INVESTIGATION OF FACTORS INFLUENCING ENGLISH AS A FOREIGN LANGUAGE LEARNERS' COGNITIVE PRESENCE LEVELS IN A 3D VIRTUAL LEARNING ENVIRONMENT

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ABSTRACT

INVESTIGATION OF FACTORS INFLUENCING ENGLISH AS A FOREIGN LANGUAGE LEARNERS' COGNITIVE PRESENCE LEVELS IN A 3D VIRTUAL LEARNING ENVIRONMENT

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The Community of Inquiry (CoI) framework has been widely used, debated, and analyzed to define the core elements of a collaborative constructivist learning environment needed to build and maintain a purposeful learning community, in online and blended learning contexts. Although there is an increasing number of studies on the implementation of Community of Inquiry framework into the field of language education, in online and blended learning environments where various technologies has been used, the implementation of this model into the 3D virtual language learning environments has remained limited.

The main aim of this study is to explore factors that may influence cognitive presence of English as a Foreign Language (EFL) learners when they engage in reasoning-gap activities in a synchronous online English-speaking module conducted in a three dimensional virtual learning environment (OpenSimulator with SLOODLE). In addition, the second aim of the study is to investigate the EFL learners' cognitive presence levels based on self-report and direct observation method. An exploratory case study approach was employed in the study.

This study was conducted in one of the foundation universities of Ankara, Turkey. Twenty-one EFL learners who were Independent Users of English and studying at the Faculty of Education participated in the study. The main data sources for data collection were surveys, semi structured interviews, and audiovisual materials (screen capture recordings of task sessions in 3D VLE). The quantitative data which were collected from 21 EFL learners were analyzed via descriptive statistics. The qualitative data from multiple data sources were analyzed by thematic analysis following the constant comparative method. Activity system analysis was performed to understand the dynamics of 3D VLE and to analyze what factors influenced CP in 3D VLE.

The factors influencing CP in a synchronous online English-speaking module in 3D VLE included tools such as Communication-interaction, information, navigation, presentation, and motivation tools. Other factors included technical infrastructure of the environment, participants' technical skills, and the design of 3D VLE and speaking tasks. The support of the technician and instructor given to the participants regarding technical difficulties and content was also important for CP in 3D VLE.

Keywords: Community of Inquiry, Cognitive Presence, Virtual Learning Environment, Speaking Skill, English as a Foreign Language

ÖZ

3B SANAL ÖĞRENME ORTAMINDA İNGİLİZCEYİ YABANCI DİL OLARAK ÖĞRENENLERİNİN BİLİŞSEL BURADALIK DÜZEYLERİNİ ETKİLEYEN FAKTÖRLERİN İNCELENMESİ

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Sorgulama Topluluğu modeli, çevrimiçi ve karma öğrenme ortamlarında bir öğrenme topluluğu oluşturmak ve sürdürmek için gereken işbirlikçi bir yapılandırmacı öğrenme ortamının temel öğelerini tanımlamak için yaygın olarak kullanılmış, tartışılmış ve analiz edilmiştir. Sorgulama topluluğu modelinin, çeşitli teknolojilerin de kullanıldığı çevrimiçi ve karma öğrenme ortamlarında, dil eğitimi alanına yönelik giderek artan sayıda uygulama çalışması olmasına rağmen, bu modelin 3 boyutlu sanal dil öğrenme ortamlarına uygulamanması sınırlı sayıda kalmıştır.

Bu çalışmanın temel amacı, Yabancı Dil olarak İngilizce öğrenenlerin, 3 boyutlu sanal öğrenme ortamında (SLOODLE'ın kullanıldığı OpenSimulator) yürütülen, mantıksal boşluk etkinliklerine katıldıkları eşzamanlı çevrimiçi İngilizce konuşma modülünde, bilişsel buradalıklarını etkileyebilecek faktörleri ortaya çıkarmaktır. Bu amaca ek olarak, çalışmanın ikinci amacı, yabancı dil olarak İngilizce öğrenenlerin bilişsel buradalık düzeylerini öz-raporlarına ve doğrudan gözlem yöntemlerine dayalı olarak araştırmaktır. Bu çalışmada keşfedici vaka çalışması yaklaşımı benimsenmiştir.

Bu çalışma, Ankara'da yer alan vakıf üniversitelerinden birinde yürütülmüştür. Çalışmaya, İngilizce Yeterlik Düzeyi Bağımsız Kullanıcısı olan ve Eğitim Fakültesinde öğrenim gören 21 İngilizceyi yabancı dil olarak öğreneni katılmıştır. Veri toplamada, anketler, yarı yapılandırılmış görüşmeler ve görsel-işitsel materyaller (3B sanal öğrenme ortamında görev oturumlarının ekran yakalama kayıtları) ana veri kaynaklarıdır. Ölçüt örneklemeye göre seçilmiş 21 öğrenciden toplanan nicel veriler betimleyici istatistikî yöntemlerle analiz edilmiştir. Çoklu veri kaynağından alınan nitel veriler ise, sürekli karşılaştırma yönteminin izlendiği tematik analizle analiz edilmiştir. 3 boyutlu sanal öğrenme ortamının dinamiklerini anlamak ve 3 boyutlu sanal öğrenme ortamında bilişsel buradalığı hangi faktörlerin etkilediğini analiz etmek için etkinlik sistem analizi gerçekleştirilmiştir.

3 boyutlu sanal öğrenme ortamında yürütülen eşzamanlı çevrimiçi İngilizce konuşma modülünde CP'yi etkileyen faktörlerde yer alan araçlar İletişim-etkileşim, bilgi, yönlendirme, sunum ve motivasyon araçlarıdır. Diğer faktörler arasında ortamın teknik altyapısı, katılımcıların teknik becerileri ve 3 boyutlu sanal öğrenme ortamının tasarımı ve konuşma görevleri yer almaktadır. Teknik zorluklara ve içeriğe ilişkin katılımcılara verilen teknisyen ve öğretim elemanının desteği de 3 boyutlu sanal öğrenme ortamında bilişsel buradalık için önemlidir.

Anahtar Kelimeler: Sorgulama Topluluğu, Bilişsel Buradalık, Sanal Öğrenme Ortamı, Konuşma Becerisi, Yabancı Dil olarak İngilizce

To my beloved wife and family

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ABBREVIATIONS

CoI	Community of Inquiry
TP	Teaching Presence
SP	Social Presence
CP	Cognitive Presence
PIM	Practical Inquiry Model
3D	Three-Dimensional
VW	Virtual World
VIE	Virtual Immersive Environment
VLE	Virtual Learning Environment
VLLE	Virtual Language Learning Environment
MUVE	Multi User Virtual Environment
MUVEEET	Multi-User Virtual Environment Education Evaluation Tool
Moodle	Modular Object Oriented Dynamic Learning Environment
LMS	Learning Management System
SLOODLE	Simulation Linked Object Oriented Dynamic Learning Environment
EFL	English as a Foreign Language
CEFR	Common European Framework of Reference for Languages: Learning, teaching, assessment
AT	Activity Theory
ASA	Activity System Analysis
RQ	Research Question
ELT	English Language Teaching
EP	English Preparatory

CHAPTER 1

INTRODUCTION

This chapter provides a general background of Community of Inquiry and 3D Virtual Learning Environnments for language education. Then it presents the purpose of the study, research questions, significance of the study, and the definition of terms.

1.1 Introduction

Over the past decade, the number of online and hybrid courses has grown dramatically due to the developments of digital learning platforms for facilitating student-teacher relationships (Siemens, Gašević & Dawson, 2015). Moreover, various models of online learning have been developed over the years in order to help explain students' online learning experiences (Garrison, Cleveland-Innes, & Fung, 2010). One of these theoretical contributions that can help understanding students' online learning experiences is the Community of Inquiry (CoI) framework.

The CoI framework was developed by Garrison, Anderson and Archer (2000). It has been used for identifying the core elements of a collaborative constructivist learning environment needed to construct and sustain a deliberate learning community within a blended and online learning contexts (Garrison et al., 2010; Garrison, 2017; Stenbom, 2018). Garrison (2011) describes a CoI as "a group of individuals who collaboratively engage in purposeful critical discourse and reflection to construct personal meaning and confirm mutual understanding" (p. 2). The CoI framework focuses primarily on an efficient learning with enhanced communication, social engagement and critical thinking skills (Kilis, 2016).

Furthermore, the CoI framework stresses on ‘critical thinking skills’ and ‘collaborative inquiry’ to establish and promote effective online learning in a community (Garrison et al., 2000).

CoI consists of three components, which are teaching presence (TP), social presence (SP) and cognitive presence (CP) (Garrison et al., 2000).

- TP was defined as “the design, facilitation, and direction of cognitive and social processes for the purpose of realising personally meaningful and educationally worthwhile learning outcomes” (Garrison & Anderson, 2003, p. 29).
- SP was defined as “the ability of learners to project themselves (i.e., their personal characteristics) socially and emotionally in a community of inquiry” (Rourke, Anderson, Garrison, & Archer, 2001, p. 52).
- CP was defined as “the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning” (Garrison et. al., 2000, p. 89)

Although the CoI framework was originally developed for asynchronous text-based discussions and online discussion forums (DeNoyelles, Zydney, & Chen, 2014), ithas been also applied to learning environments with both synchronous and asynchronous technologies (McKerlich, Riis, Anderson, & Eastman, 2011). One of these technologies is the 3D Virtual Worlds (VWs).

A virtual world has been defined as “a synchronous, persistent network of people, represented as avatars, facilitated by networked computers” (Bell, 2008, p. 2). Girvan (2018) defined it as “shared, simulated spaces which are inhabited and shaped by their inhabitants who are represented as avatars.” (p.1099). With the help of these avatars who can interact with objects and people in that world, we can develop a shared understanding (Girvani, 2018). Two of the main advantages of 3D’s immersive features are that, 3D VWs can give the sense of being in that world (Zulkanain, 2017), and it motivates learners to keep their focus and interest in the educational activities. (Cooke-Plagwitz, 2008). Active Worlds, Second Life,

OpenSimulator and Sansar are some of the popular 3D VWs which are used primarily for educational purposes.

3D VWs offer many opportunities in education. However to create effective learning environments in 3D VWs, teaching practices should be developed efficiently in order to support collaboration and group work, to support student autonomy, and social-constructivist pedagogy (Molka-Danielsen & Deutschmann, 2009). To improve the effectiveness and efficiency of learning and teaching, 3D VWs can be used in combination with other tools such as Learning Management Systems (LMSs), Modular Object Oriented Dynamic Learning Environment (Moodle), Skype, blogs, wikis, and social networking systems (Antunes, Morgado, Martins, & Fonseca, 2008; Esteves et al., 2011; Lumkin et al., 2011; Olteanu et al., 2014; Petrakou, 2010; Warburton, 2009). One such combination method that integrates 3D VWs with Moodle is called Simulation Linked Object Oriented Dynamic Learning Environment (SLOODLE). With SLOODLE, learners can take quizzes and surveys, submit assignments, record chat conversations, keep track of their progress via a point system, and perform educational activities all viewable from within the 3D VW (SLOODLE, n.d.). A few researchers provided design frameworks and structured guides to create effective learning environments for 3D VWs in the literature (de Freitas & Oliver, 2006; Kapp & O'Driscoll, 2010; Lim, 2009; McMinn, 2009; Minocha & Roberts, 2008; Salmon, 2010, Schmeil, Eppler, & de Freitas, 2012; Tuukkanen et al., 2010)

Pedagogical opportunities of 3D VWs provide valuable contributions in a variety of disciplines since the mid-1990s including the field of Language Education (Sadler, 2017; Wigham et al.,2018). Several studies agreed on the benefits of 3D VWs for the courses in Foreign Language Education programs (Gamagei Tretiakov, & Crump, 2011; Gregory & Masters, 2012; Rayner & Fluck, 2014). The benefits of using VWs for the language education includes opportunities to access a target language, to illustrate linguistic concepts, to use authentic language communication, to support social collaborative learning, to implement student-centered collaborative learning, and to design identity-related tasks (Wang, 2017).

Review studies on language learning showed that these virtual environments facilitates students' communication skills, linguistic competence, motivation, and reaching learning outcomes (Borona, Tambouris, & Tarabanis, 2018; Wang et al., 2019).

1.2 Background of the Problem

English language is considered as the global language of the contemporary world (Stephen, Welman, & An, 2004) and being widely used in international contexts (Matsuda, 2012). The main objective of English Language Teaching (ELT) is to develop learners' ability to communicate English efficiently and accurately (Davies & Pearse, 2000). But not all learners can talk easily, fluently, or accurately after spending several years studying in English language education programs. It is reported that, English as Foreign Language (EFL) learners face difficulties to communicate in English even when they have extensive education (Al Hosni, 2014). Among all other language skills, speaking seems to be the hardest one due to the anxiety of students (Sun & Yang, 2015; Ur, 1996; Zhang, 2009). However, another very important reasons for students' difficulties in developing their English speaking skills is the lack of practice (Baniabdelrahman, 2013; Sun & Yang, 2015). Nunan (2015) stated that, while too much emphasis was given to reading and writing in language education, students cannot get adequate opportunities for speaking:

> *"Of course, there are people who are fluent readers of a language but who have no facility when it comes to listening or speaking. In fact, the grammar-translation method, which dominated foreign language instruction for many years – and in some places still does – turned out learners who could read and write but who were incapable of understanding the spoken language or to speak it themselves"* (p. 48).

The key challenges of language learning in the Turkish EFL context are the difficulties arising from the use of productive skills: writing and speaking (Güzel & Aydın, 2019). Similarly, a recent report on English Proficiency shows that English language skills have declined in Turkey in the past five years, and the primary focus is on grammar, and translation, not on practical communication skills, and the main content of English teaching in schools is Turkish (L1) (EF EPI 2019, p. 22).

To provide opportunies for students to improve their English speaking skills, several studies utilized 3D VWs. These studies used a different language approach than the common practices called Task-Based Instruction or Task Based Language Teaching (TBLT). In this approach, communicative tasks were the most essential parts of the curriculum (Lai & Li, 2011).

Prabhu (1987) classified language tasks as information gap, opinion gap and reasoning gap. Among them, reasoning gap speaking tasks were reported to show effective results in oral communication competence, accuracy, and fluency (Lan, Kan, Sung, & Chang, 2016). Unfortunately, except for a few studies, integrating reasoning task activities for language learning in 3D VWs were not deeply examined in the literature (Lan et al., 2016)

In recent years, CoI framework was considered as a guideline to design and evaluate online and blended courses in language education some of which concentrated on speaking skills (González Miy & Herrera Díaz, 2015; Schumann, 2019; Solimani, Ameri-Golestan, & Lotfi, 2019; Xu, 2019 Wu, Hsieh, & Yang, 2017; Zhang & Zou, 2020). Several of the previous research studies of CoI framework in language education were conducted in asynchronous mode, for example to examine interactions in discussion boards (Shin, 2008), or to investigate the impact of instructional audio feedback on different cognitive presence categories (Olesova, Richardson, Weasenforth, & Meloni, 2011). Others utilized a synchronous mode, such as Xu (2019) who analyzed an “informal self-directed

online language learning community". Zhang and Zou (2020) investigated the effectiveness of a blended EFL course design using CoI as a guideline.

Several studies also reported cultural aspects of language learning with CoI framework. For example, Toyoda (2015) evaluated the learning experience in the video collaborative blended intercultural learning environment (i.e., YouTube) in a Japanese language course using CoI framework. They focused on CP with different cultural backgrounds of students. Another study focused on intercultural communication was Ruan and Medwell (2019) who examined how social networking technology could help develop the Chinese language as a foreign language learners' intercultural communication skills. They used CoI as the analytical framework to examine online communication and interaction. Similarly, Schumann (2019) explored the interaction between CoI using SP, CP and TP in conjunction with a Mobile-assisted Language Learning app and how students' lived experiences contribute to cultural awareness.

Regarding speaking skill context, the researchers in the field of language education also utilized CoI framework (e.g.,Herrera Díaz & González Miy, 2017). Few studies combined CoI framework with various pedagogical methods such as flipped classroom, and unplugged instruction for the speaking skill in online and blended environments (Solimani et al., 2019 ; Wu et al., 2017).

Although there is an increasing number of studies of CoI applied in the language education field in online and blended environments using a variety of technologies (e.g., González Miy & Herrera Díaz, 2015; Schumann, 2019; Solimani, et al., 2019; Xu, 2019; Wu et al., 2017; Zhang & Zou, 2020), the application of CoI framework into 3D VLEs for language education, specifically for speaking skill have remained limited.

Few studies that investigated the implementation of CoI Framework into 3D VLEs, in the language education field (e.g., Pellas & Boumpa, 2016, 2017; Ozbek, Comoglu, & Baran, 2017; King, 2018). Pellas and Boumpa (2016) examined the comparative perspectives on the efficacy of 3D VLE (i.e., OpenSimulator using

SLOODLE) Continuous Professional Development (CPD) of preservice foreign language teachers to learn basic terms related to information technology literacy, using the CoI model as a theoretical framework focusing on user experiences with the development of 3D VLE activities. The components (i.e., TP, SP, and CP) of the CoI framework had been used to foster interaction and encourage participation in blended synchronous mode (Pellas & Boumpa, 2016).

In another study of Pellas and Boumpa (2017) on CPD, the impact of the experiences of pre-service foreign language teachers on their CPD in 3D VLE (i.e., OpenSimulator using SLOODLE) was investigated using a theoretical framework of instructional design including the CoI model and the Jigsaw teaching technique. The CoI model was used in the study to identify the experiences and relationships of pre-service foreign language teachers in a learning community and as an instructional design tool to test the efficacy of preservice teachers' CPD in synchronous communication modes (Pellas & Boumpa, 2017).

In the research of Ozbek, Comoglu, and Baran (2017), two activities "introducing an innovation" and "role playing" in 3D VLE (i.e., Second Life) are planned to improve the speaking skills of English-language learners. They qualitatively assessed the roles and outputs of Turkish language learners before, during, and after the implementation of the two activities through the CoI model, consisting of CP and SP. The CoI model was used as a theoretical framework to analyze the roles and outcomes.

Furthermore, a study conducted by King (2018) investigated how college students in a 3D VLE (i.e., Second Life) learn Spanish as a foreign language and they designed a tool for Spanish Heritage Language Learners (SHLLs). The CoI framework was used to frame each stage conceptually in the development of tasks for SHLLs to be performed in 3D VLE. Specifically, it was used to determine how to balance the online class between structuring and directing the learning experiences of SHLLs (i.e., for TP), socially engaging them with peers and other

Spanish speakers (i.e., for SP), and also promoting higher-order thinking while reflecting on these experiences (i.e., for CP) (King, 2018).

Considering the findings of the previous studies related to CoI framework, CoI framework could be helpful in designing and evaluating educational experiences for 3D VLEs. It may create a deep and meaningful learning by collaborative and constructivist experience through the development of its TP, SP and CP. The affordances of 3D VLEs provide an opportunity to the development of learning community in which learners engaging authentic or complex experiential learning tasks, collaboratively. It may lead to increase their intrinsic motivation and engagement (Dalgarno & Lee, 2009).

Although some steps have been taken to consider the benefits of implementation of the CoI framework in 3D VWs, there's a need for further research. There is limited number of studies revealing how, or what aspects of virtual worlds facilitate learning in various variables including the attributes of 3D VWs and analyzing in-world interaction in detail (Traphagan et al., 2010; Reisoğlu, 2014).

In this context, more research is needed to be conducted in order to understand not only the impact of 3D VWs on the sense of community and presence in language education field, but also the factors affecting the CoI framework components in building a collaborative and worthwhile educational experience of these complex environments.

1.3 Purpose of the Study

The main aim of this study is to explore factors that may influence cognitive presence of EFL learners when they engage in reasoning-gap activities in a synchronous online English-speaking module built in a 3D VLE. In addition, the second aim of the study is to investigate these EFL learners' cognitive presence levels based on self-report and direct observation method. This aim was added to

help in the understanding of the community in which factors affecting CP was emerged.

1.4 Research Questions

The research questions of this research study are listed below:

1. What are the cognitive presence levels of EFL learners engaging in reasoning-gap activities in the synchronous online English-speaking module within a 3D VLE (specifically OpenSimulator with SLOODLE) based on self-report and direct observation?
2. What are the factors that influence cognitive presence levels of EFL learners engaging in reasoning-gap activities in the synchronous online English-speaking module within a 3D VLE (specifically OpenSimulator with SLOODLE)?

1.5 Significance of the Study

In literature, there is an increasing number of studies of CoI applied in the language education field in online and blended environments using a variety of technologies (e.g., González Miy & Herrera Díaz, 2015; Schumann, 2019; Solimani, et al., 2019; Xu, 2019; Wu et al., 2017; Zhang & Zou, 2020). However, few studies investigated the implementation of CoI Framework into 3D VLEs, in the language education field (e.g., Pellas & Boumpa, 2016, 2017; Ozbek, Comoglu, & Baran, 2017; King, 2018).

While all three CoI presences contribute to students' learning experience, CP is the central part of the CoI model and operationalizes the Practical Inquiry cycle of constructivist learning within online environments (Garrison et al., 2001). Understanding the characteristics and patterns of EFL learners' CP in the 3D VLEs and the practices that can support their CP development are important to enhance the quality of online modules and create a meaningful experience for EFL learners.

There is limited number of studies revealing how, or what aspects of virtual worlds facilitate learning in various variables including attributes of 3D VLEs and analyzing in-world interaction in detail (e.g., Reisoğlu, 2014; Traphagan et al., 2010). This study seek to explore the factors influencing cognitive presence of EFL learners when they engage in reasoning-gap activities in a synchronous online English-speaking module built in a 3D VLE. It is expected to make a valuable contribution to the literature with analyzing the various dynamics in 3D VLE, such as tools, community members, rules in the environment. This study also provides the instructional designers and practitioners about the ways how to sustain cognitive presence of the EFL learners in such environments.

Morever, in this study, the reasoning gap activities for a synchronous online English-speaking module conducted in 3D VLE was developed. Unfortunately, except for a few studies, integrating reasoning task activities for language learning in 3D VLEs were not deeply examined in the literature (e.g., Lan, Kan, Sung, & Chang, 2016). Therefore, the findings of this study might guide instructional designers and practitioners for the implementation of reasoning gap speaking tasks in 3D VLE.

1.6 Definition of the Terms

Virtual World: A virtual world has been defined as "a synchronous, persistent network of people, represented as avatars, facilitated by networked computers" (Bell, 2008, p. 2). Girvan (2018) defined it as "shared, simulated spaces which are inhabited and shaped by their inhabitants who are represented as avatars" (p.1099).

Reasoning Gap: A reasoning-gap task referred as "deriving some new information from given information through the processes of inference, deduction, practical reasoning, or perception of relationships or patterns" (Ellis et al., 2020, p.8).

English as a Foreign Language (EFL): It refers to "the learning and use of the English language as an additional language by users with different native languages in a non-English speaking country." (Christiansen, 2020, p.64).

OpenSimulator: OpenSimulator is "an open source multi-platform, multi-user 3D application server. It can be used to create a virtual environment (or world) which can be accessed through a variety of clients, on multiple protocols." (OpenSimulator, 2020).

Simulation Linked Object Oriented Dynamic Learning Environment (SLOODLE): SLOODLE is a free and open source project which integrates Second Life and/or OpenSimulator with the Moodle learning management system.

Second Life: Second Life is a free 3D virtual world where users can create, connect, and chat with others from around the world using voice and text.

Exploration – Macrostructure: Exploration is "the ability to navigate the environment and examine it to gain knowledge" (Kapp & O'Driscoll, 2010, p.79).

Experience – Macrostructure: Experience is "the ability to engage in activities, have meaningful interactions and encounter the consequences of those actions and interactions within the environment." (Kapp & O'Driscoll, 2010, p.80)

Connectedness – Macrostructure: Connectedness is "the ability to interact with each other to create and build knowledge and understanding." (Kapp & O'Driscoll, 2010, p.80).

Role Play- Archetype: The in-world role-play archetype provides a realistic environment in which two or more people act out a scenario (Kapp & O'Driscoll, 2010).

Guided Tour- Archetype: A guided tour is "a formalized, escorted situation based on constructs designed to facilitate interaction of individuals or groups with various environments" (Kapp & O'Driscoll, 2010, p.99).

Cognitive Presence: "The extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication." (Garrison et al., 2000, p.89).

Social Presence: "The ability of learners to project their personal characteristics into the community of inquiry, thereby presenting themselves as 'real people'" (Rourke et al., 2001, p. 51). "As the ability to project one's self and establish personal and purposeful relationships." (Garrison, 2006, p. 2).

Teaching Presence: Anderson et al. (2001, p. 8) define "teaching presence as the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes."

Community: Community is often used to refer to cognitive or emotional relations that have been formed between physically separated learners (Fiock, 2020). Community is defined as "a way of talking about the social configurations in which the enterprises are defined as worth pursuing and the participation is recognizable as competence" (Wenger, 1999, p.5).

Critical thinking is "reflective and reasonable thinking that is focused on deciding what to believe or do" (Ennis, 1985, p.45).

Computer Literacy Course: At the foundation university, the course offered fully online that undergraduate students enrolled is Computer Literacy (in Turkish and in English). Computer Literacy is a must course, except for the students who are studying at Faculty of Engineering, since 2013-2014 Fall Semester. It is given via distance education since 2016-2017 Fall Semester by ICT Coordination Office with the support of Başkent University Distance Education Application and Research Center. The course is given via Moodle and Adobe Connect. The course covers such basic computer literacy topics; the basic concepts of information technologies, computer operating system user interface, commonly used software packages (Microsoft Word, Excel, PowerPoint, Access), etc.

CHAPTER 2

LITERATURE REVIEW

The aim of this chapter is to provide a review of related literature on the theoretical basis, the Community of Inquiry (CoI) framework, and three elements of the framework: Teaching Presence (TP), Social Presence (SP), and Cognitive Presence (CP). The theoretical lens of this study is composed of collaborative and socio-constructivist theory, John Dewey's work of progressive understanding of education specifically emphasis on collaborative constructivism and Practical Inquiry (PI), and CoI Model of Garrison, Anderson, and Archer (2000).

Then, 3D VLEs literature in terms of definition, examples, integrated tools, affordances, challenges, and concepts related to 3D VLEs are presented. In addition, design frameworks and structured guides for 3D VLEs were reviewed in the literature and '3DLE Design Principles Model', one of the mostly acceptable design principle models for 3D VLE and proposed by Kapp and O'Driscoll (2010) is presented in detail.

Finally, similar research studies about the CoI framework applied to 3D VLEs in language education are reviewed under each related section. In the light of the literature review, gaps in the literature were identified and presented in the last section of this chapter.

2.1 Conceptual Framework

2.1.1 The Community of Inquiry Framework

In the late 1990s, a growing increase of online programs enrolments prompted researchers to investigate and define the basic elements for the successful creation of higher educational experiences in online environments (Castellenos-Reyes, 2020). Some of the new models for the design of contemporary digital learning environments are 'Khan's e-learning framework' (Morrison, 2017), 'The TAPPA process' (Moore, 2016), 'Community of Inquiry model' (Garrison, 2011; Garrison, Anderson, & Archer, 2000), and 'The Fully Online Learning Community (FOLC) model' (Childs, vanOostveen, Flynn, & Clarkson, 2015; vanOostveen, DiGiuseppe, Barber, Blayone, & Childs, 2016; Blayone, vanOostveen, Barber, DiGiuseppe, & Childs, 2017).

Garrison et al. (2000) developed the CoI framework based on John Dewey's (1938) view of Practical Inquiry. They described the essential elements of a successful online higher education learning experience which were rooted in Dewey's educational philosophy and Social Constructivism (Castellanos-Reyes, 2020). In creating the CoI framework, the purpose was to "define, describe, and measure the elements of a collaborative and worthwhile educational experience" (Garrison, Anderson, & Archer, 2010, p.6). The CoI Framework was built based on the assumption that, "a community of learners is an essential element of a deep and meaningful educational experience" (Garrison, 2017, p. 22). Stewart (2017) claimed that "in a successful community of inquiry, students engage in a combination of dialogue and reflection to question their existing assumptions about a subject matter and ultimately construct new knowledge." (p.68).

The CoI framework has been widely used, debated, and analyzed to define the core elements of a collaborative constructivist learning environment needed to build and maintain a purposeful learning community, in online and blended learning contexts

(Garrison et al., 2010; Garrison, 2017; Stenbom, 2018). A community is defined as "a way of talking about the social configurations in which the enterprises are defined as worth pursuing and the participation is recognizable as competence" (Wenger, 1999, p.5). A strong community promotes communication, interactions, and ability to exchange ideas (Wenger, McDermott & Snyder, 2002). The value of interaction between students for their success in the online environments were explicitly emphasized in the literature (Akyol & Garrison, 2008; Arbaugh, 2008; Richardson, Maeda, Lv, & Caskurlu, 2017).

The CoI framework stresses on 'critical thinking skills' and 'collaborative inquiry' to establish and promote effective online learning in a community (Garrison et al., 2000). It consists of three components called as TP, SP and CP as presented in the previous chapter. They are interdependent as depicted in Figure 2.1.

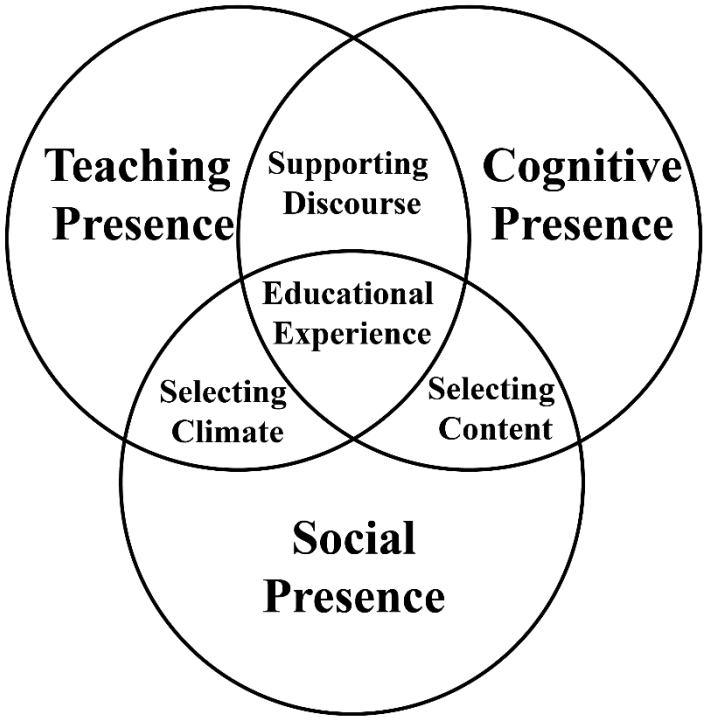


Figure 2.1 Community of Inquiry Framework (Garrison et al., 2000, p. 88)

The major focus for the previous studies on the CoI framework were the functionality of CoI framework, elements of CoI framework, and causal

relationship (Stenbom, 2018). The correlations among the presences and with other variables, such as self-efficacy have been confirmed in several other studies (Stenbom, 2018). The common finding is that three core components of CoI are interrelated and have a positive influence on each other (Akyol, 2009; Polat, 2013).

Adding component to the CoI framework to be more meaningful as a framework is one of the critiques in the CoI literature (Castellanos-Reyes, 2020). Researchers suggested adding 'learner presence"' (Shea et al., 2012), 'emotional presence' (Cleveland-Innes & Campbell, 2012), 'autonomy presence' (Lam, 2015), and 'regulatory presence' (Kilis & Yıldırım, 2018) to the CoI framework (see also Armellini & De Stefani, 2016; Dunlap, Verma, & Johnson, 2016).

Since it was proposed in 2000, CoI has been revised and refined while being used widely to develop and evaluate learning in various learning environments by researchers and educators (Akyol & Garrison 2008; Befus, Cleveland-Innes, Garrison, Koole & Stenbom, 2014; Daspit & D'souza, 2012; Garrison & Arbaugh, 2007, Rourke & Kanuka, 2009). For example, CoI has been used to compare students' higher-order thinking skills in face-to-face discussions and online discussions (Meyer, 2003); to design an online collaborative learning environment (Redmond & Lock, 2006); to evaluate students' learning experience in online discussions in a blended course (Akyol & Garrison, 2008); to develop higher – order thinking skills in an online and blended learning environment (Akyol & Garrison, 2011); and to evaluate an online course (Lamber & Fisher, 2013) (see Toyoda & Harrison, 2018).

Two main methods used by the researchers for gathering and analyzing data based on the CoI framework were transcript coding by a coding scheme (e.g., Shea et al., 2010) and survey procedure method by CoI Survey (Arbaugh et al., 2008). In addition, "Multi User Virtual Environment Education Evaluation Tool" (MUVEEET) observation checklist was developed by McKerlich and Anderson (2007) to justify an educational event in Multi-User Virtual Environments (MUVEs) in terms of indicators of CoI framework.

The CoI Survey was developed by Arbaugh et al. (2008) and validated by Swan et al. (2008), to assess the degree to which CoI presences occur in online courses and to quantitatively determine the state of a CoI. It is found to be "a valid, reliable, and efficient measure of the dimensions" of the CoI framework (Arbaugh et al. 2008, p. 133). Since the introduction of CoI survey, it has been used in many contexts and applied for multiple purposes (Stewart, 2017).

Publication of the CoI survey instrument was also intended to assist researchers wishing to examine the relationship of the CoI framework to variables such as course outcomes. Until the CoI survey instrument was developed, CoI-based research was mainly qualitative and focused on individual presences instead of the broader context of the framework (Arbaugh et al., 2008).

In a comprehensive systematic review, Stenbom (2018) analyzed the development and implementation of the CoI survey and listed the various uses of the CoI instrument by researchers as follows: "to explore a single learning environment, to examine differences using the CoI survey, to observe relationships among the different elements of CoI and their relationships with other data, and to address the reliability and/or validity of data using the CoI survey" (p. 25).

2.1.1.1 Cognitive Presence

Garrison et. al. (2000) defined CP as "the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning" (p. 89). The CP is grounded in the critical thinking literature and derived from Dewey's (1933) reflective thinking model (Garrison & Akyol, 2013, p.108). Garrison and Akyol (2013) emphasized the impact of critical thinking on educational aims and stated that "Critical thinking both authenticates existing knowledge and generates new knowledge, suggesting an intimate connection with education and critical thinking is integral to inquiry and viewed as an inclusive process of higher-order reflection and discourse." (p.108).

CP is operationalized by the Practical Inquiry Model (PIM) framework which originates in the reflective inquiry phases of Dewey (depicted in Figure 2.2.).

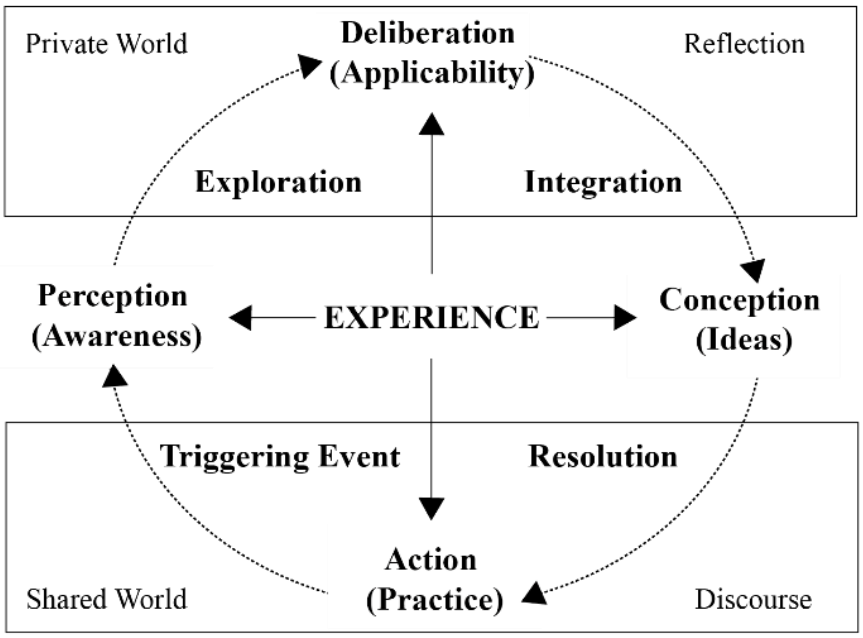


Figure 2.2 Practical Inquiry Model (Garrison, 2007, p.63)

One key structural feature of the PIM is the interplay/merging between the public (shared) and private worlds, or the reflection and discourse dynamics. In other words, it is the justification and means to understand thinking and learning collaboratively (Garrison, 2015).

In addition, the model has two dimensions that reflect the 'inductive/deductive' and 'divergent/convergent processes' of critical thinking. The vertical axis, the deliberation-action dimension, represents "constructive and collaborative activities and it reflects the rigorous process of integrating induction (arrival of generalizations) and deduction (employment of generalizations)." (Garrison, 2011, p.45). The horizontal axis is "the perception-conception dimension which reflects the point of fusion of the shared and private worlds" (Garrison, 2011, p.45). At one extreme is the divergent process of perception and analysis of facts or events; at the other extreme is the convergent process of insights and understanding associated with ideas and concepts (Garrison, 2011).

CP proved to be a suitable instrument to assess critical thinking (Garrison et al., 2001), given that oral and textual communication (e.g., via discussion forums) have been shown to stimulate development of critical thinking skills. In essence, cognitive presence is a process model describing the development of higher order thinking rather than individual learning outcomes (Akyol and Garrison, 2011b, Akyol et al., 2009).

As previously mentioned, CP is rooted in Dewey's (1910) social-constructivist views of learning and operationalized through the PIM (Garrison et al., 2001) that defines four phases of inquiry learning cycle which are Triggering Event, Exploration, Integration, and Resolution.

- Triggering Event phase (as the phase of the problem definition) is the initiation phase of critical inquiry. Triggering Event phase is also associated with conceptualizing a problem, dilemma, or issue that arises from experience. Triggering events motivate learners by posing problems or asking questions to provide direction for and enhance discourse (Moore, 2013, p. 158). In an educational context, triggering events can be caused by not only the instructor's communication of learning challenges or tasks, but also, any group member's intentionally or implicitly attachment to the discourse in video conferencing. Well planned activity ensures the engagement of students and creates curiosity and questioning (Moore, 2013, p. 109).
- In Exploration phase (as phase of the exploration of various ideas), participants, shift between their private, reflective world and the social exploration of ideas after their perception of the nature of the problem, dilemma, or issue and after their exploration of relevant information and possible explanations. It is based on 'the personal reflection and social exploration processes' (Garrison et al., 2001). Brainstorming, questioning, and information exchange characterizes this divergent phase.

- Integration phase (as the phase of construction of the meaning of the proposed solutions) is characterized by more focused and structured construction of meaning from the ideas generated in the Exploration phase. It presents a constructed meaning from the developed ideas and assumes a continuous process of integration and reflection (Garrison et al., 2001). As the students move away from the exploratory process, the applicability of ideas may start to be tested in terms of how well they are related to the investigated problem, dilemma, or issue. Students engages in critical discourse that form understanding. In contrast to the Exploration phase, the convergence among group members, connection ideas, and creating solutions important (Garrison et al., 2001, Park, 2009). Integration takes place as learners solve problems and link their ideas with other learners' different viewpoints and ideas.
- Resolution phase (as the phase of the specification of possibilities to apply developed knowledge) is a resolution of the problem, dilemma, or issue by means of direct or vicarious action. It usually entails a vicarious test using thought experiments and consensus building within the CoI. It means implementing the proposed solution or testing the hypothesis by practical application in most non-educational settings. Resolution allows learners to critically evaluate their solution to test its validity and anticipates clear strategies for applying newly created knowledge in both non-educational and educational settings. Resolution of the original problem may initiate a new learning cycle with a new triggering event.

CP requires students' engagement in all phases of Practical Inquiry. However, many early study results showed lower levels (i.e., Triggering Event and Exploration phases) than higher levels (i.e., Integration and Resolution phases) of Practical Inquiry (e.g., Garrison et al., 2001; McKlin, Harmon, Evans, & Jone, 2002; Picciano, 2002; Meyer, 2003, 2004; Pawan, Paulus, Yalcin, & Chang, 2003; Vaughan & Garrison, 2005; Kanuka, Rourke, & Laflamme, 2007; Stein et al., 2007). As it progresses to the Resolution phase, inquiry becomes more demanding

(Garrison & Arbaugh, 2007). Recent studies have yielded greater activity at the Integration and Resolution phases (Richardson & Ice, 2010; Shea & Bidjerano, 2009; Akyol & Garrison, 2008, 2011). Sufficient time in order to reach Resolution phase is required in online discussions (Richardson & Ice, 2010), and many of them generally reach the Resolution phase offline (Akyol & Garrison, 2008; Archer, 2010; Shea et al., 2010).

While all three presences contribute to students' learning experience, CP is the central part of the CoI model and operationalizes the Practical Inquiry cycle of constructivist learning within online environments (Garrison et al., 2001).

2.1.2 3D Virtual Worlds

Virtual Worlds (VWs) have been defined as "a synchronous, persistent network of people, represented as avatars, facilitated by networked computers" (Bell, 2008, p. 2). Girvan (2018) defined it as "shared, simulated spaces which are inhabited and shaped by their inhabitants who are represented as avatars. These avatars mediate our experience of this space as we move, interact with objects and interact with others, with whom we construct a shared understanding of the world at that time" (p.1099). Users participate in VWs via an 'avatar' referred to "a visual representation of his or her real or surrogate identity and appearance" (Dalgarno & Lee, 2010, p. 15) by moving around this world using a mouse and the arrow keys on the keyboard (Antonacci & Modaress, 2008). In some VWs, users can also use the arrow keys to fly 'teleport' to different locations in the virtual world (Antonacci & Modaress, 2008). Thus, avatars afford the capacity for the user to change their point-of-view within the VWs, so they can observe objects and phenomena from multiple perspectives (Dickey, 2003). Because VWs incorporate synchronous chat tools, participants are able to verbally interact with one another, provide each other with feedback, and hence socially negotiate meaning (Dickey, 2003). Users can also use their avatars to gesture, smile, dance, and use body language in other ways to express themselves (McKerlich & Anderson, 2007).

Bower (2017) reported that Active Worlds, OpenSimulator (OpenSim), and Second Life were the most used VWs in education. OpenSimulator is an open-source, multi-user virtual world platform that enables users to form private virtual worlds (Coban, Karakus, Gunay, & Goktas, 2015). One of the advantages of OpenSimulator is that educators can download and install it on their own computers to prevent the risks of participating in a global community (Childs, Schnieders, & Williams, 2012). In addition, developers customize the virtual world to their individual needs due to its being an open source software (OpenSimulator, 2020). OpenSimulator can operate standalone mode having limited to a smaller number of users capacity. It can also operate grid mode having the potential to scale as the number of users grows (Lorenzo et al., 2012).

In early work Dickey (2005a) defined the three main components of three-dimensional (3-D) worlds as "the illusion of 3-D space, avatars that serve as the visual representation of users, and an interactive chat environment for users to communicate with one another" (p. 121). 3D VWs could be used in combination with other tools in order to provide clearer and more direct access to information (Petrakou, 2010), to facilitate the sharing of resources by using learning management systems (Antunes, Morgado, Martins & Fonseca, 2008; Esteves et al., 2011), to support productivity by using Moodle, G Suite, Skype, blogs, wikis, and social networking systems (Warburton, 2009; Lumkin et al., 2011; Olteanu et al., 2014). In addition to support learning and teaching on 3D VLEs, SLOODLE can be also utilized (SLOODLE, n.d.). SLOODLE is a free and open source project which integrates Second Life and/or OpenSimulator with the Moodle learning management system. With SLOODLE, learners can take quizzes and surveys, submit assignments, record chat conversations, keep track of their progress via a point system all viewable from within the 3D VWs (SLOODLE, n.d.).

While the terms of "3D Virtual Learning Environments (VLEs)", "3D Multi-User Virtual Environments (MUVEs)", and "3D Virtual Worlds (3D VWs)" have been frequently used in the literature, and sometimes interchangeably, the term of "3D VLEs" is used in this study. However, the terms used in the previous studies were not changed and remained as the same as in the original study.

2.1.2.1 3D Learning Experience (3DLE) Design Principles Model of Kapp and O'Driscoll (2010)

In recent years, conceptual frameworks were utilized for guiding the purposeful design of VWs, activities in virtual environments, and in VW applications (Schmeil, 2012). A handful of design frameworks and structured guides for VWs has been observed in the literature (Darvasi, 2008; de Freitas & Oliver, 2006; Kapp & O'Driscoll, 2010; Lim, 2009; McMinn, 2009; Minocha & Roberts, 2008; Nambisan & Nambisan, 2008; Salmon, 2010; Schmeil, Eppler & de Freitas, 2012; Tuukkanen et al., 2010).

Kapp and O'Driscoll (2010) proposed a theoretical approach based on the characteristics of the virtual environment and used the term 3D Learning Experience (3DLE) to stress the importance of creating authentic learning experiences in virtual immersive environments (VIEs) and avoid duplicating traditional worlds in VIEs (Ollé, & Kristóf, 2013). A virtual immersive environment represents "a virtual 3D Learning environment in which avatars can interact and learn from the enviorment, each other, and a faciliator" (Kapp & O'Driscoll, 2010, p.354). They presented the 3DLE model that focuses on transforming learning experience through episodic interactions that move learners through a flow state of challenge and reward and assimilating new learning along the way (Chou & Hart, 2014). 3DLE Design Principles Model is one of the mostly acceptable design principle models for 3DLE and (Hopcan, Hopcan, İlhan, & Tokel, 2016; Kefeli, İlkhan, Güleç & Tokel, 2016; Kilis, Alkis, Kadirhan, Ozgenel, Cetinkaya, & Tokel, 2015).

Within the model, 3DLE Architecture builds on classifications of sensibilities (i.e., effects triggered by the VW) and archetypes (i.e., sample patterns of collaboration) into the four macrostructures of agency, exploration, connectedness, and experience. The 3DLE Architecture is critical to align the sensibilities of virtual immersive environment technologies to the principles required for effective 3DLEs. The critical elements in that architecture are the learning archetypes. Elements of 3DLE Design Principles Model and their components are presented in Table 2.1.

Table 2.1 Elements of 3DLE Design Principles Model and their Components (Kapp & O'Driscoll, 2010)

Model Elements	Components
Principles	'instructionally grounded', 'reflectively synthesized', 'participant centered', 'contextually situated', 'discovery driven', 'activity oriented', 'consequentially experienced', 'collaboratively motivated'
Macrostructures	'agency', 'exploration', 'experience', 'connectedness'
Archetypes	'avatar persona', 'role play', 'scavenger hunt', 'guided tour', 'operational application', 'conceptual orienteering', 'critical incident', 'co-creation', 'small group work', 'group forums', 'social networking'
Sensibilities	'a sense of self', 'death of distance', 'power of presence', 'sense of space and scale', 'capability to co-create', 'pervasiveness of practice', 'enrichment of experience'

The model stresses on collaboration and action. It emphasizes experiential learning and tend to align with constructivist learning theories. It referred as being "action-oriented" and doing more than just "being there" (Yang & Hao, 2012, p.559). Kapp and O'Driscoll (2010) stated that "Each 3DLE, based on its specific desired learning outcomes, will lean more heavily toward one or two of the

macrostructures, but all four should be engaged at some level." (p.78). They further stated that instructional designers of VLEs should consider using each macrostructure to reach desired learning outcomes. The weight of each macrostructure is up to the context and the designer, but activation of all of them at any level of the process is strongly suggested by Kapp and O'Driscoll (2010). Moreover, they anticipated that, as experience in leveraging VIEs to create 3DLEs matures, more archetypes would be identified in addition to the identified eleven 3DLE archetypes.

2.2 Review of Relevant Research Studies

2.2.1 Virtual Worlds and Language Education

Pedagogical opportunities of 3D VWs have been provided many valuable online applications in a variety of disciplines since the mid-1990s; and also, for language teachers and learners in the field of language education (Sadler, 2017; Wigham et al.,2018). The benefits of using VWs in the language education context comprise opportunities "to access a target language", "to illustrate linguistic concepts", "to use authentic language communication", "to support social collaborative learning", "to implement student-centered collaborative learning", and "to design identity-related tasks" (Wang, 2017, p.31). The results of Borona et al.'s (2018) systematic literature review showed that the use of 3D MUVEs in computer-assisted second language learning provided progress in learning outcomes, communication skills, and motivation. In addition, a meta-analysis of Wang et al. (2019) also showed that 3DVWs are expected to significantly improve the 'communication skills' and 'linguistic competence' of learners through the application of different teaching methods. Regarding the previous literature, researchers have been benefitted from VWs for developing and improving speaking skills. One of the most common approaches in Second Life has been task-based instruction or known as Task Based Language Teaching (TBLT) (Canto, Jauregi, & van den Bergh, 2013; Chen, 2016a,

Chen, 2016b; Jauregi, De Graaff, & Canto, 2011; Lai & Li, 2011; Peterson, 2010, 2012). TBLT was described as "an extension of communicative language teaching" (Richards, 2006, p.27). Through the use of tasks, TBLT seeks to connect the language practiced in the classroom with circumstances in everyday life where students can find themselves (Anthony, 2018). A task can be defined as "a structural plan for the provision of opportunities for the refinement of knowledge and capabilities entailed in a new language and its use during communication" (Breen, 1989, p.187). In addition, a task could be both a brief practice exercise and a more complex workplan that requires spontaneous communication (Ellis, Skehan, & Li, 2019, p.6).

Prabhu (1987) classified the language tasks into three types based on the types of cognitive ability involved: information-gap, opinion-gap, and reasoning gap. This type of classification based on the assumption that reasoning facilitates learning (Tardieu & Dolitsky, 2012). Prabhu's three types of language tasks were defined as below:

- An information-gap task involves "a transfer of given information from one person to another – or from one form to another, or from one place to another" (Ellis et al., 2020, p.8).
- An opinion-gap task involves "identifying and articulating a personal preference, feeling, or attitude in response to a given situation" (Ellis et al., 2020, p.8).
- Lastly, a reasoning-gap task referred as "deriving some new information from given information through the processes of inference, deduction, practical reasoning, or perception of relationships or patterns" (Ellis et al., 2020, p.8). The reasoning gap also involves sharing information, but it requires going beyond the information provided (Tardieu & Dolitsky, 2012).

Prabhu (1987) argued that reasoning-gap tasks are more likely to result in sustained engagement with meaning than information-or opinion gap tasks (Ellis, & Shintani,

2014, p.138). Several studies also explored the effects of task types, on language learning and speaking skills (Arciniegas & Vasquez, 2017; Dadras & Erfani, 2018; Fondo Garcia & Appel, 2016; Lan et al., 2016; Namaziandost, Hashemifardnia, Shafiee, & Feng, 2019; Peterson, 2006, 2009).

Previous literature results showed that reasoning gap tasks have remarkable results on oral communication competence, accuracy, and fluency. As an example of a study using VW, Lan et al. (2016) analyzed the impact of various types of language activity (i.e., "information-gap" and "reasoning-gap") carried out in Second Life on the accuracy of oral performance of Chinese second language learners. The results revealed that both task types encouraged interaction among learners and all the learners improved significantly in oral communication competence, especially with those performing the reasoning-gap task.

2.2.2 Implementation of CoI Framework into Virtual Worlds

Since the CoI framework was found as appropriate to evaluate educational events in 3D VWs (McKerlich & Anderson, 2007), several studies utilized CoI framework in 3D VWs (see Aebersold et al., 2015; Burgess et al., 2010; Claman, 2015; Hill, 2012; McClannon et al., 2013; McKerlich & Anderson, 2007; McKerlich et al., 2011; Omale et al., 2009; Pellas & Boumpa, 2016,2017; Pellas & Kazanidis, 2014; Pellas, Peroutseas, & Kazanidis, 2013; Reisoğlu, 2014; Traphagan et al., 2010; Zulkanain & Rahim, 2017). The main focus in the earlier studies were on the analysis of the existence of CoI framework in VWs and new indicators for CoI (Burgess et al., 2010; McKerlich & Anderson, 2007; McKerlich et al., 2011; Traphagan et al., 2010). McKerlich and Anderson (2007) designed and developed MUVEEET to observe and evaluating educational event in a MUVE and found that the CoI framework could be applied to VWs. Following the design and development of the MUVEEET, the CoI Survey has been developed by Arbaugh et al. (2008) and validated by and Swan et al. (2008) in the form of questionnaire survey in online courses. Earlier measures of CoI were derived through transcript

analysis (from the researcher's perspective-objectively). The CoI Survey measuring the TP, SP and CP categories of the CoI, from a student's perspective (subjectively) added a new direction to the CoI research (McKerlich et al., 2011). In previous studies, factors affecting the CoI presences in VWs were also explored as below:

- The tool (including sub-factors of "familiarity with the tools", "visual information that the tools provide", and "computer requirements"), task (including sub-factors of "task familiarity", "nature of task"), and group collaboration factors in 3D VWs appeared to affect and/or be affected by TP, SP and CP (Traphagan et al., 2010, p.934).
- The attributes of 3D technology ('avatars', '3-D space', and 'comic style bubble dialogue boxes') promoted SP (Omale et al. 2009).
- The situational interest was the only significant predictor of SP (Pellas & Kazanidis, 2014).
- "The software", "instructional design", "material design knowledge of the design team" and "content and 3D VLE knowledge of teachers; "arrangement of the content"; "using different materials while presenting the content"; "communication-interaction and information tools"; "technical infrastructure" and "student numbers in the environment" affect TP (Reisoğlu, 2014, p. iv).
- "Students' communication and computer usage skills", "communication-interaction", "motivation and guidance tools", "realistic environment design", "properties of the Second Life platform", "technical infrastructure" and "the role of the teacher" affect SP (Reisoğlu, 2014, p. iv).
- "The tools used for communication-interaction, informing, motivation and guidance", "technical infrastructure", "students' computer usage skills", "properties of the Second Life platform", "realistic environment design" and "behaviors of the technical team and teachers" affect CP (Reisoğlu, 2014, p. iv).

- “The academic success of the students” was significantly related with TP and CP levels with small effect (Reisoğlu, 2014, p. iv).
- “3D game experience” affects SP and CP levels (Reisoğlu, 2014, p. iv).
- “Avatars” and “roleplay activities” affect SP. In addition, “roleplay activities in synchronous mode” also affect CP (Ozbek et al., 2017).

Other important aspects from the previous studies implemented CoI Framework into the VWs can be summarized as below:

- Second Life, OpenSimulator, Active Worlds and VenueGen (currently no longer exists) were utilized as a 3D VW platform. OpenSimulator was combined with SLOODLE (Pellas & Boumpa, 2016; 2017) and Scratch4OS (Pellas, Peroutseas, & Kazanidis, 2013)
- Subjects/topics were covered in secondary school, high school (see Ozbek et al., 2017), undergraduate, and graduate courses. They were delivered by synchronous and asynchronous mode in online and blended environments. In addition, Hill (2012) examined factors that may or may not contribute to the adoption of the innovation of VWs by librarians. Furthermore, Reisoğlu (2014) examined various factors that affect the level of TP, SP, and CP (“grade level”, “computer game experience” and “3D game experience” and factors that affect these components of CoI framework) and their relation with academic success in a course at secondary school developed for informing and raising awareness in winter sports.
- In these relevant studies, the number of the participants ranged between 8 and 204.

Previous studies showed that CoI framework can be used for VWs and the CoI survey is an effective tool to measure teaching and learning effectiveness in virtual worlds (McKerlich et al. 2011). However, King (2018) criticized CoI framework due to the lack of motivation factor which was crucial in language education and stressed on the need of additional motivation component to the CoI framework to ensure a better supported learning experience. In addition, Zulkanain and Rahim

(2017) offered enhancement of CoI framework with the inclusion of instructor presence “with an aim to be used as a guideline to improve learning session with the instructor” (p.113). Adding additional component to the CoI framework to be more meaningful as a framework is one of the recommendations in the CoI literature (Castellanos-Reyes, 2020). Researchers suggested adding learner presence (Shea et al.,2012), emotional presence (Cleveland-Innes & Campbell, 2012), autonomy presence (Lam, 2015), and regulatory presence (Kilis & Yıldırım, 2018) to the CoI framework (see also Armellini & De Stefani, 2016; Dunlap, Verma, & Johnson, 2016).

In terms of language education, few emerging studies were conducted on CoI framework applied in 3D Virtual Language Learning Environments (3D VLLEs) (e.g. King, 2018; Ozbek et al., 2017; Pellas & Boumpa, 2016, 2017). Pellas and Boumpa (2016) examined the comparative perspectives on the efficacy of SLOODLE and OpenSim as a 3D web-based platform for Continuous Professional Development of preservice foreign language teachers to learn basic terms related to Information Technology literacy, using the CoI model as a theoretical framework focusing on user experiences with the development of 3D VLE activities. The components of the CoI have been used to foster interaction and encourage participation in blended synchronous mode (Pellas & Boumpa, 2016).

In another study of Pellas and Boumpa (2017) on CPD, the impact of the experiences of pre-service foreign language teachers on their CPD in OpenSimulator using SLOODLE was investigated using a theoretical framework of instructional design including the CoI model and the Jigsaw teaching technique. The CoI model was used in the study to identify the experiences and relationships of pre-service foreign language teachers in a learning community and as an instructional design tool to test the efficacy of preservice teachers' CPD in synchronous communication modes (Pellas & Boumpa, 2017).

In the research of Ozbek et al. (2017), two activities ‘introducing an innovation’ and ‘role playing’ in Second Life are planned to improve the speaking skills of

English-language learners and qualitatively assess the roles and outputs of Turkish language learners before, during and after the implementation of the two activities through the CoI model, consisting of CP and SP. The CoI model was used as a theoretical framework to analyze the roles and outcomes (perceived benefits of the participants from the 3DLE).

A thesis study conducted by King (2018) investigated how college students in a 3D VLE (i.e., Second Life) learn Spanish as a foreign language and they designed a tool for Spanish Heritage Language Learners (SHLLs) studying their Heritage Language. The CoI framework was used to frame each stage conceptually in the development of tasks for SHLLs to be performed in 3D VLE. Specifically, it was used to determine how to balance the online class (Second Life Language Lab) between structuring and directing the learning experiences of SHLLs (for TP), socially engaging them with peers and other Spanish speakers (for SP), and also promoting higher-order thinking while reflecting on these experiences (for CP) (King, 2018).

Considering the previous research on CoI application to 3D VLEs in language education field, researchers used CoI Framework as an instructional design mean, in other words, as a theoretical model for several purposes. For example for the development of an instructional design framework focusing on users' interactions (Pellas & Boumpa, 2016), to discuss the Turkish Foreign Language Learners' roles and outputs (Ozbek et al., 2017), for pedagogical design of Second Life regarding task design, and for SHLLs to be performed in Second Life (King, 2018).

In addition, the CoI Survey was used as a rubric for formative evaluation of the learning process, for example for the measurement of the learning process of preservice teachers in synchronous communication modes (Pellas & Boumpa, 2017). By the implementation of CoI framework as an instructional design mean, studies showed positive results regarding effective teaching and learning, high learning gain, meaningful learning (Pellas & Boumpa, 2016), and meaningful outcomes (Pellas & Boumpa, 2017).

Ozbek et al. (2017) claimed that avatars helped to strengthen the relationship between student-student and student-teacher by enabling communication. They stated, “It is possible to state that social presence is also high in a real-life context where students choose their favourite avatar and work on speaking” (Ozbek et al., 2017, p. 296). Moreover, roleplay activities in which the students worked actively and performed the different scenarios through their avatars in small groups increased SP. Considering CP, they claimed that “the interaction between the teacher-students and the social environment is higher in the role-playing activity” (Ozbek et al., 2017, p.296). The study was performed in synchronous format, but written preparation in all the teaching strategies influenced the success of students positively. Students’ spontaneous response to the questions without following the scenario and finding the correct answer through discussion affected CP positively.

Considering the findings of the reviewed studies, CoI framework could be helpful in designing and evaluating educational experiences for 3D VLLEs and it may create a deep and meaningful learning by collaborative and constructivist experience through the development of its TP, SP and CP. The affordances of 3D VLLEs provide an opportunity to the development of learning community in which learners engaging authentic or complex experiential learning tasks, collaboratively. It may lead to increase their intrinsic motivation and engagement (Dalgarno & Lee, 2009).

2.3 Gaps in the Literature

In literature, there is an increasing number of studies of CoI applied in the language education field in online and blended environments using a variety of technologies (e.g., González Miy & Herrera Díaz, 2015; Schumann, 2019; Solimani, et al., 2019; Xu, 2019; Wu et al., 2017; Zhang & Zou, 2020). However, few studies investigated the implementation of the CoI Framework into 3D VLEs, in the language education field (e.g., Pellas & Boumpa, 2016, 2017; Ozbek et al., 2017; King, 2018).

Considering the relevant studies applied the CoI framework in the 3D Virtual Language Learning Environment, only the study of Ozbek et al. (2017) conducted research on the enhancement of English language learners' speaking skills. This study was aimed at high school students.

When the literature review in this thesis and relevant studies mentioned above are examined, the CoI Framework was used as an instructional design mean (in other words, as a theoretical model). Among these studies, Pellas and Boumpa (2017) employed both CoI model as an instructional design mean and CoI Survey as rubric to measure of the learning process. The limited number of studies made it difficult to draw conclusions on the results for exploring the implications of CoI framework on 3D Virtual Language Learning Environment. However, it can be concluded that implementation of CoI framework as an instructional design mean in 3D VLLEs revealed positive results for effective teaching and learning: high learning gain and learned meaningfully (Pellas & Boumpa, 2016), more meaningful outcomes (Pellas & Boumpa, 2017).

Although English Preparatory (EP) Program of Başkent University (workplace of the researcher and research setting), focus on communicative approach in the classes, the instructors from Faculty of Education also observed that many EFL learners still face difficulties in speaking at foreign language classes.

The factors influencing the components of the CoI framework in creating courses for the undergraduate level for an effective speaking skill built in such 3D VLE, constructivist and collaborative learning environment are unknown.

Although 3D VW has beneficial affordances and results in language education only few studies have used the CoI framework. There is little information about the effects of CoI framework on language learning environments and the factors affecting its constituent elements (TP, SP, and CP).

In this study, the developed English-speaking module in 3D VLE will be evaluated by using CoI Survey and MUVEEET together and suggestions will be made for the

improvement of CP level results. In this way, although 3D VWs have beneficial opportunities and results in language education, it will be a comprehensive example of studies in which very few studies integrated CoI frameworks in the field of language education. In this way, it will be able to serve as a guide for practitioners and researchers in this field.

CHAPTER 3

METHODOLOGY

This chapter presented the research methodology and the rationale for the research design. Firstly, the research questions that provided a basis for the methodology were introduced. Then, research design of the study and the justification for the design were presented. After that, research context including the synchronous online English-speaking module, speaking tasks (specifically, including reasoning-gap activities), and virtual learning environment (including 3D VLE called as TeachinGrid and its design and development process, SLOODLE, Moodle and Zoom) were explained. Then, information about the pilot study, case and participant selection procedure and main study were presented. After that, sources of data and instruments, and overview of the data collection procedure were explained. Then, the data collection procedure, and data analysis were presented. Lastly, trustworthiness, ethical considerations, delimitations, and limitations of the study are explained.

3.1 Research Questions

The main aim of this study is to explore factors that may influence cognitive presence of EFL learners when they engage in reasoning-gap activities in a synchronous online English-speaking module built in a 3D VLE specifically in OpenSimulator with SLOODLE. In addition, the second aim of the study is to understand the EFL learners' cognitive presence (CP) levels based on self-report and direct observation method. This aim was added to help in the understanding of the community in which factors influencing CP was emerged. The research questions of this research study are listed below:

1. What are the cognitive presence levels of EFL learners engaging in reasoning-gap activities in the synchronous online English-speaking module within a 3D VLE (specifically OpenSimulator with SLOODLE) based on self-report and direct observation?
2. What are the factors that influence cognitive presence levels of EFL learners engaging in reasoning-gap activities in the synchronous online English-speaking module within a 3D VLE (specifically OpenSimulator with SLOODLE)?

3.2 Overall Research Design of the Study and the Justification for the Design

Investigating the factors influencing CP levels of EFL learners in a synchronous online English-speaking module in 3D VLE requires an in-depth study of the processes and settings using multiple data collection methods and data sources. Therefore an indepth qualitative case study design (exploratory, holistic single-case study) was used in this study. Due to the nature of the research questions, the study was formed by a constructivist/interpretivist paradigm that included a belief in relativist ontology ("there are multiple realities"), a subjectivist epistemology ("knower and respondent co-create understandings"), and naturalistic ("in the natural world") methodology (Denzin & Lincoln, 2018, p.57). The overall representation of the philosophical and methodological approaches employed in the study presented in Table 3.1. Figure 3.1 illustrates the timeline of overview of the study.

Table 3.1 Selection of Philosophical and Methodological Approaches for the study

Elements	Selected Approach for the Study
Paradigm	Constructivist/Interpretivist
Ontology	Relativist
Epistemology	Subjectivist

Methodology	Naturalistic Inquiry
Method	Qualitative Research
Qualitative Research Approach	Exploratory, Holistic Single-Case study

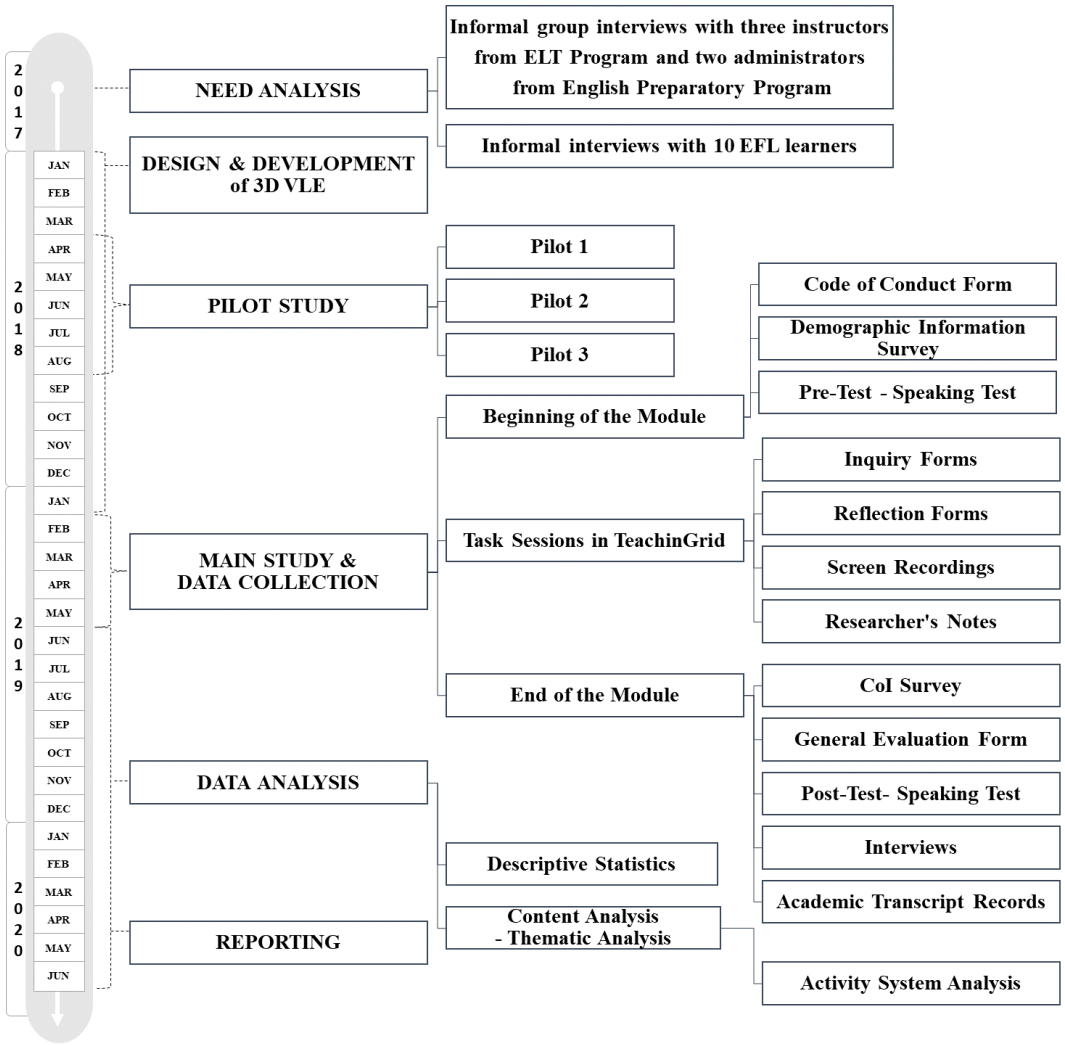


Figure 3.1 Timeline of the Study

The synchronous online English-speaking module was the bounded system, and the topics including reasoning gap activities within the synchronous online English-speaking module developed by the researcher was the context. Table 3.2 shows the research methodology at a glance. The instruments for data collection were presented separately according to each research question and summarized in Table

3.3 and Table 3.4. In addition, Table 3.5 shows the trustworthiness of the study at a glance.

Table 3.2 The Research Methodology at a Glance

Research Components	Descriptions
Method	Qualitative single-case study - Holistic, exploratory case
Bounded System of the case	3D VLE - OpenSimulator utilizing SLOODLE (TeachinGrid) - Including a synchronous online English-speaking module
The Phenomenon	EFL learners' cognitive presence in synchronous online English-speaking module within a 3D VLE
Participants	EFL Learners at undergraduate level - 21 pre-service English language teachers
Selection	Purposive Sampling - Criterion-based sampling technique - Enrolled in a first-year course, titled as Computer II course, in the Spring semester of 2018-2019 Academic Year, - Studying at the Faculty of Education, Department of Foreign Languages, English Language Teaching Program, - Volunteer to participate to the study.
Setting/Site	Başkent University, Faculty of Education, Department of Foreign Languages, English Language Teaching Program - A foundation university, in Ankara, Turkey
Context	Reasoning Gap Speaking Tasks for English language - 4 real-life contexts: Task 1- Department Stores, Task 2- Phobias, Task 3- Railway Station of Future, Task 4- Fake

Research Components	Descriptions
	or Real News

Table 3.2 (continued)

Research Components	Descriptions
Data Collection, Data Sources & Instruments	Surveys and Forms - Demographic Information Surveys (for the EFL learners and for the instructor) - Community of Inquiry (CoI) Survey - Inquiry Form - Reflection Forms (for the EFL learners and for the instructor) - General Evaluation Forms (for the EFL learners and for the instructor) Interviews - Interview Protocol Observations and Task Sessions' Screen Recordings - Modified Multi-User Virtual Environment Education Evaluation Tool (MUVEEET) - Form - Emerged Tensions in 3D VLE - Form - Researcher's Notes by the direct observations throughout task sessions Documents - Researcher's Notes - Academic Transcript Records of Participants - Speaking Exams
Data Analysis	Descriptive Statistics (for the data derived from the CoI Survey) Thematic Analysis following by constant comparative

Research Components	Descriptions
	method
	Activity System Analysis following the thematic analysis

Table 3.3 Research Question 2 and Instruments for Data Collection

Data Source	Instrument	Created by	Filled by	Data Type Gathered	Phase Employed		
					Beginning	During	End
Surveys and Forms	CoI Survey	Original – Arbaugh et al. (2008) Turkish Translation – Öztürk (2012)	EFL Learners	Quantitative			✓
	Inquiry Form	The researcher	EFL Learners	Qualitative		✓	
Screen Recordings of task sessions in 3D VLE	Modified MUVEEET – Observation Form	Original - McKerlich and Anderson (2007) accompanying by the coding scheme – Shea et al. (2010)	The Researcher and multiple observers	Both Qual and Quan			✓

Table 3.4 Research Question 2 and Instruments for Data Collection

Data Source	Instrument	Filled by	Data Type Gathered	Phase Employed		
				Beginning	During	End
Forms and Survey	Demographic Information Survey [a]	EFL Learners	Quantitative	✓		
	Reflection Form for the EFL Learners	EFL Learners	Qualitative		✓	
	Reflection Form for the Instructor	The Instructor	Qualitative		✓	
Interview	Interview Protocol	EFL Learners	Qualitative			✓
Screen Recordings of task sessions in 3D VLE	Emerged Tensions in 3D VLE - Observation Tool	The Researcher and multiple observers	Qualitative			✓

Note. All the instruments developed by the researcher.

[a] It was used to measure demographics and support the data analysis phase

3.2.1 Case Study Design

In order to achieve research purposes, exploratory case study methodology was utilized. Several researchers defined case study a little differently. Yin (2014) defined the case study as "an empirical method that investigates a contemporary phenomenon (the case) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (p.16). Merriam and Tisdell (2015, p.40) defined a qualitative case study as "an indepth description and analysis of a bounded system". Whereas Creswell (2013) defined it detailed as "case study research is a qualitative approach in which the investigator explores a bounded system (a *case*) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving *multiple sources of information* (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a case *description* and case-based themes" (p. 97).

Yin (2003) claimed that the case study contains at least five different applications. Exploratory case study, one of these strategies, "may be used to explore those situations in which the intervention being evaluated has no clear, single set of outcomes" (Yin, 2003, p.15). This study employed a qualitative approach; exploratory case study design in which quantitative and qualitative data were collected. The study focused its attention on the central phenomenon of 'factors influencing CP in a 3D VLE'. Furthermore, it required an in-depth investigation of the EFL learners in 3D VLE (a bounded system; a case) to present experiences from their own viewpoints and phenomenon in its natural world without influencing the participants' behaviors.

Moreover, Yin (2018) claimed that "the single-case study is an appropriate design under several circumstances, and five single-case rationales—that is, having a critical, unusual, common, revelatory, or longitudinal case" (p.52). This single case study using holistic design can be considered as a critical case in testing of existing

theory which was CoI framework containing research gaps in its implementation to the 3D VLLEs.

3.2.2 Determination of the Case

Although English Preparatory (EP) Program of Başkent University (workplace of the researcher and research setting), focus on communicative approach in the classes, the instructors from Faculty of Education also observed that many EFL learners still face difficulties in speaking at foreign language classes. For EFL learners' difficulties on English speaking skills at Faculty of Education, informal group interviews and brainstorming with two EP Program administrators and three instructors from English Language Program, at the Faculty of Education were conducted. In addition, the researcher had informal conversations with EFL learners at the Faculty of Education to collect their thoughts on this issue. The informal meetings showed that difficulty in foreign language speaking skills was common among the EFL learners at the Faculty of Education in Başkent University. They reported that it was important to change some part of their curriculum, add extracurricular course, or any other method to use and develop students' foreign language speaking skills. Most EFL learners showed willingness to attend any activities or courses for practicing speaking English. More surprisingly, EFL learners from Department of Foreign Languages at the Faculty of Education were also in these group of students facing difficulties in speaking. Components of the research design and their justifications for this study were given below:

a. Bounded system:

A bounded system can be defined as a "single entity, a unit around which there are boundaries" (Merriam & Tisdell, 2015, p. 38). Specifically, the case in this study was bounded by

(a) Geographical Location / Place

(Country, City, Foundation University, Undergraduate Program and Course)

- Turkey, Ankara
- Başkent University, Faculty of Education, Department of Foreign Languages, Undergraduate Program in English Language Teaching
- 'Speaking Tasks in a 3D Virtual Learning Environment'- Module integrated into Computer II - Course

(b) time period (6 weeks)

- Spring Semester of 2018-2019 Academic Year
- Period of Total Data Collection: February 20th, 2019 – May 31st, 2019
- Period of Task Sessions: February 20th, 2019 – April 10th, 2019

(c) conceptual framework of the study

- Community of Inquiry
- Cognitive presence (CP in the 3D VLE and factors influencing CP)

This single case study employed the qualitative approach. It mainly focused attention on the phenomenon of 'factors influencing CP in a 3D VLE'. A speaking module in 3D VLE ('Speaking Tasks in a 3D Virtual Learning Environment' - Module integrated into 'Computer II' – Course) was the bounded system, and reasoning gap English speaking tasks developed by the researcher were the context.

b. Nature of research questions:

In order to explore the research subject through an investigation of the research questions, an exploratory, holistic single-case study research design were chosen. As suggested by Yin (2003, pp. 5-6), research questions start with 'how' and 'what' are exploratory by nature and could be used for exploratory case studies. The research questions formulated for this study were in exploratory form. This research explored the level of CP of EFL learners and the factors that may affect the level of CP in a 3D VLE by asking 'what' questions.

3.3 Context of the Study

3.3.1 Setting and Informal Need Analysis

This study was conducted in Başkent University, one of the foundation universities of Ankara in Turkey. There are 12 faculties, 7 vocational school, 7 Institutes, the state conservatory, and the School of Foreign Languages in the university. The university provided 45 associate, 61 undergraduate, 90 master, and 26 PhD degree programs with around 17,000 students in total. The Faculty of Education had 6 departments (i.e., "Basic Education", "Computer Education and Instructional Technology", "Educational Sciences", "Foreign Language Education", "Mathematics and Science Education", and "Turkish and Social Sciences Education") with 9 programs.

At the foundation university, to assist students to develop better spoken and written communication skills in English, EP Program was a must course and a prerequisite for the students who enroll in undergraduate programs that provide instruction partially or completely in English. However, this program was optional for the students who enroll in undergraduate and other programs that provide instruction in Turkish.

Informal group interviews on EFL learners' difficulties related to English speaking skill at Faculty of Education were conducted to brainstorm on the possible solutions with two EP Program administrators (subject matter experts) and three foreign language instructors (subject matter experts) from ELT Program at the Faculty of Education. They claimed that the communicative approach was applied for teaching in English-speaking courses in EP Program and Faculty of Education. One of the administrators of EP Program added that:

> *We try hard to help our students develop communicative competence for real life settings and situations.*

Another EFL instructor at the Faculty of Education stated that

> *Ideally, communicative language teaching is expected to be employed to teach oral communication skills. However, as far as I know based on my students' feedback, this is not the approach used in their speaking lesson. Although this may also depend on the instructor's teaching style, I do not think this course has not been given the attention it needs in terms of communicative approach being utilized.*

EFL learners completed the Preparatory Program at B1 + level based on the Pearson GSE scale (Başkent University School of Foreign Languages, 2018). The researcher asked about the speaking level of EFL learners studying at the Faculty of Education when they finish the EP Program. They shared mixed opinions. One of the administrators of EP Program stated as below:

> *Most of these students are B2 ones. At his level they can interact with a degree of fluency and spontaneity. However, they need to express themselves in more contexts, including unfamiliar topics.*

Some of the EFL instructors from ELT Program stated as below:

> *I think it depends on the previous background of the student, some of them are satisfactory but others are still unsatisfactory.*
>
> *I believe that the number of students who are really proficient, like at C1 level, is quite low. As there are not many students who study at preparatory school, it is hard to make generalizations. However, I had ten students who completed their preparatory school program and they were like B1 or B2 level.*

All of them confirmed that EFL learners from the Faculty of Education faced problems about English language speaking skills. One of the administrators of EP Program stated their speaking problems as below:

Accuracy, fluency, correct vocabulary items, lacking enough exposure to the target language.

Some of the EFL instructors from ELT Program stated their speaking problems as below:

Fear of negative evaluation and mostly lack of communicative, pragmatic competence.

I believe some students really struggle with speaking in front of public and fear that they would mistake, and their peers would make fun of them. Their low self-confidence prevents them from making the effort to produce any sentences orally. Some do not have the necessary vocabulary knowledge to talk about some topics.

They briefly summarized the reasons of English-speaking problems of EFL learners from Faculty of Education as stated below:

Motivational problems, anxiety, not having enough practice, boring tasks, not using technology.

Lack of self-confidence and low proficiency level.

I believe the main reasons of English-speaking problems are fear of making mistakes, nervousness, low self-confidence, and insufficient vocabulary knowledge.

The informal interviews showed that although EP Program of Başkent University (workplace of the researcher), focus on communicative approach in the classes, the instructors from Faculty of Education also observed that many students still face difficulties in speaking English at foreign language classes. They believed that English speaking courses and their course hours at the foundation were not enough. They believed that there should be more speaking courses. One of language instructor from ELT Program stated that:

I believe that the weekly course hours, two hours a week, are not enough as the classrooms are generally too crowded for instructors to conduct their speaking courses in an efficient way. Due to this reason, I believe we need to prepare materials, activities and tasks which provide the learners with the opportunity to practice their oral communication skills out of the class environment.

Some of their suggestions for preventing the speaking problems of the EFL learners from/at Faculty of Education as given below:

Highly appealing contexts, new topics, integrating technology, meaningful tasks, out-of-class practice opportunities and assignments.

Learner friendly atmosphere in classroom and encouragement.

We need to provide them with many opportunities to upgrade themselves and their language skills. We can make use of educational media instruments such as videos and podcasts. another way can be to make use virtual worlds because these students are digital natives and they enjoy the lessons more if technology is integrated to the courses. Virtual worlds can help us to extend the learning environment for the students by using it as an integrated part of the lesson.

Some of their thought about the 3D Virtual Worlds (Second Life, OpenSimulator) in foreign language classrooms as given below:

I think it will make English classes, especially speaking and listening ones, much more fun and attractive. Therefore, they will not get bored easily.

Yes, it can be a good solution.

I believe games have a significant impact in drawing learners' attention and increasing their motivation towards the lesson. As they adapt a new role or identity through these games, they feel more comfortable in speaking in English or do not fear that they would make mistakes while speaking. As

they progress throughout the games, their self-confidence also increases because they feel less nervous compared to real environment. In time, they can transfer these skills into their real life. So, these virtual worlds can be considered as anxiety-free world in this context. Due to all these reasons, I think it can be one of the solutions for speaking problems of EFL learners.

In addition, some of their thought about using communicative Task Based Language Teaching in the foreign language classrooms as given below:

It is one of the most interactive ways to engage learners in meaningful goal-oriented communicative tasks which are designed carefully.

As it is learner-oriented and based on their needs and interests, it works in EFL classroom.

I believe it is a vital approach whose principles we should follow especially if we are employing an eclectic approach. As the aim of speaking courses is to foster learners' oral communication skills and prepare them for the real world, we need to design communicative tasks which include situations the learners can come across in the real world. In this respect, I believe this approach has a lot to offer to the learners.

In addition, the researcher had informal interviews with 10 undergraduate EFL learners who were available at the Faculty of Education to collect their thoughts and experiences regarding their foreign language speaking skills. Informal interviews with EFL learners were held in the seating space in front of the Faculty of Education. The informal interviews showed that difficulty in foreign language speaking was common among the EFL learners. They reported that a solution is needed to help them improve their foreign language speaking skills such as adding new speaking courses (as an extracurricular course), changing the content of the speaking courses, or any other solution. Most of EFL learners who were interviewed showed willingness to attend any activity or course to practice speaking English. More surprisingly, some of the interviewees were the EFL

learners from the Department of Foreign Languages at the Faculty of Education and they also reported difficulties in speaking.

For this study, EFL learners studying at the Faculty of Education, Department of Foreign Languages, ELT Program was considered as the most appropriate participants for the research study. Because they had a prior history of language education in high school extensively and assumed to have minimal 'barriers to English language'. In addition, the features of those participants could mirror the potential target population for which an effective language module within 3D VLE is needed to design and developed at the Faculty of Education of the foundation university.

3.3.2 Speaking Tasks in a 3D Virtual Learning Environment - Module

A 6-week undergraduate-level online module titled as 'Speaking Tasks in a 3D Virtual Learning Environment' was developed and integrated into Computer II course in 2018-2019 spring semester at the Faculty of Education. Brief information about the Computer II course was given below:

Computer II is a 4 hours-must course (2 hours for theory and 2 hours for practice) in spring semester for the freshmen students at the Faculty of Education and given face to face and supported by online education utilizing Moodle. It was provided between February 2019-April 2019. The course covers many topics including historical development of Computer Supported Learning (CSL), types of CSL including simulations, open ended learning environments, tests, web based training, educational games, evaluation of the Computer Supported Learning software, and applications of Web 2.0 tools into the education. In this course, in previous years, the EFL learners had not found a chance to benefit from the affordances of 3D VLEs. They were given theoretical information and some limited applications of 3D VLEs in foreign language education for the students studying at ELT Program. In the course, there was one mid-term (25%), one project (15%), 5 assignments

(15%), and one final exam (45%). After the integration of the module for this research, the grading policy of the Computer II course has changed as: one mid-term (25%), one project (15%), 2 assignments (5%), and one final exam (45%), and this module (%10).

The 'Speaking Tasks in a 3D Virtual Learning Environment' Module was integrated to Computer II course and it was at the B2 level of the Common European Framework of Reference for Languages (CEFR)[1]. The aim of the module was to provide EFL learners reasoning gap activities and learning events that would enable them to improve oral skills in English upon completion of the course. The module included collaborative and brainstorming activities to support and facilitate CP of the participants. The module was made up of a total of 4 tasks. The tasks took place on the educational island of TeachinGrid which was designed and developed by the researcher in OpenSimulator utilizing SLOODLE. The activities were held on a weekly basis and lasted approximately 90 minutes each.

Since the module was conducted in a part of Computer II course, the following modifications were made in Computer II course in order to integrate the 'Speaking Tasks in a 3D Virtual Learning Environment' Module in this research study:

- The EFL learners were attended to 3D VLE in-class task sessions during the research process in the practice hours (2 hours) of Computer II course. These sessions were managed by one ELT instructor, controlled by the researcher, and informed to the Computer II course instructor weekly about the research process.
- Participants who were accepted to attended to the research would be awarded by the Computer II course instructor by maximum 10 points. The point that the EFL learners would be awarded was determined according to the performance of the participant by the EFL instructor. EFL learners'

[1] The full title is the "*Common European Framework of Reference for Languages: Learning, Teaching, Assessment*".

performance was evaluated by both formative and summative methods. The "grading policy" for this part of the course consisted of 2 points for the speaking proficiency exam as a pre-test before the study (February 2019), 6 pts for the group performance, weekly reflection assignments, completion of training, training activity assignment and training quiz, and 2 pts for the speaking proficiency exam as a post-test after the study.

3.3.2.1 Speaking Tasks

The syllabus of the English-speaking Module was initially based on the syllabi of previously run courses at English Preparatory School of the foundation university. Task topics were the speaking activity sections of certain units concerning real life experiences in the course book - "New Headway English Course – Intermediate Student's Book (Fourth Edition)" (Soars & Soars, 2013). The units and objectives were selected based on whether the topics had covered real life experience with the collaboration of three experts in the ELT Program.

The researcher having an experience as an instructional designer and graduated from English Language Teaching Program started out with a general framework of the speaking module and prepared reasoning gap activities for the selected units. Four authentic tasks for speaking skill were designed for EFL learners at independent user level (B2) by the researcher. During the design of the tasks, Communicative Task-based approach was applied.

Prabhu (1987) referred a reasoning gap task as "the new information that are derived by the students through inference, deduction, practical reasoning, or perception of relationships or patterns" (p.46). It involves deriving some new pieces of information and getting the final answer by comprehending and conveying the clues hidden in the contexts or the restrictions or conditions given by the instructor. There are clues to be found, answers must be agreed upon, and the task needs to be discussed with all group members to accomplish them. For 3D

VLE, in reasoning gap tasks, basic information and the clues for accomplishing the task were given to participants or hidden in the surroundings within the environment. Group members should observe their surroundings to collect the hidden clues, brainstorm and discuss with each other to successfully accomplish the task.

After the development of tasks, they were evaluated and reviewed by a group of experts at the ELT Program (3 experts in the field of ELT as external auditors) before the pilot study. In this process, "Checklist for Evaluating Tasks" modified from Nunan (2004)'s "Checklist for evaluating communicative tasks" was utilized (see Appendix A). They analyzed each task and filled the form. Then, the researcher checked the comments and discussed with the experts. After the discussion and reaching the consensus on the tasks, they were ready for the pilot study.

As mentioned before, in this study, reasoning gap tasks were created to facilitate the CP of EFL learners. Guidelines and plans for each task were given to the instructor before each task sessions and the instructor had the right to change the course of the task session if it was needed. The task sessions were prepared to be held on a weekly basis and lasted approximately 100 minutes each. Order of the speaking tasks were depicted in Figure 3.2.

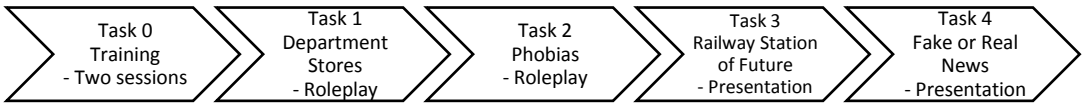


Figure 3.2 Order of the Speaking Tasks

Four authentic tasks listed below were provided after training sessions where the researcher made sure that EFL learners were able to access the TeachinGrid 3D VLE from the Computer Lab at the Faculty of Education at the foundation university. Also, to make sure that they were able to use the basic communication functions of voice chat, teleporting, and movement in the environment. Speaking task plans were summarized below and presented in Appendix B.

Task 0 – Training

During Task 0, the researcher provided information to EFL learners about Policies and Legal Agreements (i.e., Code of Conduct), User credentials (i.e., pseudonyms), Typical Lesson Timeline, Evaluation, Technical Details (i.e., preparation of microphones), Presentation System Head Up Display (HUD), Possible Technical Difficulties and what to do about them, and the Contact Information of the researcher (as an technician). In Task 0, participants connected to TeachinGrid and test their avatars in the environment. They were required to click on SLOODLE Registration Enrollment Booth to connect their avatars with Moodle at first login. They visited each training areas and click on SLOODLE trackers after they read and fulfilled the instruction on the information boards at the training area. SLOODLE trackers were used to keep track of their progress on the completion of training. At the end of the training, participants sat on SLOODLE Quiz Chair to take the training quiz. Training took for 100 min. in the main study (50 min x 2 sessions).

Task 1 – Department Stores

The main objective of Task 1 was to enhance speaking skills of EFL learners via role-play conversations (Min. 3 min, Max. 5 min) in the departments of the shopping center in TeachinGrid. By the end of this session, EFL learners would be able to:

- State intention to purchase items, to ask price of items, and to request correct change when incorrect change is received.
- State clothing needs, including color and size, and delivery, asking for gift wrap, its' material produced, or conditions/duration of guarantee, type of pay and the cost.
- Use appropriate signs at the shop during the conversations on the 3D VLE.

Task 2 – Phobias

The main objective of Task 2 was to develop speaking skills of EFL learners via role-play conversations (Min. 3 min, Max. 5 min) on phobias. By the end of this session, EFL learners would be able to:

- Talk about/share the story (real experience) something that people they know is afraid of, when it started and how it affects his/her life using the phrases they have learned.
- Identify different types of common phobias by completing a scavenger hunt in the 3D VLE.
- Create news about a weird phobia by completing a role-playing.

Task 3 – Railway Station of Future

The main objective of Task 3 was to develop speaking skills of EFL learners by discussing on the Railway Station of Future. By the end of this session, EFL learners would be able to:

- Talk about travelling by train and famous Railway Stations around the world.
- Share a story (real experience) positive and/or negative experiences by travelling train.
- Rank some features of railway station according to their choice.
- Prepare a presentation of 2030's Railway Station considering its location, physical appearance, facilities, etc. for the "Railway Station-2030 Competition".

Task 4 – Fake or Real News

The main objective of Task 4 was to develop of EFL learners their speaking skills by discussing on newspapers. By the end of this session, EFL learners would be able to:

- Talk about the newspapers in their country (best reputation, popular, sport, scandal)
- Create a mind map how to spot fake news.
- Identify fake or real news by playing game called as Factitious.
- Create a fake or real news for the newspaper with the headline.

3.3.2.2 Speaking Tasks in a 3D Virtual Learning Environment at a glance

The module titled as 'Speaking Tasks in a 3D Virtual Learning Environment' is given at a glance in Table 3.5.

Table 3.5 Speaking Tasks in a 3D Virtual Learning Environment - Module at a Glance

Decision on	Description	Details
Syllabus of the module	- Syllabi of previously run courses at English Preparatory School - Speaking activity sections in "New Headway English Course – Intermediate Student's Book (Fourth Edition)" (Soars & Soars, 2013)	The book was used as the course book at English Preparatory School of the foundation university.
Selection of the units	Topics covering real life experience	The units were selected with the consultation of a group of experts in the ELT Program.

Decision on	Description	Details

Table 3.6 (continued)

Decision on	Description	Details
Approach	Task Based Language Teaching	- Communicative approach focusing on the use of authentic language was applied.
Tasks	4 Reasoning Gap Tasks (Task 1- Department Stores, Task 2- Phobias, Task 3- Railway Station of Future, Task 4- Fake or Real News)	- Tasks included roleplay, presentations, games, and scavenger hunt.
Suitability of the tasks	Evaluation by "Checklist for Evaluating Tasks"	- After the development of tasks by the researcher, they were evaluated and reviewed by a group of experts at the ELT Program (3 academicians in the field of ELT as external auditors) before the pilot study. - The checklist was modified from Nunan's (2004) "Checklist for evaluating communicative tasks".
Target Participant	CEFR Level - Independent user level	- The participants were assumed as Independent Users (B1-B2) at English Proficiency Level of CEFR since they had completed the English

Decision on	Description	Details
		Preparatory Program.

3.3.3 Virtual Learning Environment used in this Research

In this research study, TeachinGrid, a 3D VLE built in OpenSimulator utilizing SLOODLE was designed and developed to provide EFL learners to improve and practice their speaking skills by communicative speaking tasks at various areas, including social, presentation and discussion areas, shops (e.g., a florist), and a train station.. Additionally, Moodle was used as a supplementary part of the online learning environment for the announcements of the new tasks, retrieval, and submission of documents (help documents, presentation).

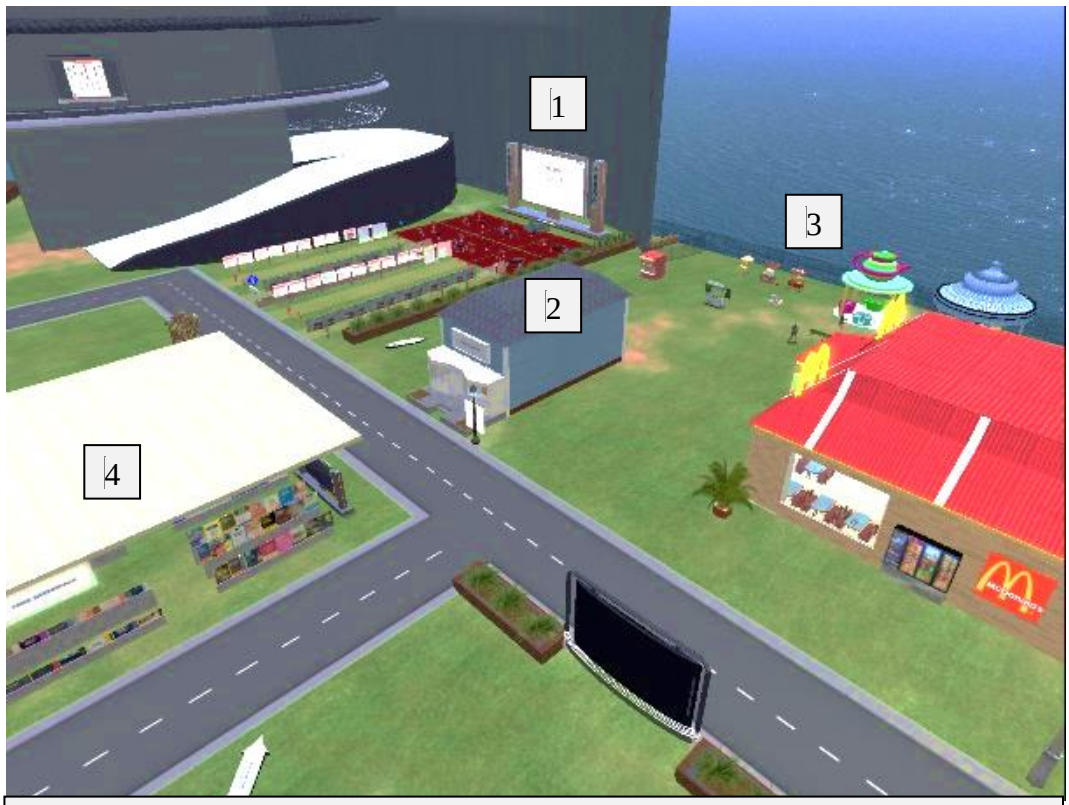
3.3.3.1 TeachinGrid - 3D VLE

TeachinGrid built in OpenSimulator utilizing SLOODLE was designed and developed by the researcher to provide EFL learners a 3D VLE where they could improve and practice their speaking skills by reasoning gap tasks. To reach the goals in the 3D VLE, it was included both individual and group activities and equipped with various supporting tools, such as presentation tool, web browser tool, SLOODLE Choice tool, information boards, etc.

For the development of TeachinGrid, an OpenSimulator Standalone Region (empty) was rented from one of the OpenSimulator hosting companies by the researcher with the allocation extra budget. The hosting service enabled a server interface that simplifies new terrain uploading process, saving an OpenSimulator Archive (OAR), and adding users. The region allowed between 24'000 - 48'000 prims. The server had 1024 MB memory and the region allowed the maximum 40 visitors.

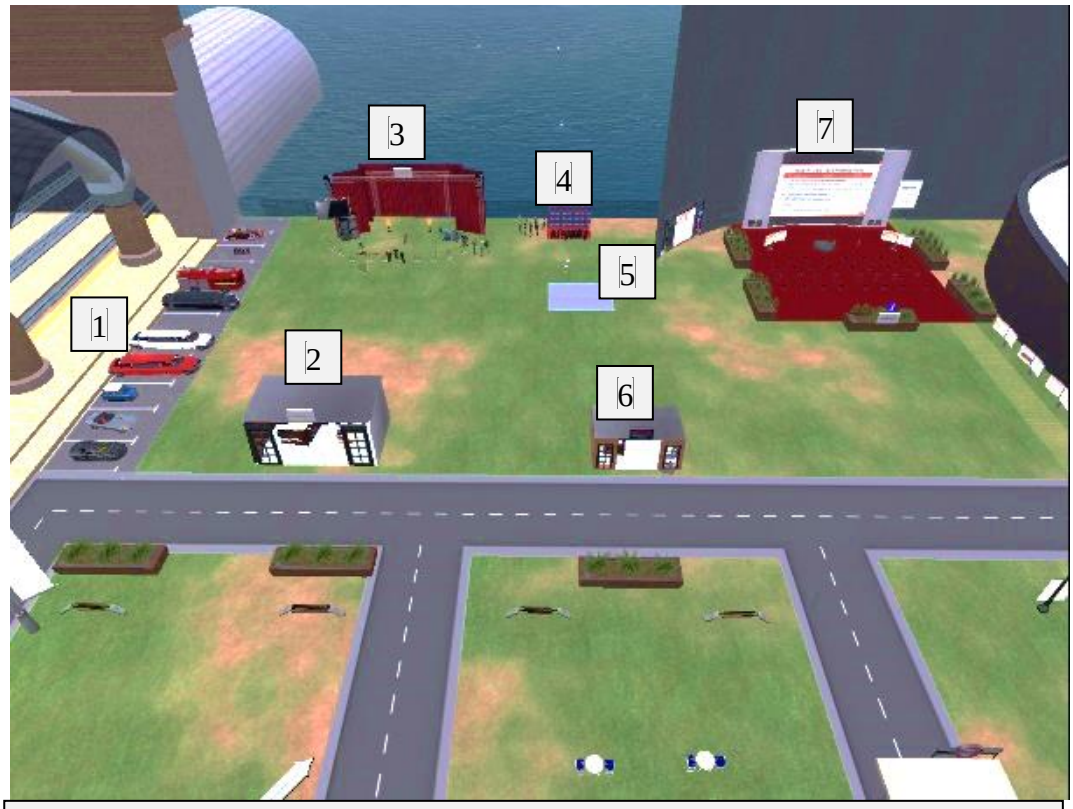
The researcher created scenarios for 3D virtual environment design, areas that give information about the use of 3D virtual environment, teleportation areas to facilitate navigation, orientation objects, social and presentation areas. The researcher also added SLOODLE tools into the learning environment. Pre-made

OARs were utilized and helpful for the development of some areas on TeachinGrid. Various views from TeachinGrid 3D VLE are given in Figure 3.3., Figure 3.4, Figure 3.5, and Figure 3.6 (See for other views in Appendix D) below:



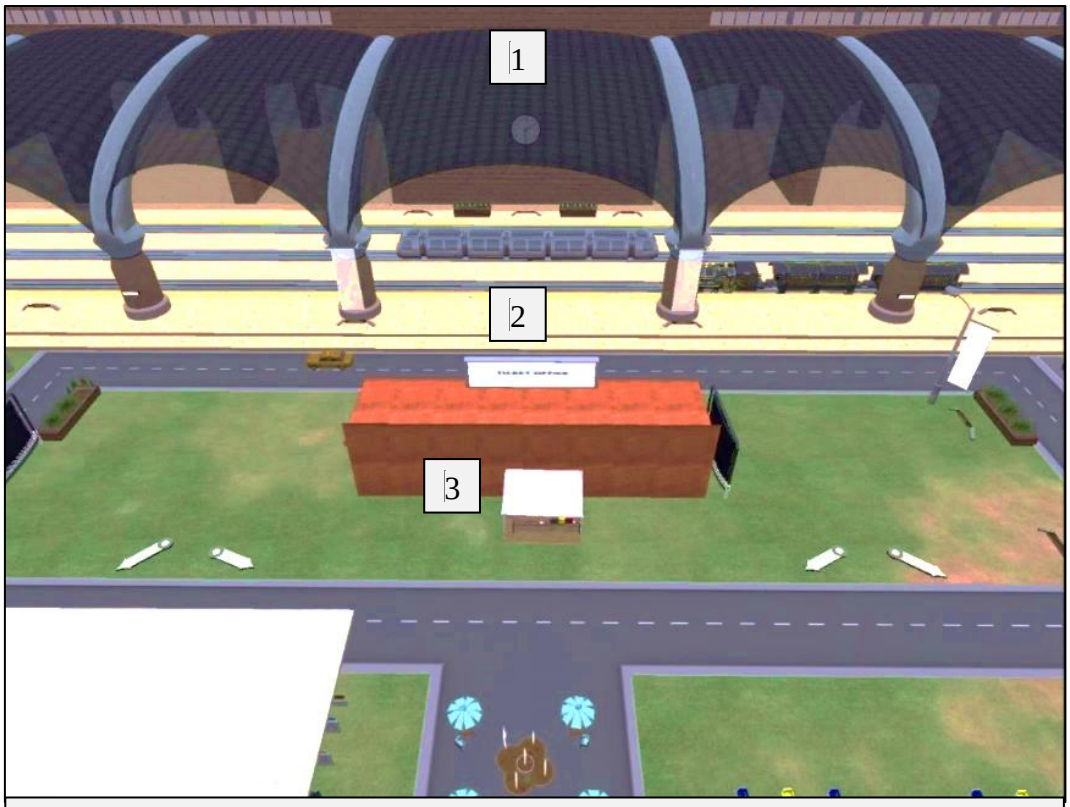
1 – Social Area
2 – Travel Agency
3 – Amusement Park
4 – Free Materials Area

Figure 3.3 Various Views from TeachinGrid 3D VLE - 1



1 – Vehicles
2 – Tech Store
3 – Concert Area
4 – Photo Area
5 – Elevator to skydiving (Teleportation Area)
6 – Kiosk
7 – Presentation Area

Figure 3.4 Various Views from TeachinGrid 3D VLE - 2



1 – Train Station
2 – Ticket Office
3 – Café

Figure 3.5 Various Views from TeachinGrid 3D VLE - 3

Figure 3.6 Gathering at Welcome Center at the Beginning of the Task Session

A session at Presentation Area is presented in Figure 3.7. In this screenshot, the instructor introduces the roles in the Task 3 by utilizing Presentation Tool at the Presentation Area.

Figure 3.7 Session at Presentation Area

The ‘Speaking Tasks in a 3D Virtual Learning Environment’ Module was given via online education (synchronous) in TeachinGrid. EFL learners were able to connect to TeachinGrid to discover the environment, interact with the tools and materials, meet, and discuss with other participants at any time via the Internet connection whenever they wanted. All task sessions in TeachinGrid were recorded via Camtasia, a type of screen capturing software, for further analysis.

Adequate computer hardware (same as hardware requirements of OpenSimulator) was required to connect to TeachinGrid. The Firestorm Viewer should be installed and the grid address of TeachinGrid should be added. Participants needed to create a TeachinGrid account to sign in. For this purpose, they registered to TeachinGrid by using the web site of the OpenSimulator Hosting Company. The researcher sent

them the link for registration. Participants also needed high speed Internet and Ethernet cables in order to establish a satisfactory connection with the TeachinGrid server. The Faculty of Education provided all participants computers, fast Internet connection, and Ethernet cables. The overall features of TeachinGrid 3D VLE is given at a glance in Table 3.6.

Table 3.6 TeachinGrid 3D VLE at a Glance

Decision on	**Description**
Platform	OpenSimulator
Design Principles	3DLE Design Principles Model (Kapp & O'Driscoll, 2010) - All archetypes were used, except Operational Application.
External Plugin	SLOODLE (Version 2.1) - 'Presenter', 'Registration Enrollment Booth', 'Quiz Chair', 'Quiz Scoreboard', 'Tracker', and 'Choice Tool' were used.
Technical Information (OpenSimulator Server)	An OpenSimulator Standalone Region (empty) was rented. - The region allowed between 24'000 - 48'000 prims. - The server had 1024 MB memory and the region allowed the maximum 40 visitors.
Web Panel	Web interface provided by the hosting company - The hosting service enabled a server interface that simplifies new terrain uploading process, saving an OAR (OpenSimulator Archive), and adding users.
Viewer	Firestorm Viewer

3.3.3.1.1 Design and Development of TeachinGrid

TeachinGrid built in OpenSimulator utilizing SLOODLE was designed based on "3DLE Design Principles Model", one of the most acceptable design principle models for 3DLE and proposed by Kapp & O'Driscoll (2010). The framework called as "3DLE Architecture", building on classifications of sensibilities and archetypes into the four macrostructures of "agency", "exploration", "connectedness", and "experience", was used in the design process of TeachinGrid.

The 3DLE Design Principles Model outlines eight principles to guide instructional designers in their work of creating immersive and engaging 3D learning environments. Kapp and O'Driscoll (2010) emphasized that the design principles should be grounded in the virtual immersive environment affordances to enhance 3D learning experiences.

The principles for the design of 3DLE are divided into two primary categories: grounding principles and design principles. Kapp and O'Driscoll (2010) identified two different principles, which are the core elements for the other six principles: "Instructionally Grounded" and "Reflectively Synthesized". In the following section, each principle considered during the design of TeachinGrid is presented.

- **Principle 1. Instructionally Grounded**

TeachinGrid was used to simulate real life scenarios/experiences to engage EFL learners in authentic and meaningful spoken interaction by providing communicative speaking tasks. EFL learners can gain speaking experience by carrying out real-world tasks in English enhanced by the features of 3D VLE. It can encourage interaction among learners, increase motivation, active learning, and creativity, facilitate risk taking and enable immersive group work.

- **Principle 2. Reflectively Synthesized**

EFL learners can share their opinions about the tasks, task performances, and environment at any time by using the Evaluation Box (mailbox) near the Welcome

Area in TeachinGrid. When each group performances are completed, other groups' members review and comment on the performance in Social Area, Presentation Area, or the location where the task performed. Then, the instructor comments on the performance. EFL learners vote for the best performed group at the end of each task.

- **Principle 3. Participant Centered**

In TeachinGrid, actions and interaction that EFL learners could encounter by their requirement to do in the environment were listed below:

- In Task 0 - Training - Visit each training areas and click on SLOODLE trackers as a training-completion-confirmation button at the entrance of each training area, after reading, follow the steps written on the information boards and fulfil the instruction
- In all tasks - Read all instruction about the tasks, from information board and complete them.
- In Task 1 - Add some materials to the store that were assigned randomly to each group by clicking the object called as "Assign a Shop" around the television to make it attractive.
- In Task 2 - Search the environment and find 5 bottles which include notecards about the phobias in a scavenger hunt. At the end, talk about the phobias mentioned on the notecards briefly.
- In Task 4 - Use the web tool at the "Presentation Area" to create a mind map on how to spot fake news with their groups and to play the fake or real news game: "Factitious".

- **Principle 4. Contextually Situated**

In TeachinGrid, contextually situated scenarios, which EFL learners could easily identify, were created to meet the determined objectives of the tasks. EFL learners discovered the environment by the scavenger hunt, read the task related information from the notecards, roleplayed in assigned shops designed specifically

for the tasks, and made presentations. Moreover, in all phases of tasks, they read instructions from information boards and web tools, to get the main points, key concepts necessary to improve their speaking skills.

- **Principle 5. Discovery Driven**

In TeachinGrid, a scavenger hunt that they search the bottles related to phobias in Task 2 was designed. The bottles were located near the objects or the area related to the phobia mentioned on the notecard in the bottle and the participants were asked to consider general phobias as a clue. Participants were informed that the best performed group who were voted by the participants would get extra 5 pts (out of 100 to the task performance grade) in tasks to motivate them to perform the tasks carefully. Moreover, vehicles for driving, amusement park for rides, Concert Area for dancing and listening to music, and relaxing areas were provided in TeachinGrid to motivate the EFL learners.

- **Principle 6. Activity Oriented**

In all tasks of TeachinGrid, relevant and meaningful experiential activities were designed to improve and practice participants' English-speaking skills.

- **Principle 7. Consequentially Experienced**

In TeachinGrid, the participants worked in groups to plan and practice for tasks and perform them. The instructor provided immediate constructive feedback related to each task performance to improve their performance and speaking skills. There was no additional feedback mechanism in TeachinGrid.

- **Principle 8. Collaboratively Motivated**

In TeachinGrid, participants working in groups of 3-4 were informed that the best performed group who were voted by the participants would get extra 5 pts (out of 100 to the task performance grade) in tasks to motivate them to perform the tasks carefully. In addition, Discussion Area and Conference Room areas were designed to support collaboration for additional spaces for students to interact.

In the model, these design principles are then embedded in broader macrostructures: agency, exploration, connectedness, and experience to support the 3D VLE design process (Dass, Dabbagh & Clark, 2011; Kapp & O'Driscoll, 2010). These macrostructures are activated within these 3DLEs' principles. Kapp and O'Driscoll (2010) stated that "Each 3DLE, based on its specific desired learning outcomes, will lean more heavily toward one or two of the macrostructures, but all four should be engaged at some level." (p.78). In this context, instructional designers of VLEs should consider using each macrostructure to reach desired learning outcomes. The weight of each macrostructure is up to the context and the designer, but activation of all of them at any level of the process is strongly suggested by the researchers.

These four macrostructures serve as an organizing framework for specific 3DLE archetypes which are the basic building blocks of 3DLEs (Kapp & O'Driscoll, 2010, p.80). As shown in Figure 3.8, each macrostructure included a specific set of 3DLE archetypes. Each archetype achieves a specific set of learning outcomes and enables a specific macrostructure.

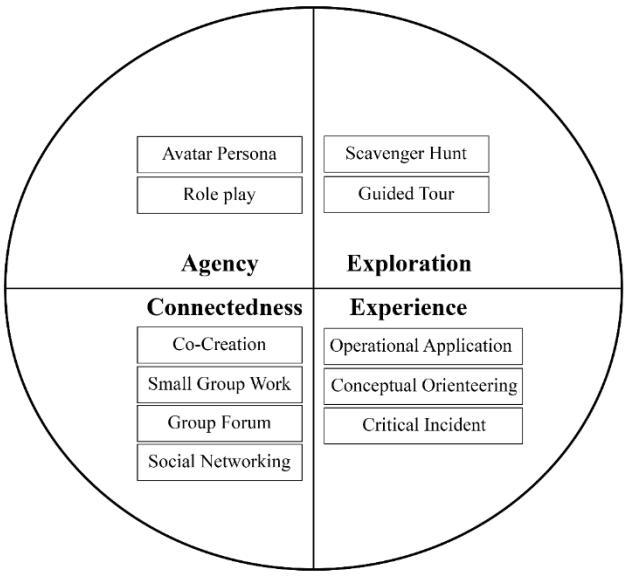


Figure 3.8 The Eleven Archetypes Mapped to the Four Macrostructures of the 3DLE Design Principles Model (Kapp & O'Driscoll, 2010, p.82)

In this study, for each macrostructure at least one archetype was included. "Agency" (avatar persona, role play), "exploration" (scavenger hunt, guided tour), "connectedness" (co-creation, small group work, group forum and social networking) and "experience" (conceptual orienteering, critical incident). However, "Operational application" was not enabled for the TeachinGrid due to the nature of task topics. Based on the principles, the following four macro-structures and eleven archetypes are defined and their application/examples within TeachinGrid are given in detail below:

Agency - Macrostructure

Avatar Persona - Archetype

In TeachinGrid, EFL learners and the instructor took a training tour and practice the basic operations (such as moving and flying for the Training Task. During the training, they were also instructed about how to change clothes and customize their avatars. They were also able to change their avatars and clothes whenever they want at 'Clothes Store'. When they completed the training session, they were asked

to change their avatars and clothes to represent the persona they wanted to be or portray and motivate new TeachinGrid users. Moreover, at the end of the training session they were asked to take a screenshot of their avatars as an assignment and share with the class by uploading it to the Moodle. The implementation of the Avatar Persona archetype into TeachinGrid 3D VLE is shown in Figure 3.9. In the figure, avatars are editing their appearance (changing the clothes).

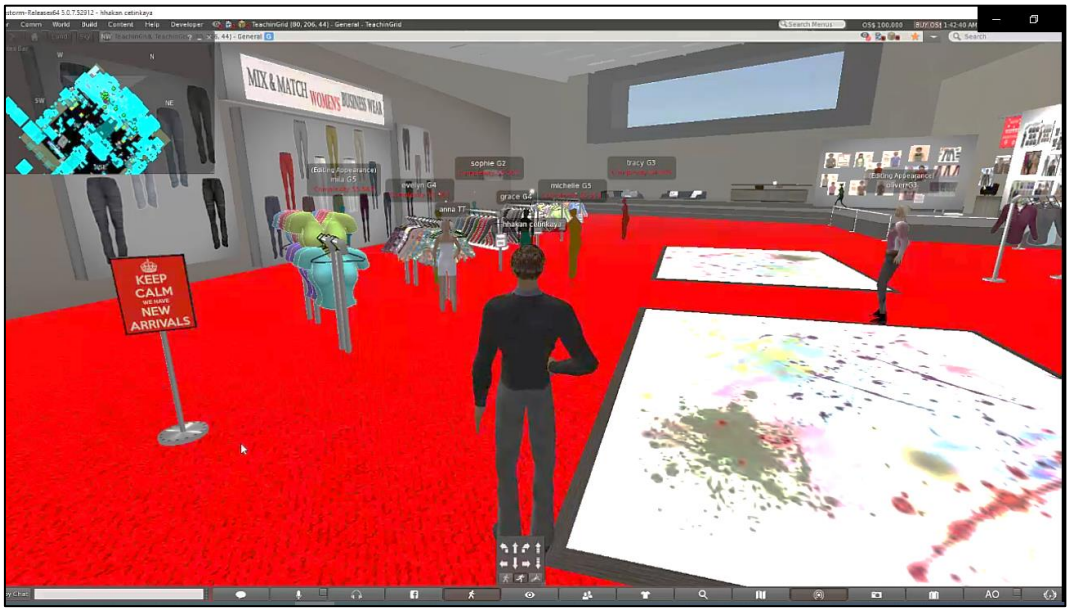


Figure 3.9 The Avatar Persona Archetype in TeachinGrid 3D VLE

Role Play - Archetype

In TeachinGrid, participants had two different role plays, in Task 1 and in Task 2. In Task 1, they worked in a group of 3-4 and created role-play conversations in the departments of the shopping center. They acted as one of the roles of store manager, customer, shop assistant, and reporter. The main objective of Task 1 was to enhance EFL learners' speaking skills via role-play conversations (Min. 3 min, Max. 5 min) in the departments of the shopping center in TeachinGrid. Table 3.7 shows that the summary of Task 1(task cycle), roles, and details on them. The implementation of the Role Play archetype into TeachinGrid 3D VLE is shown in Figure 3.10.

Table 3.7 Summary of Task 1-Task Cycle Part

Task 1 – Department Stores	Details
Task - Information	
Duration	60 min
Activity Type	Group (Groups of 3-4)
Location	Various Areas
Instruction for EFL Learners	- You will create role-play conversations in the departments of the shopping center (Min. 3 min, Max. 5 min conversation). - Groups will be assigned into shops randomly by clicking the object called as “Assign a Shop” around the television. - Choose one of your group members and wait for the instructor's invitation to use the object. - You can decide which the role you will assign. - You should focus on signs at stores and use various store signs in the conversations.

Table 3.7 (continued)

Task 1 – Department Stores	Details
Role	
Store Manager	- There are many challenges facing many shopping malls. There is a decline in-your store sale. - Think about "What should you do to make your store more attractive as a store manager?" - Add some materials to your store. You can get them from the Free Materials Store. Make effective changes in your store.
Customer	- Thinks about what he/she wants to buy. - Asks the details such as Size-in stock-delivery-gift wrap-material-how long it is guaranteed -how to pay, cost and so forth.
Shop Assistant	- Helps the customer to decide and/or answer his/her questions.
Reporter	- After changes made by the store manager, there is an increase in the store sales, and it gets the attention of the media. - As a reporter, asks the details (cost, etc.) what the store manager changed at the store to make the store more attractive.

Note. If the group consists of 3 participants, one of the group members takes both the roles of store manager and shop assistant.

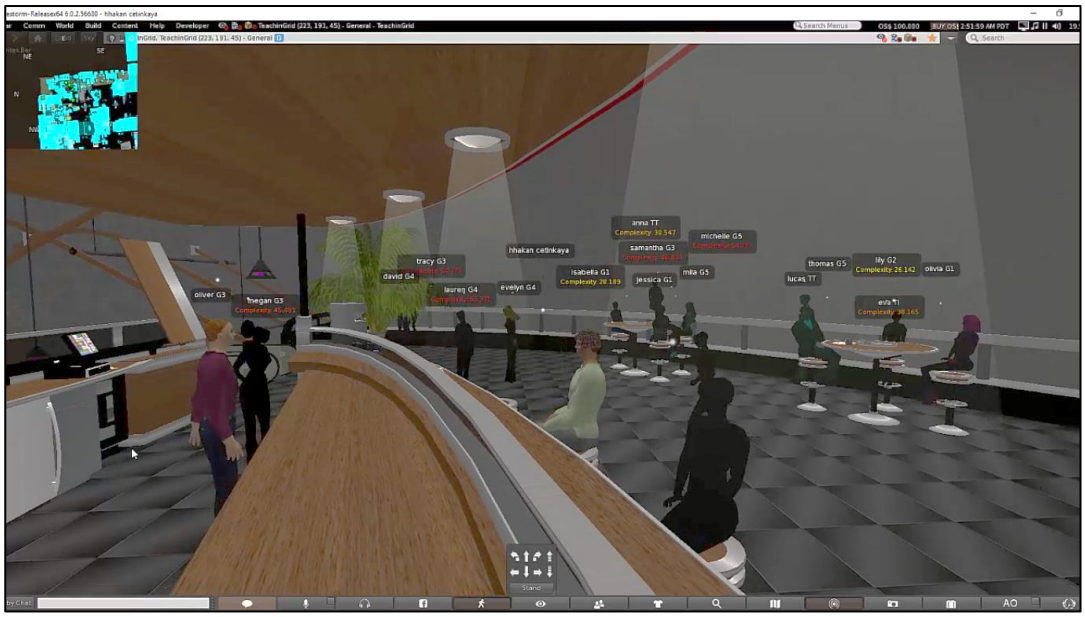


Figure 3.10 Role Play Archetype in TeachinGrid 3D VLE

In Figure 3.10, G3 members are roleplaying at TeachinGrid Café in Task 1. In Task 2, they work in a group of 3-4 and create a weird phobia news. They act as one of the roles of reporter, person having the weird phobia, friend of the person with the weird phobia, and relative of the person with the weird phobia. If the group consists of 3 participants, one of the group members takes both the roles of store manager and shop assistant. The main objective of Task 2 was to develop EFL learners' speaking skills via role-play conversations (Min. 3 min, Max. 5 min) on phobias. Table 3.9 shows that the summary of Task 2 (task cycle), roles, and details on them.

Table 3.8 Summary of Task 2-Task Cycle Part

Task 2 – Phobias	Details
Task - Information	
Duration	60 min
Activity Type	Group (Groups of 3-4)
Location	Various Areas
Instruction for EFL Learners	- You will create a weird phobia news (Min. 3 min, Max. 5 min conversation). - You can decide which the role you will assign.
Role	
Reporter	Asks what the person having the weird phobia suffer from
Person having the weird phobia	Explains the difficulties he/she faced
Friend of the person with the weird phobia	Explains the difficulties he/she faced while he/she is with the person having the weird phobia
Relative of the person with the weird phobia	Explains the difficulties he/she faced while he/she is with the person having the weird phobia

Exploration - Macrostructure

Scavenger Hunt - Archetype

In Task 2, EFL learners get into groups of 3-4. They search the environment and find 5 bottles which include notecards about the phobias in 5 minutes. ‘Consider the common phobias to find bottles.’ is given as the clue to help them. Groups

which find the bottles come back to the ‘Social Area’ and talk about the phobias mentioned on the notecards briefly. By the scavenger hunt, EFL learners become familiar with basic facts, declarative knowledge, and the environment. A view from the implementation of the Scavenger Hunt archetype into TeachinGrid 3D VLE is given in Figure 3.11.

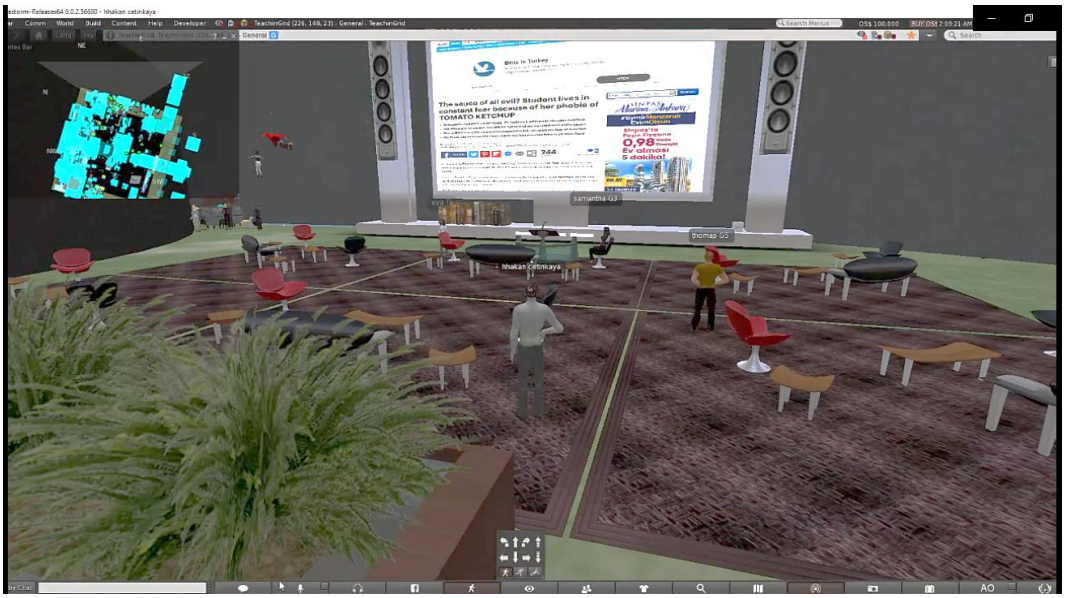


Figure 3.11 Scavenger Hunt Archetype in TeachinGrid 3D VLE

Guided Tour- Archetype

In TeachinGrid, EFL learners and the instructor took a training tour and practiced the basic operations (such as moving, flying, changing avatars, and changing clothes.) for the Training Task lead by the researcher in Task 0. They could also follow the steps (numbers are written under the information boards) on the information boards. There was also a training-completion-confirmation button built by a SLOODLE Tracker at the entrance of each training area. EFL learners must click when they complete each training activity in the area. They visited each training areas and clicked on SLOODLE trackers after they read and fulfill the instruction on the information boards at the training area. SLOODLE trackers were used to keep track of their progress about the completion of training. The instructor

can also check if they complete the training at the end. The researcher also introduced the basic areas that they would use in the speaking task sessions. By guided tour, EFL learners and the instructor became familiar with the environment and learnt basic avatar operations. A view from the implementation of the Guided Tour archetype into TeachinGrid 3D VLE is given in Figure 3.12.

Figure 3.12 Guided Tour Archetype in TeachinGrid 3D VLE

Experience - Macrostructure

Operational Application - Archetype

Operational application was not enabled for the TeachinGrid due to the nature of task topics which were selected after the discussion and reaching the consensus on them with 3 experts from ELT Program. The researcher also consulted to the expert in IT about the possibility of using this archetype in the environment. The expert shared the same opinion with the researcher as ‘not applicable to the selected task topics’.

Conceptual Orienteering - Archetype

In Task 2, animations related to phobias were provided for the instructor. When they were stuck in elevator and the instructor showed a claustrophobic reaction to the situation. The instructor's avatar was animated to look like worried and afraid. While searching around the environment in scavenger hunt, the bottles were located near the objects (e.g., elevator, dogs) related to the phobia. To create the ambiance, related sounds (e.g., dog barking) about the phobia was added. The instructor could have cynophobia experiences. The instructor's avatar could be animated to look like feeling faint (see Figure 3.14). The goal was to give the EFL learners about what the situation would be. They recognized the effects of the incident or the phobias. In addition, TeachinGrid also supported the conceptual orientation archetype by providing the shops having full of products (features) for Task 1, Task 2, and Task 3. EFL learners could go around and visually see attributes and help them for the conversations during the process of their roleplays and presentations. A view from the implementation of the Conceptual Orienteering archetype into TeachinGrid 3D VLE is given in Figure 3.13.

Figure 3.13 Conceptual Orienteering Archetype in TeachinGrid 3D VLE

Critical Incident - Archetype

In Task 2, EFL learners encountered an unexpected situation in an elevator at the shopping center. They were stuck in an elevator and the instructor showed a claustrophobic reaction to the situation. The instructor's avatar was animated to look like worried and afraid. EFL learners were placed into the situation like real event in which their prior knowledge or experience must be activated to solve the problem. A view from the implementation of the Critical Incident archetype into TeachinGrid 3D VLE is given in Figure 3.14.

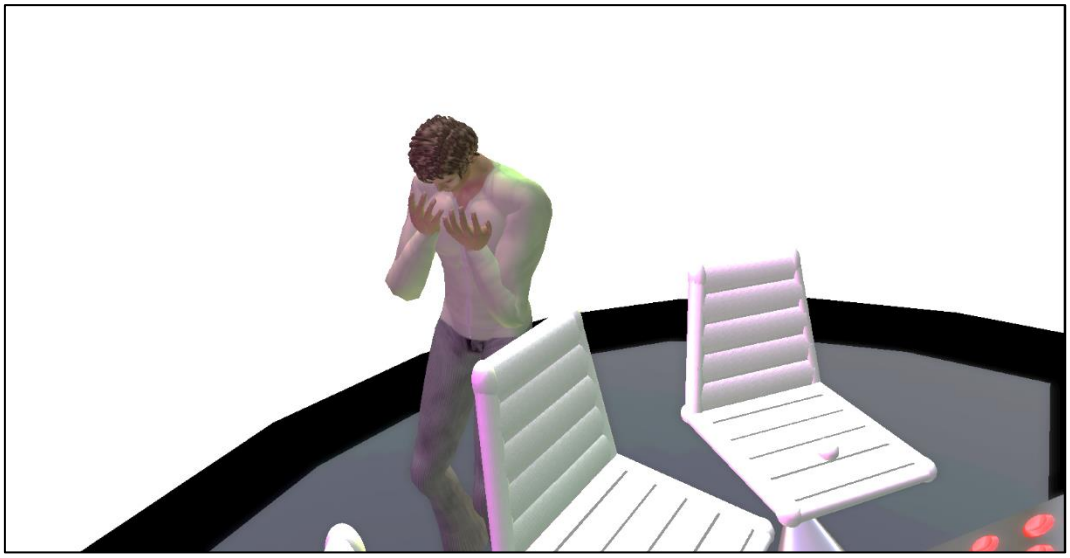


Figure 3.14 Critical Incident Archetype in TeachinGrid 3D VLE

Connectedness - Macrostructure

Co-creation - Archetype

In Task 1, EFL learners could work together to create a 3D material (e.g., poster) to be used in their shops. The 3D material would be used to make the shops attractive. A view from the implementation of the Co-creation archetype into TeachinGrid 3D VLE is given in Figure 3.15.

Figure 3.15 Co-creation Archetype in TeachinGrid 3D VLE

Small Group Work - Archetype

In all tasks, EFL learners worked in groups, exchange ideas by using only voice chat to create conversations for their roleplays, presentations, and other activities. In addition, Discussion Area provided private space for EFL learners to discuss and share opinions. A view from the implementation of the Small Group Work archetype into TeachinGrid 3D VLE is given in Figure 3.16.

Figure 3.16 Small Group Archetype in TeachinGrid 3D VLE

Group Forums - Archetype

At pre-task part of all tasks, EFL learners gathered at Social Area in Task 1 and Task 2 whereas at Presentation Area in Task 3 and Task 4 to attend the conversations as much as possible and shared their opinions on the tasks' topics in TeachinGrid.

At task cycle part of all tasks, they gathered at shops (i.e., each group's assigned shops) in Task 1, whereas at Social Area in Task 2 and at Presentation Area in Task 3 and Task 4. They watched the task performances, shared their opinions and made comments on the performance. Moreover, Conference Room was designed to support Group Forums archetype. A view from the implementation of the Group Forums archetype into TeachinGrid 3D VLE is given in Figure 3.17.

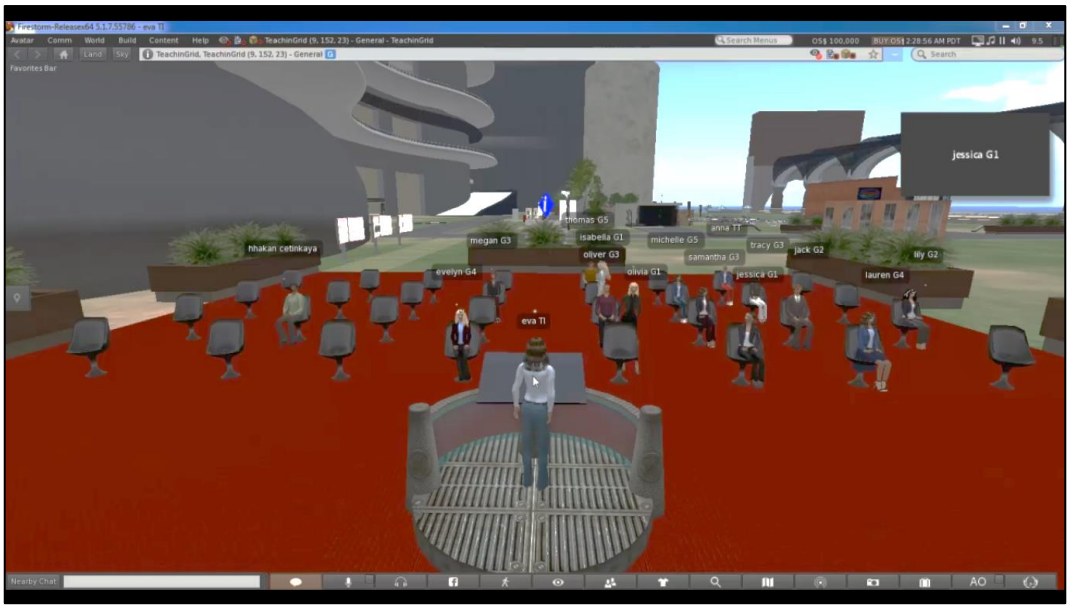


Figure 3.17 Group Forums Archetype in TeachinGrid 3D VLE

Social Networking - Archetype

A Concert Area and relaxing areas (picnic areas) were located various areas of TeachinGrid. Students could gather around them to communicate and exchange ideas with each other and get socialize. They could access appropriate Web-based mediation tools (such as wikis and Social Networking websites.) by using Web tool in TeachinGrid to interact with others. A view from the implementation of the Social Networking archetype into TeachinGrid 3D VLE is given in Figure 3.18.

Figure 3.18 Social Networking Archetype in TeachinGrid 3D VLE

3.3.3.1.2 Evaluation of TeachinGrid

TeachinGrid environment was evaluated by an expert (academician) who had previous experience, knowledge, and resources about VWs in terms of design principles applied on TeachinGrid and usability. “Virtual World Design Principles - Expert Evaluation Form” was developed based on the archetypes from the study of Kapp & O’Driscoll (2010). It was used as a tool for the validation of the application of the 3DLE design principles on TeachinGrid (see Appendix E). During the design and development process of TeachinGrid, the researcher consulted the expert on regular bases and discussed on the application of design principles into TeachinGrid. In addition, TeachinGrid was tested by pilot tests to identify if any technical and usability problems had existed. Information about the pilot tests were presented in Section 3.4.

3.3.3.2 SLOODLE

To support learning and teaching on TeachinGrid, SLOODLE (Version 2.1), a free and open source project integrating the OpenSimulator with the Moodle LMS, was utilized. With SLOODLE, EFL learners can take quizzes and surveys, submit assignments, record chat conversations, and keep track of their progress via a point system all viewable from within the 3D VLE. In TeachinGrid, the following SLOODLE tools were used: ‘Presenter’, ‘Registration Enrollment Booth’, ‘Quiz Chair’, ‘Scoreboard’, ‘Tracker’, and ‘Choice Tool’ (see Figure 3.19).

Figure 3.19 SLOODLE Choice Tool

3.3.3.3 Moodle

Moodle LMS (Version 2.5) was installed to a virtual server rented by the researcher and configured to utilize SLOODLE. Moodle was used as a supplementary part of the online learning environment for such purposes; announcements of the new tasks, retrieval, and submission of documents (help documents, presentation) (see Figure 3.20).

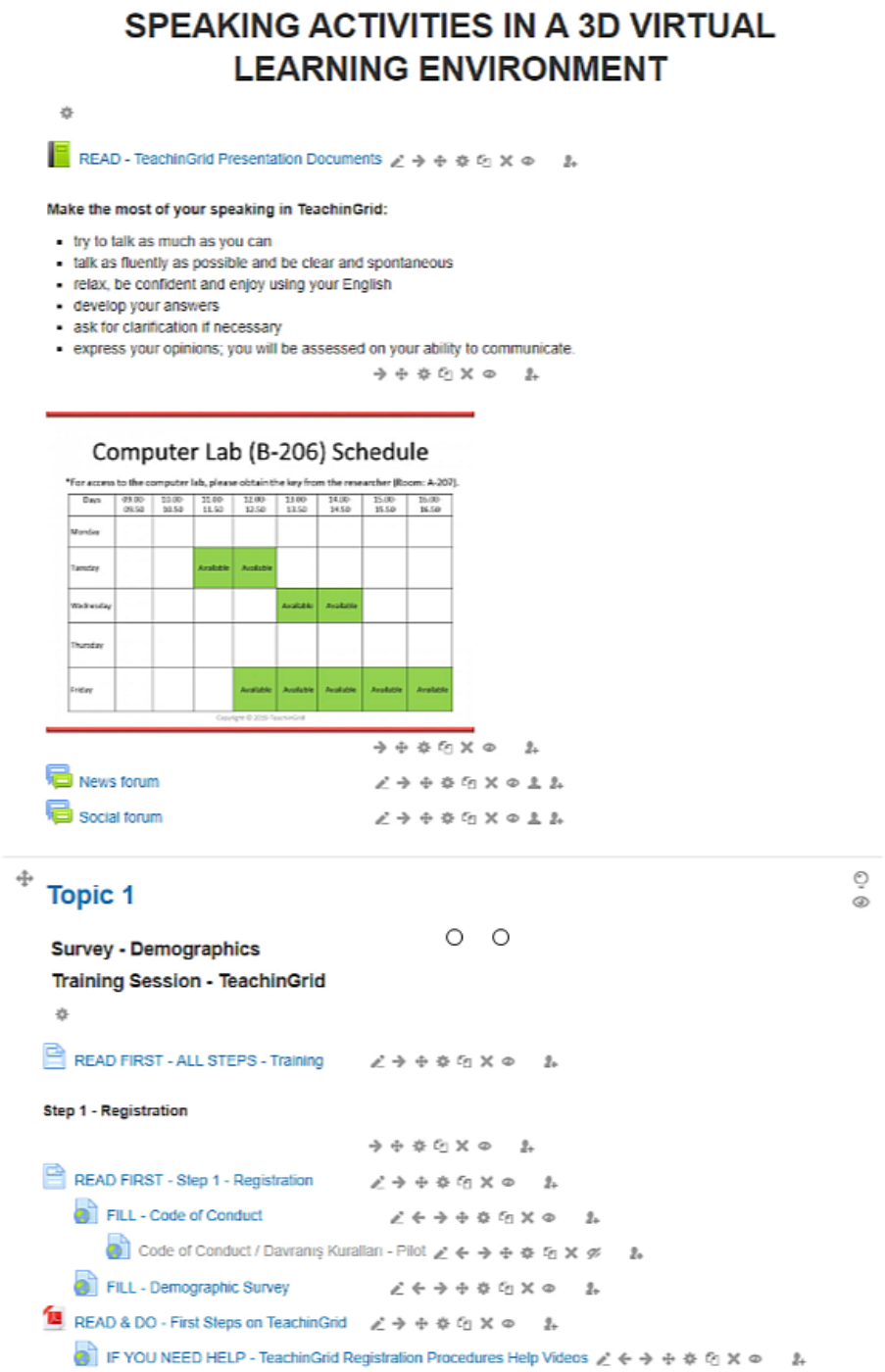


Figure 3.20 Moodle Course Module Page Screen

3.3.3.4 Zoom - Additional Tool for Voice-based Communication

Although OpenSimulator has features of either public or private voice-based communication, Zoom (zoom.us) was used since it allows breakout rooms for in-group discussions. The participants connected to TeachinGrid and login to Zoom for each task session. Conversations among participants and/or the instructor in task sessions were recorded by Zoom. This enabled record all participant avatar activity and conversations within the 3D VLE without losing any data.

3.4 Pilot Study

A pilot case study allows optimizing the data collection strategies on the content of the data and the procedures to be implemented (Yin, 2018). In the participant selection process of the pilot study, the researcher announced the academicians at the Faculty of Education by sending an email about the research details and asked for the available EFL learners to attend to the pilot study. The key criterion for choosing these students were ‘convenience’, ‘access’ and ‘geographical proximity’ (Yin, 2018). In this research, three short pilot studies were conducted, with available EFL learners studying at different departments at in the Faculty of Education, to decide on the outline of the tasks, appropriateness of the planned activities and group size, and to identify the required time for each task in TeachinGrid (see Table 3.9). With prior identification of strengths and weakness of TeachinGrid, researcher was able to take precautions and prevent some of the major problems in the main study. All three pilot studies were conducted during the Spring Semester of 2017-2018 Academic Year, two semesters before the main study (Spring Semester of 2018-2019 Academic Year).

Table 3.9 Pilot Tests

Pilot Name	Aim and Details	Participants	Application Date and duration

Pilot Name	Aim and Details	Participants	Application Date and duration
Pilot 1[a]	- Managed by the researcher - The environment was tested whether there were any problems. - Registration and training processes were tested. - Task recording procedure was followed.	15 EFL learners	May 24th, 2018 – 100 minutes
Pilot 2[b]	- Managed by the EFL Instructor and supported by the researcher - The EFL instructor was trained. - The tasks were followed.	7 EFL learners & the EFL Instructor of the pilot test	June 13th, 2018 – 100 minutes
Pilot 3[a]	- Managed by the researcher - The environment was tested whether there were any problems. - Improvements were asked to the EFL learner (Navigation-signs)	One EFL learner	August 10th, 2018 - 90 minutes

For the pilot test sessions which took place in the Computer Laboratory of the Faculty of Education at the university, in a face to face context, the researcher as the support staff (as a technician) and the EFL instructor of the pilot test connected

to the Skype and participated in the session via video-conferencing. The length of each pilot test sessions was around 100 minutes.

EFL learners were aware that they were participating in a pilot study by participating the activities in the 3D VLE. They were informed about the purpose of the research and encouraged to provide their suggestions for improvements of the study. Moreover, they were trained about how to use Firestorm Viewer, how to control and change the appearance of their avatars, and how to interact with tools and objects in the 3D VLE connecting by Firestorm Viewer. In addition, they were trained how to connect Zoom and communicate with their voices in 3D VLE.

3.4.1 Findings of Pilot Study and Updates

The researcher observed the sessions and received feedback from the participants and took notes in-detail during the pilot study processes. Issues emerged during the Pilot studies were listed below:

- During the registration process of the participants to TeachinGrid, receiving the registration confirmation email took for between 5 and 10 minutes when they used university's webmail service.
- Some of the participants had difficulties and lack of knowledge, complained, or did not obey the rules in 3D VLE as below:
    - Difficulties in downloading the Firestorm Viewer's accurate version, due to the lack of knowledge about their computer operating system (32 bit or 64 bit).
    - Difficulties in using Camtasia as the screen recording software.
    - Not obeying the rule of using only voice chat.
    - Complaining about difficulty of controlling avatars and cameras, and the system speed.
    - Difficulties in understanding the commands, the steps, and what they should do.

- Not being able to hear each other (mixed voices) in-group discussion properly provided by Skype.
- Lack of knowledge about where to wait and where to go in the task sessions.
- Complaint about difficulty of catching the researcher/instructor's avatar due to his/her moving around fast (losing their ways)
- Wearing more than 2-3 clothes together.

Based on the findings of pilot study, some decisions were made to address emerged issues. Improvements were made in the main study.

Decisions about group process and structure:

- In the pilot study, the length of the training session was 50 minutes. Based on the activities and participants' feedbacks the length of training sessions was increased to 100 minutes (2 sessions) in the main study.
- A group of three to four participants were considered as the appropriate size for the groups.

Decisions about technical issues and design of the environment:

- A guideline was prepared to help students, covering the information about how to register and connect to TeachinGrid, configure the grid information settings, register Moodle, and download Camtasia screen capture recorder, (Appendix C – 'First Steps on TeachinGrid').
- During the pilot study, participants had some technical problems about installation and configuration of the Firestorm viewer (software used to connect virtual environment). They considered it as a complicated process. Screen recording videos about how to register to TeachinGrid, how to configure the Firestorm Viewer (adding the grid address of TeachinGrid) send a message to the manager (i.e., researcher) were prepared in order to help for the process.

- Although the activity plans for co-creation and critical incident archetypes had been designed, they were not included in the main study. The

organization and implementation of these archetypes were not possible to be completed within the time allocated to the course. Instead of the activity for co-creation (i.e., creating a 3D material to make their shop attractive) in Task 1, one of the group members choose the poster from Free Materials Area and the researcher would help them to bring posters to their shops. Then, the group members would work together to decide on where to put the posters at their shop. Instead of the activity for critical incident archetype in Task 2, scavenger hunt was included to motivate the EFL learners and make them familiarize with the environment.

- Computer laboratory has the deep freezer program. Participants had difficulties when the computer was shut down, they lost the software (Firestorm Viewer) and the configuration of TeachinGrid island on the viewer. Therefore, the researcher asked to the specialist who was responsible from the computer labs to get the permission to install required software to the computers that the participants can use. The researcher downloaded the Firestorm Viewer and configured the grid address of TeachinGrid to eliminate some technical/ procedural issues. The researcher made it ready to be used by the participants.
- For the main study, the researcher decided to use another communication software called Zoom instead of Skype. Zoom provided breakout rooms (private rooms) where the group members could share their ideas and discuss with each other to reach the consensus for the task to be performed without any distraction of the other groups in a period of time (15 min), for in-group discussions.
- Presentation Area and Social Area were redesigned based on participants' feedback. Information boards and maps were added to various areas in TeachinGrid.
- The researcher provided the EFL learners one of the computer lab access in their free times to let them practice in TeachinGrid. The Computer Lab Schedule was given in Figure 3.21 below.

Computer Lab (B-206) Schedule

*For access to the computer lab, please obtain the key from the researcher (Room: A-207).

Days	09.00-09.50	10.00-10.50	11.00-11.50	12.00-12.50	13.00-13.50	14.00-14.50	15.00-15.50	16.00-16.50
Monday								
Tuesday			Available	Available				
Wednesday					Available	Available		
Thursday								
Friday				Available	Available	Available	Available	Available

Figure 3.21 Computer Lab Schedule

The pilot case study was regarded as a critical phase of testing in this research study. It allowed to

(i) evaluate the 3D VLE,
(ii) decide on the content; outline of the tasks, appropriateness of the planned activities and group size, and the required time for each task in 3D VLE,
(iii) optimize data collection tools to be implemented,
(iv) train the EFL instructor about 3D VLE, procedure of task sessions.

It is noteworthy that the data from the pilot cases study was not reused in the formal case study (Yin, 2018). The main study was also conducted with completely different participants. The pilot cases were taken into consideration in the decision process of participant selection for the main study.

Unfortunately, at the beginning of the Fall semester of 2018-2019 Academic Year, the EFL Instructor of the pilot tests changed her workplace and was not available for the main study. The new EFL instructor agreed to contribute to the research. She was trained as well by the researcher by two Task 0-Training sessions before the start of the main study.

3.5 Main Study

In this section, participants of the study, participant selection procedure, information about the English Preparatory Program, group formation, and the instructor were presented.

3.5.1 Participants of the Study and Participant Selection Procedure

In qualitative case studies, two levels of sampling are usually needed (Merriam & Tisdell, 2015, p.99). First, a case is selected, and then the participants within the case. The selection of the case has been explained in the previous sections. For participant selection, most qualitative studies focused on nonprobability sampling method (Merriam & Tisdell, 2015, p.96). Similarly, in this study, participants were selected by using one of the nonprobability sampling method; purposeful (or also called as purposive) sampling. Merriam and Tisdell (2015) stated that "Purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned." (p.96).

The first step of purposeful sampling is the determining the participants' selection criteria (Merriam & Tisdell, 2015). After the pilot tests, the researcher consulted with a language instructor and group of experts from ELT Program for the suggestion on the participant selection. During this process, the researcher showed the screen recordings to the experts and the language instructor shared opinions on the teaching process with EFL learners. As a result of the discussions with the experts, EFL learners from ELT Program were considered as the most appropriate participants for the research study since they had a prior history of language education in high school extensively and could not be claimed to suffer from 'barriers to English language'.

After reaching consensus, the researcher determined the selection criteria in choosing the participants. The following three criteria (criterion-based selection) were employed and explained below:

(i) who were enrolled in a first-year course, titled as "Computer II" course, in the Spring semester of 2018-2019 Academic Year, (There were 21 registered students with this criteria)
(ii) who were studying at the Faculty of Education, Department of Foreign Languages, English Language Teaching Program,
(iii) who volunteered to participate to the study.

Computer II course was selected due to its suitable content and the delivery method. Participants selection was purposeful since the features of those participants mirror the potential target population for which an effective language module within 3D VLE is needed to design and developed at the Faculty of Education of the foundation university.

In this study, the participants were 21 higher education undergraduate students (EFL learners - pre-service English teachers) at the Faculty of Education in one of the foundation universities of Ankara, Turkey. All EFL learners studying ELT Program and registered to Computer II course accepted to attend to the main study. There was no other section of Computer II for ELT Program in the Spring semester of 2018-2019 Academic Year. Detailed information about the participants was given in Table 3.10 below:

Table 3.10 Demographics of the Participants

Variable	*f*	%
Gender		
Female	15	71.4
Male	6	28.6
Grade Level		
Freshman	12	57.1

Variable	*f*	%
Sophomore	4	19
Junior	5	23.8

Table 3.10 (continued)

Variable	*f*	%
Age		
19	3	14.3
20	6	28.6
21	6	28.6
22	4	19.0
23	1	4.8
24	1	4.8
Computer/Video Games Experience		
No experience	8	38.1
Experience	13	61.9
Computer Literacy Course Experience		
Passed	8	38.1
Conditionally passed	5	23.8
Failed	4	19
Not Taken	4	19
Computer I		
Passed	17	81
Conditionally passed	2	9.5
Not Taken	2	9.5
Computer II		
Conditionally passed	4	19
Failed	7	33.4
Not Taken	10	47.6
Virtual World Experience		
No experience	17	80.9
Experience	4	19.1
Previous Online Course Experience		
No experience	4	80.9

Experience	17	19.1

There were 21 participants in the study; 15 of them were female (71.42%) and 6 of them were male (28.58%), consistent with dominance of female population at the Faculty of Education. Although the Computer II course was for freshmen, there were freshmen (57.1%, *n*=12), sophomores (19%, *n*=4), and juniors (23.8%, *n*=5) enrolled in the course. Participants represented a narrow age range of 6 years (19 to 24 years) and the mean age of participants is 20.86. They also represented a heterogeneous frequency of computer/video games playing experience and most of them was experienced in playing computer/video games (61.9%, *n*=13).

Participants took at least one Computer Literacy course among the courses titled as Computer Literacy, Computer I, and Computer II at the foundation university. Most of the participants (*n*=17) had online course experience while few of them (*n*=4) had no online course experience or VWs' experience.

3.5.1.1 English Preparatory Program and English Language Proficiency levels of Participants

The participants of this study were the EFL learners studying at the ELT Program, Department of Foreign Languages, Faculty of Education. They were assumed as Independent Users(B1-B2) at English Proficiency Level of Common European Framework of Reference (CEFR) since they had previously completed the English Preparatory (EP) Program.

EP Program was a must for the students who enroll in all partial English as medium of instruction undergraduate programs. On the other hand, the EP Program was optional for the students who enroll in all Turkish as medium of instruction undergraduate programs and other programs in vocational schools at the foundation university. Participants were studying at ELT Program. The medium of instruction

at the program was English for the courses related to the field, the other courses in Turkish.

Foreign Language Proficiency Exam held at the beginning of the program. Based on its results about EFL learners' English knowledge, students are placed at different levels: "Beginner-Basic" (Program 1- For A1-A2) and "Pre-Intermediate – Intermediate" (Program 2 - For B1-B2) levels, respectively. Each program covers 16 weeks, 24 hours per week – period of instruction in all four language skills appropriate to their level. The students may complete the EP Program in one or two semesters depending on their program and success. They are required to complete it within two years.

To pass the EP Program, students enrolled in all English as medium of instruction undergraduate programs needed 70 points out of 100 full points. Of these students, with a total of less than 50 points from Listening-Comprehension, Language Use, Reading-Comprehension and Writing parts of the exam, are considered directly unsuccessful and are not admitted to the Speaking Part. They completed the English Preparatory Program at B1 + level based on the Pearson GSE scale. The Global Scale of English (GSE) is a standardized, granular English proficiency scale from 10–90 and psychometrically aligned to the CEFR (Pearson, 2019) (see Figure 3.22).

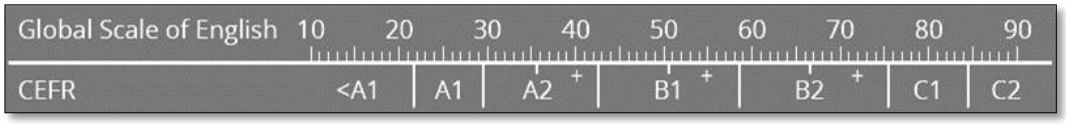


Figure 3.22 Alignment of the Global Scale of English to the CEFR

The Global Scale presented in the CEFR states that the independent user (B2):

- *"Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation."*
- *"Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party."*

- *"Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options."* (CEFR, 2020).

3.5.1.2 Group Formation

For group activities in TeachinGrid, 21 participants enrolled in the course were divided into six groups randomly by the researcher. Randomization was performed using the web site Random.org (http://www.random.org). During the participant selection process to the groups, gender balance was taken into consideration. Since there were six male participants enrolled in the course, they were assigned to different groups. Each group consisted of 3 or 4 EFL learners (see Table 3.11)

Table 3.11 Group Formation and Members

Group Name	n	Group Members- Nicknames
Group 1 (G1)	4	Isabella – Jessica – Olivia – William
Group 2 (G2)	3	Jack – Lily – Margaret
Group 3 (G3)	4	Megan – Oliver – Samantha – Tracy
Group 4 (G4)	4	David – Evelyn – Grace – Lauren
Group 5 (G5)	3	Michelle – Mila – Thomas
Group 6 (G6)	3	Anna – Bella – Lucas

3.5.1.3 Participants and Participant Selection Criteria at a glance

Each participants' demographic information, previous experience, and self-assessments of English language and computer skills are presented in Table 3.12, and the participants' selection criteria (selection of participants, course and program) are given in Table 3.13 at a glance.

Table 3.12 Participants' demographic information, previous experience and self-assessments of English language and Computer Technology Skill

Pseudonym	Group Name	Grade	Gender	Age	Previous Experience			Self – Assessment			
					Online Course	3D VW	English Preparatory School	English Proficiency Global Scale	English-Speaking Interaction	English-Speaking Production	Level of Computer Technology Skill
Anna	G6	3	F	24		✓	✓	B1	B1	B1	Intermediate
Bella	G6	3	F	20	✓		✓	B2	B2	B1	Beginner
David	G4	3	M	21	✓			C1	C1	C1	Intermediate
Evelyn	G4	1	F	20	✓		✓	C1	B2	B1	Beginner
Grace	G4	2	F	20			✓	C1	C1	C2	Intermediate
Isabella	G1	1	F	20	✓	✓	✓	C1	B2	B2	Intermediate
Jack	G2	2	M	23		✓	✓	B2	C2	C2	Intermediate
Jessica	G1	1	F	20	✓		✓	C1	B2	B2	Intermediate
Lauren	G4	1	F	22			✓	B1	B2	B1	Intermediate
Lily	G2	1	F	22	✓	✓	✓	C2	C1	C1	Intermediate
Lucas	G6	1	M	19	✓	✓		C1	C1	C2	Intermediate
Margaret	G2	3	F	20	✓		✓	B2	B2	B1	Intermediate
Megan	G3	1	F	19	✓	✓	✓	B1	B1	B1	Intermediate
Michelle	G5	1	F	22	✓		✓	C1	C1	C1	Beginner
Mila	G5	2	F	19	✓			C2	C1	C1	Beginner
Oliver	G3	1	M	21	✓	✓		C1	C1	C1	Intermediate
Olivia	G1	1	F	21	✓	✓	✓	B1	B1	B1	Beginner
Samantha	G3	1	F	21	✓	✓	✓	B2	B2	B2	Intermediate
Thomas	G5	1	M	22			✓	-	-	-	Beginner
Tracy	G3	2	F	21			✓	C1	C1	C2	Intermediate
William	G1	3	M	21	✓		✓	C2	C2	C2	Intermediate

Table 3.13 Participants' Selection Criteria at a Glance

Decision on	Description	Details
Selected Method	Purposeful sampling	Nonprobability sampling method
Selection Criteria	- Enrolled in a first-year course, titled as "Computer II" course, in the Spring semester of 2018-2019 Academic Year, - Studying at the Faculty of Education, Department of Foreign Languages, English Language Teaching Program, - Volunteer to participate to the study.	- Announcement of the research with the academicians at the Faculty of Education. - After the 3 pilot tests conducted with available EFL learners studying at different departments, the researcher consulted with the instructor and group of experts from ELT Program for the decision on the participant selection.
Course Selection Criterion	- Computer II was selected due to its suitable content and the delivery method. - 'Speaking Tasks in a 3D Virtual Learning Environment' Module was integrated into Computer II course without changing the course events in the main course.	- The course includes historical development of Computer Supported Learning(CSL), types of CSL including simulations, open ended learning environments, tests, web based training, educational games, evaluation of the Computer Supported Learning software, applications of Web 2.0 tools into the education and is given face to face and supported by online education utilizing Moodle.

Table 3.14 (continued)

Decision on	Description	Details
Program Selection Criterion	English Language Program	- They had a prior history of language education extensively and could not be claimed to suffer from "barriers to English language." - The features of those participants mirror the potential target population for which an effective language module within 3D VLE is needed to design and developed at the Faculty of Education of the foundation university.
Voluntary Participation Criterion	Consent Form	- Code of Conduct Form (as the consent form) was delivered to the prospective participants for the research. - "Code of Conduct Form" was established to govern all participants behavior in TeachinGrid 3D VLE including information about the island, General Behavior, Avatar Guidelines, Privacy Policy, Photography & Videography Policy.

3.5.2 Instructor Information of the Main Study

Task sessions were given by female research assistant (age 23) working at the foundation university, Faculty of Education, Department of Foreign Languages, Program in ELT. She took satisfactory scores from various national and international English Proficiency When the main research started, she was at the very beginning of her career (1 month) at the university. She had previous online course experiences (Teaching English to Young Learners - American English MOOC (George Mason University, USA), Using Educational Technology in the English Language Classroom, American English MOOC (Iowa State University, USA) before. She rated that she had advanced computer technology skills and she was technologically savvy. However, she was not familiar with VWs and did not navigated an avatar through a VW. At the beginning of the research, after the training task sessions, she informally reported to the researcher that a VW could be useful in improving English speaking skills of EFL learners.

3.6 Sources of Data and Instruments

In case study, a broad variety of evidence including direct observation results, interviews with participants, documentary records (e.g., documents detailing actions, legislative documents, media reports), artifacts, and secondary analysis of others' research (Yin, 2009) needs to be collected to explain a phenomenon holistically and in depth, or to answer the questions why and how something happened. Due to this requirement and the purpose of the study, in this study a variety of data were collected using several instruments. The main data sources for data collection were surveys, semi structured interviews, and audiovisual materials (screen capture recordings of all in-class and out-of-class task sessions of students on TeachinGrid 3D VLE). These recordings were analyzed by modified MUVEEET - Form and Emerged Tensions in 3D VLE - Form. Moreover, data

from Reflection Forms were used to support the data collected with the CoI survey and interviews.

All collected data were recorded and organized systematically as a 'case study database' (Yin, 2018) to make them available to be reviewed by the coders or other researchers, in other words, to increase the reliability of the case study. All instruments were examined by subject matter experts and researchers in the field of ELT and Instructional Technology to ensure the content validity.

Table 3.14 shows the rationale and definition of the data sources. In addition, the instruments for data collection were presented separately according to each research question and summarized in Table 3.15 and Table 3.16.

Table 3.14 The Rationale and Description of the Data Sources

Data Sources	Rationale and Description
Demographic Information Surveys - For the EFL Learners - For the Instructor	- To investigate previous online course and virtual world experience, English proficiency and computer literacy background and demographics of the EFL learners and Instructor
Community of Inquiry (CoI) Survey	- To determine cognitive presence levels of EFL learners engaging in reasoning gap task activities in the synchronous online English-speaking module built in a 3D VLE. - Turkish version (Öztürk, 2012) of the original survey (Arbaugh et al., 2008) was used. - Quantitative data were gathered.
Inquiry Form	- To unveil cognitive presence levels of EFL learners engaging in reasoning gap task activities in the synchronous online English-

Data Sources	Rationale and Description
	speaking module built in a 3D VLE. - Qualitative data were gathered.

Table 3.14 (continued)

Data Sources	Rationale and Description
Reflection Forms - For the EFL Learners - For the Instructor	- To support the data collected with the CoI survey, Inquiry form, and interviews. - Including questions about what they like in the environment that positively affect their learning, the challenges that they face in the environment, self, and group evaluation of task performance.
General Evaluation Forms - For the EFL Learners - For the Instructor	- To support the results of CoI survey, inquiry form, and interviews - Including questions on overall evaluation of the experience in 3D VLE
Interviews	- To explore other potential factors that influence EFL learners' cognitive presence levels, and to have a more detailed understanding. - Semi-structured interviews with the participants (EFL learners)
Observations and Audiovisual	- To support the data collected with the CoI

Materials (Screen capture recordings of the task sessions)	survey, inquiry form and interviews. - Direct observations were made accompanying the groups in the 3D VLE.

Table 3.14 (continued)

Data Sources	Rationale and Description
Documents	- To triangulate the data collected with the CoI survey, inquiry form, and interviews. - Including researcher's notes, academic transcript records of the participants, and other documents.

Table 3.15 Instruments used to Collect for Answering Research Question 1

Data Source	Instrument	Created by	Filled by	Data Type Gathered	Phase Employed		
					Beginning	During	End
Surveys and Forms	CoI Survey	- Original – Arbaugh et al. (2008) - Turkish Translation – Öztürk (2012) [a]	EFL Learners	Quantitative			✓
	Inquiry Form	The researcher	EFL Learners	Qualitative		✓	
Screen Recordings of task sessions in 3D VLE	Modified MUVEEET – Observation Form	Original - McKerlich and Anderson (2007) accompanying by the coding scheme – Shea et al. (2010)	The Researcher [b]	Mixed [c]			✓

Note.

[a] Turkish Translation of the original CoI Survey was used.

[b] Multiple observers (experts) were filled the form.

[c] Quantitative data were gathered for the main purpose (to determine CP level). In addition, examples of CP were also gathered.

Table 3.16 Instruments used to Collect for Answering Research Question 2

Data Source	Instrument	Filled by	Data Type Gathered	Phase Employed		
				Beginning	During	End
Surveys and Forms	- Demographic Information Survey [a]	EFL Learners	Quantitative	✓		
	- Reflection Form for the EFL learners	EFL Learners	Qualitative		✓	
	- Reflection Form for the Instructor	The Instructor	Qualitative		✓	
Interview	Interview Protocol	EFL Learners	Qualitative			✓
Screen Recordings of task sessions in 3D VLE	Emerged Tensions in 3D VLE - Observation Tool	The Researcher [b]	Qualitative			✓

Note. All the instruments developed by the researcher.

[a] It was used to measure demographics and support the data analysis phase

[b] Multiple observers (experts) were filled the form.

3.6.1 Surveys and Forms

In this section, information about the surveys and forms, as one of the data collection instruments were presented. They included Demographic Information Surveys (for the EFL learners and for the instructor), Community of Inquiry (CoI) Survey, Inquiry Form, Reflection Forms (for the EFL learners and for the instructor), and General Evaluation Forms (for the EFL learners and for the instructor),

The surveys and forms were reviewed in terms of content validity, understandability, and suitability for the participants and for the research by three full-time academicians in the field of Instructional Technology; one of them was an expert in Qualitative research method (in terms of data collection), the other was in research design (instrument development), and the last one was in 3D VLE (in terms of design and development of 3D VLE). The folder including all instruments was prepared for them and meetings were arranged. At the end of each meeting, the experts provided oral and written feedback. While there were no major changes in the content, minor corrections were made in the language protocols and their application to online format.

All surveys and forms were prepared by using Google Forms and shared with the participants in Moodle. The data were collected by using the following surveys and forms and explained below:

3.6.1.1 Demographic Information Surveys

There were two Demographic Information Surveys: for the EFL learners and for the Instructor. The rationale of the surveys was to investigate previous online course and virtual world experience, English proficiency and computer literacy background and demographics of the EFL learners and Instructor.

Demographic Information Survey for the EFL learners consisted of 32 items categorized into three sections (See Appendix G). In the first section, there were questions related to the pseudonym, previous online course experience, and the names of these courses, duration of English language education experience, duration of English Preparatory School experience. In the second section, items related to the self – assessment of English Proficiency based on CEFR (Global Scale, Listening, Reading, Writing, Speaking Interaction, Speaking Production) were included. In the third section, the questions related to EFL learners' computer literacy and virtual world experience were included. In the survey, the Turkish translation of the 'self-assessment grid' which "illustrates the levels of proficiency described in the Common European Framework of Reference for Languages (CEFR)" was used (Council of Europe, 2020). In addition, demographic information of the instructor was also collected by the Demographic Information Survey for the Instructor (See Appendix H).

Both demographic information surveys were developed by the researcher. They were reviewed in terms of content validity, understandability, and suitability for the participants and for the research by three full-time academicians mentioned in the previous section. They were administered after the acceptance of the participants' joining on the research via accepting Code of Conduct.

3.6.1.2 Community of Inquiry Survey

Overall CoI, TP, SP and CP level of the EFL learners in the synchronous online English-speaking module in 3D VLE context were discovered via the Turkish translation of CoI Survey. The original CoI survey was established by Arbaugh et al. (2008) to assess students' perception of the CoI with 287 graduate students. The original CoI survey was developed on three factors namely TP reflecting with 13 items, SP with 12 items and CP with 9 items; 34 items in total in in the form of 5-point Likert type scale indicating – 1= *strongly disagree*; 2= *disagree*; 3= *neutral*; 4= *agree*; and 5= *strongly agree).*

In the original English version of the survey, the reliability of the instrument was analyzed with Cronbach's Alpha values which yielded internal consistencies equal to .94 for TP, .91 for SP, and .95 for CP (Arbaugh et al., 2008). The reliability of Turkish version of the instrument was analyzed with Cronbach's Alpha values which yielded internal consistencies equal to 0.92 for TP, 0.88 for SP, 0.75 for CP and .97 for the whole instrument (Öztürk, 2012). The author found it reliable and valid in the study.

Although the participants were studying at ELT Program, Turkish version of CoI instrument were used without any modifications of their items in this study, to avoid confusion in the meaning of the items during their translation of the items in the original CoI Survey. In this study, the reliability of Turkish version of the instrument was also analyzed with Cronbach's Alpha values which yielded internal consistencies equal to 0.86 for TP, 0.88 for SP, 0.93 for CP.

The Turkish version of the CoI Survey was given in Appendix I. It was administered at the end of the speaking module and its completion time was around 15-20 minutes. Although, the researcher's interest on CP, the results of other presences (TP and SP) will be presented to show the EFL learners' overall levels of CoI in the next chapter.

3.6.1.3 Inquiry Form

The "Inquiry Form" was developed based on CP items presented in CoI Survey by the researcher and was used to unveil EFL learners' CP levels in the online course context. The main purpose was to understand, analyze the nature of the development of CP and discover the problems that they faced in each phases of CP. The form was in Turkish and included open-ended questions.

At the end of each task, the EFL learners were asked to respond the questions categorized into phases (Triggering Event – Exploration – Integration – Resolution) of CP. The Inquiry Form is presented in Appendix J.

The form consisted of 39 items categorized into four main sections; the first section included questions on the attendance, the second was on the phases of CP, the third one was related to the reflection and the last one was related to the out-of-class-task sessions.

The Inquiry Form was reviewed in terms of content validity, understandability, and suitability for the participants and for the research by three full-time academicians mentioned in the previous section (see Section 3.6.1). It was administered at the end of each task.

3.6.1.4 Reflection Forms

There were two Reflection Forms: for the EFL learners and for the Instructor. Both the "Reflection Form for the EFL Learners" and "Reflection Form for the Instructor" were developed by the researcher. The data derived from these forms were used to verify/support the results of CoI Survey. These forms were in Turkish and included open-ended questions.

The "Reflection Form for the EFL Learners" consisted of 17 items and included such questions as follows: what they liked in the environment that positively affected their learning, the challenges that they faced in the environment, and self and group evaluation of task performance. On the other hand, the "Reflection Form for the Instructor" included the questions regarding the opinions of the instructor about what they liked in the environment that positively affected their students' learning, the challenges that the instructor, and the EFL learners faced in the environment, self and group evaluation of task performance.

At the end of each task, the EFL learners and the instructor were asked to respond the questions presented in the forms. The Reflection Forms are presented in Appendix K (for the EFL learners) and Appendix L (for the Instructor).

Both Reflection Forms were reviewed in terms of content validity, understandability, and suitability for the participants and for the research by three

full-time academicians mentioned in the previous section (see Section 3.6.1). It was administered at the end of each task.

3.6.1.5 General Evaluation Form

There were two General Evaluation Forms: for the EFL learners and for the Instructor. General Evaluation Forms were developed by the researcher to get overall evaluation of EFL learners' and the instructor's experiences in 3D VLE (See Appendix M for the EFL learners and Appendix N for the instructor). The data derived from these forms were used to verify/support the results of Community of Inquiry Survey. The questions on pseudonym, general evaluation (the instructor, the group members, the environment), and speaking skills (factors influencing speaking English in 3D VLE, effect of 3DVLE on speaking English) were included in the form.

Both forms were reviewed in terms of content validity, understandability, and suitability for the participants and for the research by three full-time academicians mentioned in the previous section (see Section 3.6.1). It was administered at the end of the speaking module.

3.6.2 Interview Protocol

The interview protocols direct the activities of an interview (Creswell, 2018). An 'Interview Protocol' was developed by the researcher and prepared to explore other potential factors that influence EFL learners' CP levels, and to have a more detailed understanding. The 'Interview Protocol" was semi-structured and open-ended. It was in Turkish language. EFL learners were asked to share their opinion on the factors that affect their CP, the development of their speaking skills in the 3D VLE, and the problems they encountered in the 3D VLE.

To ensure its content validity, understandability, and suitability, three full-time academicians in the field of Instructional Technology (expert in IT and experienced in qualitative research) examined each question. They checked the questions in terms of clearness, simplicity, meaning and understandability. After reaching consensus, pilot tests were performed face to face with two EFL students who were not involved in the research at the Faculty of Education. Since general and superficial answers were given to the interview questions in the pilot tests, the researcher expanded the questions with subcategories and discussed again with the experts in detail. After revision of interview protocol, there are four sections including 46 open-ended questions in the final version. The 'Interview Protocol' is presented in Appendix O.

Interviews were conducted face to face and lasted 45-60 min each. All 21 EFL learners attended to the interviews. The interviews were recorded via audio recorder after taking permissions from the interviewees.

3.6.2.1 Interview Questions

The EFL learners were asked a total of 46 main questions. In the interview protocol, the introduction part included three main questions including the tasks they had attended: Whether or not they had completed the tasks, what is the reason if they could not complete the tasks, and about their general opinion on speaking tasks With the help of these questions, the EFL learners' general opinion on speaking tasks was gathered.

After introduction and general tendency on speaking tasks part of interview protocol, the next question was about sharing the first experience on 3D VLE; things they did, factors that attracted their attention, and increased their curiosity. After that, the rest of the questions were grouped under five sections: cognitive presence sub-categories, reflection, out-of-class tasks, speaking tasks, and contribution on speaking skills. CP phases section was organized under four sub-

categories: Triggering Event, Exploration, Integration and Resolution. Since all the participants attended in in-class-task session of Task 1, questions in this section were asked related to the Task 1 to understand the nature of each participant in a task session by their own words in detail.

At the end of the interviews, all participants were given a chance to provide further information related to research questions, to comment and ask questions freely. Information about the request for transcribed data was given to participants by the researcher.

3.6.3 Direct observations, Screen Recordings and Researcher's Notes

In-class and out-of-class task sessions in TeachinGrid were recorded by the screen capture software called Camtasia Studio by the researcher for observing examples of cognitive presence phases and tensions. In-class task sessions' recordings included two training and four task sessions recordings for the whole-class. Out-of-class task sessions' recordings included four task sessions for each group separately.

The motions of avatars were captured and recorded by Camtasia Studio from not only from researcher's avatar's point of view but also from at least one of group member's point of view from each group. Further, conversations among participants and/or the instructor were recorded by online teleconferencing software called Zoom. Recording all participant avatar activity and conversations within the 3D VLE as much as possible, without any lost was aimed by this way.

Moreover, in order to understand participants' experiences in TeachinGrid in real time, in-world participant observation was utilized. Researcher conducted observations as a participant to gather fieldnotes. Participant observation was defined by Schensul, Schensul, and LeCompte (1999) as "a process of learning through exposure to or involvement in the day-to-day or routine activities of participant in the research setting" (p. 91). For this study, observation was focused

on the teaching and learning activities between instructor and participants in task sessions. In addition, some screenshots were specifically taken in order to describe important activities and interactions on TeachinGrid by using the Firestorm Viewer's screenshot feature. Required permissions were obtained to take screenshots and screen recordings by Code of Conduct Form before.

3.6.3.1 Modified Multi-User Virtual Environment Education Evaluation Tool (MUVEEET) - Form

Screen capture recordings of the task sessions were analyzed by using modified MUVEEET ("Multi-User Virtual Environment Education Evaluation Tool") – Form and Emerged Tensions in 3D VLE – Form. The original MUVEEET was developed by McKerlich and Anderson (2007) to measure the existence of CoI components; TP, SP and CP within in a MUVE to collect observations. McKerlich and Anderson (2007) pointed out "Cognitive presence is critical in any learning event"(p.48) and added categories of 'Integrated Education Tools', 'Use of Enhanced Multimedia' and 'Mediated Assessment' within the context of MUVE criteria for a CoI in the tool. In this study, the form was modified for the data analysis of the screen capture recordings: 'Time Interval (start-stop time)' and 'Code' columns were added to the original form and 'Coding Scheme' suggested by Shea et al. (2010) was used as a guide for the multiple observers (See Coding Scheme in Appendix P). CP part of the instrument was used in the study. The form was in English (See Modified MUVEEET Form in Appendix Q).

Modified MUVEEET ("Multi-User Virtual Environment Education Evaluation Tool") – Form and Emerged Tensions in 3D VLE – Form were reviewed in terms of content validity, understandability, and suitability by three full-time academicians.

3.6.3.2 Emerged Tensions in 3D Virtual Learning Environment (3D VLE) – Form

Another Form of 'Emerged Tensions in 3D VLE – Form' including CP phases, column of examples of occurred emerged tensions and the elements ('subject', 'object', 'community', 'tools', 'rules', 'division of labor') of AT was used to observe the tensions in which phases of CP occurred during the TeachinGrid sessions (See Appendix R). The form was in English and developed by the researcher.

3.6.4 Documents and Other Data collected

Additional data to support the main data sources mentioned in the previous sections were provided by reviewing the researcher's notes and academic transcript records of participants collected. The other data were collected by the speaking exams to determine speaking skill progress among the participants. The information about the mentioned documents were given in the following section.

3.6.4.1 Researcher's Notes

Throughout the research process, the researcher kept a journal recording descriptions of interactions among participants in TeachinGrid. The researcher took notes in all process of each synchronous in-class and out-of-class task session. The researcher described actions of EFL learners and the instructor in 3D VLE, the difficulties encountered and potential drawbacks of the tasks and the study itself.

3.6.4.2 Academic Transcript Records of Participants

The transcript records of participants were obtained by the researcher from their advisors in order to get information about the participants' grades of computer

literacy courses (ICT100 Computer Literacy, Computer I, and Computer II) and GPAs.

3.6.4.3 Speaking Exams

Cambridge B2 First Speaking Sample tests were conducted to observe whether there was a speaking skill progress among the participants. Although this purpose is not included in the research purposes, the data derived from the speaking tests were used to analyze the effectiveness of the speaking module conducted in 3D VLE.

The Speaking tests were taken face to face. In each session, two instructors tested two students at the same time. Each pair of students randomly decided using the web site http://www.random.org. The exam dates were scheduled and announced by the researcher on Moodle. The schedule was formed in Doodle (https://doodle.com/) and asked to pairs to select the suitable time period for the exam. The exams were completed in 2 days.

Since Cambridge B2 First Speaking Sample tests were used in the study, the original exam procedure was followed. Candidates take the test in pairs, but are assessed on their individual performance by trained examiners. The speaking exams were administered by two experts in the field of English Language Teaching: the ELT instructor as the interlocutor and the ELT expert (language instructor) as the assessor. The ELT instructor as the interlocutor spoke with the candidates, managed the test, and awarded participants a mark for global achievement (a general mark for how well the EFL learners did in the whole test). The assessor only listened to candidates and used four assessment criteria: “Grammar and Vocabulary”, “Discourse Management”, “Pronunciation” and “Interactive Communication”.

The Speaking test of B2 First includes 3 parts. It starts with general conversation between the examiner and each candidate. Then the candidate takes turns to speak

for about 1 minute about two photographs. In Part 3, the candidate discusses a decision-making task with the other candidate. Finally, the candidate will discuss topics related to the task in Part 3. Formal evaluation procedure of the Speaking test of B2 First was adopted to assess EFL learners' performances.

> *"Candidate speaking performances are assessed using scales which are linked to the Common European Framework of Reference. The assessor gives 0–5 marks for each of the following criteria: Grammar and Vocabulary; Discourse Management; Pronunciation; and Interactive Communication. Marks for each of these criteria are doubled. The interlocutor gives a mark of 0–5 for Global Achievement. This mark is then multiplied by four. Examiners may award half marks. Marks for all criteria are then combined, meaning there are 60 marks available in the Speaking test."* (UCLES, 2019, p.4)

3.7 Data Collection Procedure

The data collection process is presented in Figure 3.23 below.

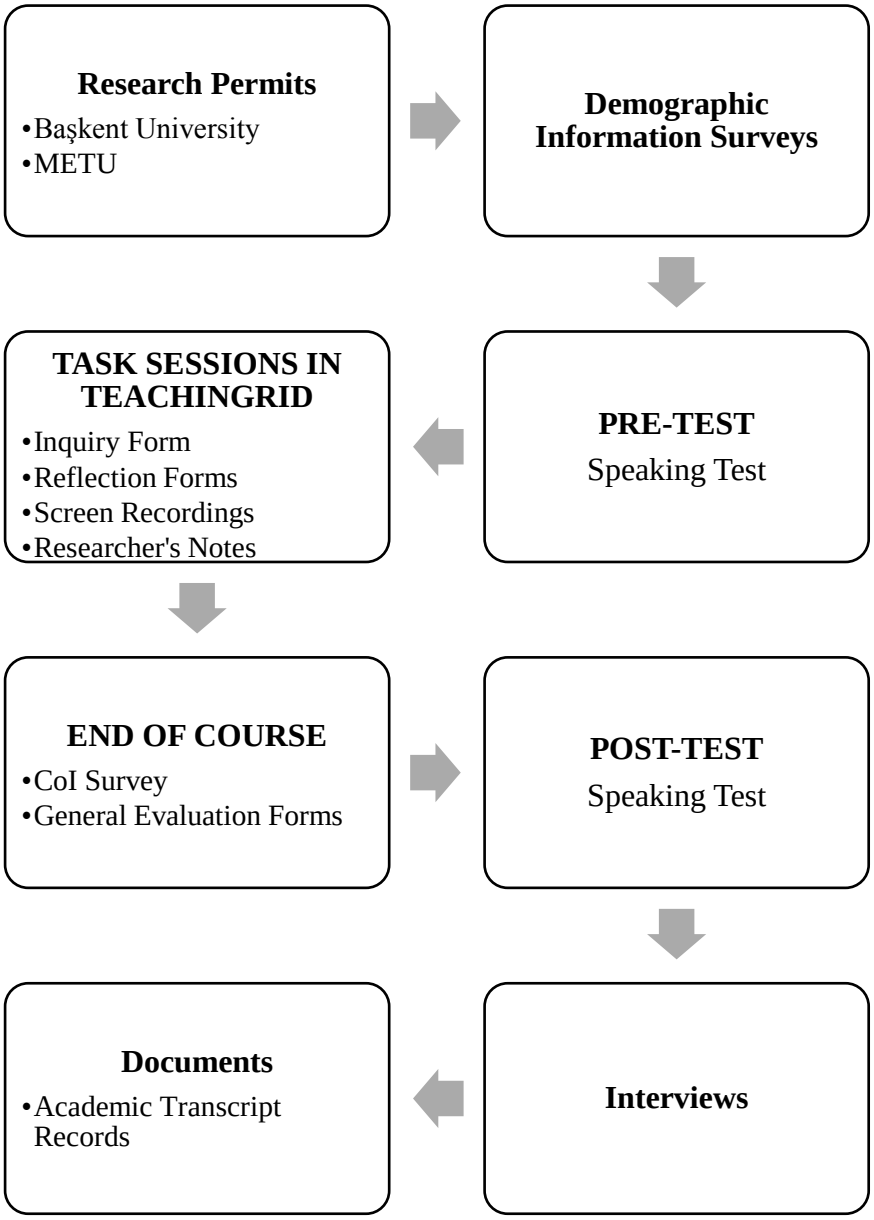


Figure 3.23 Illustration of Data Collection Process for the Main study

After reviews and corrections of the instruments, to conduct research and start data collection, permission from the Ethics Committee was necessary to obtain. Therefore, all instruments and voluntary participation form and information form including the purpose and summary of the thesis were sent to the Ethics Committee of Başkent University (the research setting) and the Institutional Review Board (IRB), namely METU Applied Ethics Research Center. The research permits were approved by the Ethics Committee of Başkent University and METU (see Appendix S). After 3 pilot tests and improvements in 3D VLE, the researcher contacted with the instructor of Computer II course and scheduled the meeting with the potential EFL learners for the announcement of the research.

The link for "Code of Conduct Form" was shared with them in Moodle (Computer II – Course Page) at the beginning of the study. All EFL learners enrolled to Computer II course responded to the instrument and accepted to attend the research. Then, they were registered to a course in Moodle for future announcements of TeachinGrid 3D VLE and asked them to fill the "Demographic Information Survey" on the course page in Moodle.

Then, Cambridge B2 First ("formerly known as Cambridge English: First (FCE)") Speaking Sample tests were conducted with 2 experienced examiners (the ELT instructor and the assessor (an expert from the ELT Program) by following the same procedure and evaluation of the exam to observe whether there was a speaking skill progress among the participants (see Section 3.6.4.3. Speaking Exams). Each of 2 EFL learners as candidates assigned in a pair randomly.

The TeachinGrid sessions; including two training sessions, four in-class task sessions, and four out-of-class task sessions (for each group) were recorded by using Camtasia screen capturing software by the researcher. There were six groups in TeachinGrid. Group 2 and Group 5 did not attend to the out-of-class task session of Task 4. All task recordings were analyzed for observation of existence of CP (level of CP and examples of CP phases, by modified MUVEEET) and tensions emerged among the dynamics in 3D VLE (by Emerged Tensions in 3D VLE -

Form). In-class task sessions' recordings included two training and four task sessions' recordings for whole-class whereas out-of-class task sessions' recordings included four task sessions for each group separately. During the 6 weeks of the task sessions period, in total 28 sessions (2 Training sessions, 4 in-class task sessions and 4 out-of-class task sessions for each group) were recorded by Camtasia. The researcher attended to all 28 sessions in the 3D VLE, recorded them and kept notes.

At the end of each task, the participants were required to fill the "Inquiry Form" and "Reflection Form" as soon as possible, before the next task session. After Task 4 ended, the participants were required to fill the "CoI Survey" and "General Evaluation Form". The links for all the instruments/forms were shared with them in Moodle.

Then, each of 2 EFL learners as candidates assigned in a pair randomly again for the Cambridge B2 First by following the same procedure and evaluation of the exam (as a post-test). The pairs in post-test were not the same as in pre-test.

After the speaking exam, a semi-structured interview (in-depth) was conducted with each participant face to face in the researcher's office in the Başkent University by the researcher, in order to ensure consistency of the data, except for three participants via Zoom. The researcher scheduled possible interview dates in a form established in Doodle (https://doodle.com/) and shared the form link on Moodle. He announced participants to select the suitable time period for the interview. Participants responded to a standard protocol (including information about anonymity and confidentiality, semi-structured) particularly generated for this study as well as other questions that arose spontaneously in the course of the interview. After obtaining permissions from the EFL learners, they were recorded via audio recorder (Windows Voice Recorder). The researcher followed the interview schedule and provided additional details / explanations and asked additional questions when necessary. All interviews were completed in two weeks.

Participants' audio recordings were transcribed and sent them for approval by following the member check procedure. This allowed the participants to examine and modify the transcript of the interview and confirm the transcription as a precise record of the interview.

Lastly, academic transcript records of the participants were obtained from their advisors in order to get information about the participants' grades of computer literacy courses and GPAs accurately. Required permissions were obtained to take the transcript records at the end of the study. The researcher followed Yin's (2018) three data collection principles ("use of multiple sources of evidence", "establish a chain of evidence", "create a case study database") to increase construct validity(quality) in this case study.

3.8 Data Analysis

This section summarizes the analyses used for each research question. Firstly, summary of data analysis for each research questions including data sources, instruments, and the purpose of the instrument, data analysis and techniques used. Then statistical tests employed for each research question are explained.

RQ1. What are the Cognitive Presence levels of EFL learners engaging in reasoning-gap activities in the synchronous online English-speaking module within a 3D VLE (specifically OpenSimulator with SLOODLE) based on self-report and direct observation?

Table 3.17 summarizes the data analysis used for Research Question 1

Table 3.17 Data Analysis for Research Question 1

Data Source /Instrument	Data Analysis	Types of statistic / Techniques
Survey		
CoI Survey (CP items)	Descriptive Statistics	- Measure of Central Tendency (Mean) - Measure of Variability/Spread (Standard Deviation, Range – Minimum & Maximum) - Frequency and Percent
Screen Capture Recordings of task sessions in 3D VLE		
Modified MUVEEET Form	Content Analysis Quantitative [a] Qualitative	A "category occurrence range" was developed by the researcher and the intercoder to rate CP as having a low, medium, or high occurrence.

Note. Data derived from the Demographic Information Survey and Inquiry Form were also used.

In consideration of first research question, overall CoI, TP, SP and CP levels of the EFL learners in the synchronous online English-speaking module in 3D VLE context were discovered via their responses to the quantitative data instrument, CoI Survey. The Cronbach's coefficient alpha for internal consistency of the survey items was ignored due to the small sample size (n=21, n<30). The CoI Survey provides a measure of EFL learners' TP, SP and CP in the synchronous online English-speaking module conducted in 3D VLE. Although, the researcher's interest on CP, the results of other presences (TP and SP) are also presented to show the EFL learners' overall levels of CoI in the next chapter.

Participants' responses to the CoI Survey were analyzed by descriptive statistics and non-parametric tests to determine the answers to the first research question by utilized SPSS statistical software (IBM SPSS Statistics 22). Mean, standard deviation, minimum and maximum scores of each item of CP were calculated. Additionally, the various descriptive results will be also given in the next chapter as listed below.

- Overall score of CoI and its components (CP, SP, and TP)
- Level of CP and its phases (TE, EX, IN, RE)
- Level of CP in terms of its items (from item 23 to item 34)
- Frequency of responses to each CP item (indicator)

In addition to data derived from CoI Survey, the researcher provided and enriched this data with key qualitative data obtained from analysis of screen capture recordings of task sessions in 3D VLE by using modified MUVEEET(from the researcher' and the inter-raters' point of views) and EFL learners' responses to Inquiry Form which was filled at the end of each task (from EFL learners' point of view).

Patton (2015) defined qualitative inductive analysis as "generating new concepts, explanations, results, and/or theories from the specific data of a qualitative study" whereas qualitative deductive analysis as "determining the extent to which qualitative data in a particular study support existing general conceptualizations,

explanations, results, and/or theories" (p.791). The qualitative/naturalistic approach is generally inductive at an early stage, especially when the codebook is developed to analyze the content or when categories, patterns and subjects are identified by open coding (Strauss & Corbin, 1998, p. 223) which emphasizes "the importance of being open to the data" (Patton, 2015, p.792). Both qualitative deductive and inductive approach were used to analyze the gathered data.

3.8.1 Qualitative Data Analysis

RQ2. What are the factors that influence Cognitive Presence levels of EFL learners engaging in reasoning-gap activities in the synchronous online English-speaking module within a 3D VLE (specifically OpenSimulator with SLOODLE)?

Table 3.18 summarizes the data analysis used for Research Question 2

Table 3.18 Data Analysis for Research Question 2

Data Source/Instrument	Purpose	Data Analysis	Details
Forms			
Inquiry Form	- To understand and analyze the nature of the development of CP. - To discover the problems that they faced in each phases of CP.	Content Analysis [a]	- Thematic analysis following the constant comparative method (Strauss & Corbin, 1998) [b] - Activity System Analysis
Reflection Form - EFL Learners - Instructor	- To discover EFL learners' experience on their learning and feelings on self and group performances, and the 3D VLE. - To discover the instructor's experience and feelings on the EFL learners' group performances and the 3D VLE.	Content Analysis [a]	- Thematic analysis following the constant comparative method (Strauss & Corbin, 1998) [b] - Activity System Analysis
General Evaluation Form - EFL Learners - Instructor	- To discover overall evaluation of EFL learners' and the instructor's experiences in 3D VLE.	Content Analysis [a]	- Thematic analysis following the constant comparative method (Strauss & Corbin, 1998) [b] - Activity System Analysis

Table 3.18 (continued)

Data Source/Instrument	Purpose	Data Analysis	Details
Interview Interview Protocol	To determine the factors affecting EFL learners' CP level	Content Analysis [a]	- Thematic analysis following the constant comparative method (Strauss & Corbin, 1998) [b] - Activity System Analysis
Screen Capture Recordings of task sessions in 3D VLE Emerged Tensions in 3D VLE - Observation Tool	To discover the contradictions and tensions in each phases of CP	Content Analysis [a]	- Thematic analysis following the constant comparative method (Strauss & Corbin, 1998) [b] - Activity System Analysis

Note.
[a] Data derived from the Demographic Information Survey were also used.
[b] Qualitative data were analyzed first by thematic analysis, then by an activity system analysis.

In consideration of second research question, the researcher dealt with a large amount of data obtained from surveys, interviews, and observations. However, Activity Theory (AT) framework provided a structured data analysis process. Thematic qualitative analysis was utilized in addition to the systematic analysis with the activity system (Yamagata-Lynch, 2010).

AT as a methodological tool described the complex; tool mediated social environment, revealed key dynamics of the described reality, pointed out contradictions and showed a visual representation of interaction among the dynamics of the environment (Kaptelinin & Nardi, 2006). According to Jonassen (2000), AT provides a different perspective to analyze the learning processes and the outcomes of the context. Activity system analysis (ASA) was performed to understand the dynamics of 3D VLE and to analyze what factors influenced CP in 3D VLE. Furthermore, by focusing on community, rules and division of labor, the study was able to identify contradictions and tensions that shaped development in the community.

'Qualitative activity systems analysis' is a process that helps researchers to gain a detailed understanding of the subject that they are studying (Yamagata-Lynch, 2010). The steps to the process of providing a qualitative activity systems analysis may vary depending on the researcher and their needs based on the topics being addressed. The qualitative data from multiple data sources were analyzed by thematic analysis following the constant comparative method; "an intense, systematic process of examining and re-examining the data while comparing one source with another to find similarities and differences" (Yamagata-Lynch, 2010, p. 73).

For practical use, Jonassen and Rohrer-Murphy (1999) suggested a detailed checklist to implement AT as an analysis tool. This checklist provided a structured analysis sequence. In this study, an updated version of this checklist was used to understand the study's context and focus on some important parts of the data (Jonassen & Rohrer-Murphy, 1999; Karakuş, 2011; Reisoğlu, 2014). The sequence,

which was helpful to understand the context in depth was followed in ASA. Updated version of Jonassen and Rohrer-Murphy's (1999) checklist was listed below:

1. "Clarification of the purpose of activity system"
   1.1. "Understand relevant context(s) within which activities occur"
   1.2. "Understand the subject(learner), his/her motivations, and interpretations of perceived contradictions"
2. "Analysis of the activity system by identifying and describing its components"
   2.1. "Define the subject"
   2.2. "Define community - communities "
   2.3. "Define the object"
3. "Analyze Mediators"
   3.1. "Tool mediators and mediation"
   3.2. "Rule mediators and mediation"
   3.3. "Division of labor"
4. "Analysis of the activity structure"
   4.1. "Define the activities, actions, and operations"
5. "Analysis of the activity system's dynamics"
   5.1. "What are the interrelationships that exist within the components of the system and how they influenced the processes?" (pp. 71-78)

After that, the researcher continued the ASA which was presented in two main stages: 'identifying codes' (by constant comparative method) and 'analyzing the activity system' (by following the checklist of Jonassen and Rohrer-Murphy, 1999).

Before the ASA, the researcher analyzed the screen capture recordings of task sessions by using Modified MUVEEET and Emerged Tensions in 3D VLE Forms. Analysis procedure of screen capture recordings of task sessions was given below. The analysis of overall qualitative data is given at a glance in Table 3.19.

Table 3.19 Analysis of Overall Qualitative Data At a Glance

Decision on	Description
Procedure	Thematic analysis following the constant comparative method for ASA (Yamagata-Lynch, 2010)
Qualitative Data Analysis	Constant Comparative Method (Strauss,1987; Strauss & Corbin,1998)
Activity System Analysis	Jonassen and Rohrer-Murphy (1999)'s checklist - Modified in the order of the steps

3.8.1.1 Analysis of Overall Qualitative Data

After the analysis of screen recordings and interview transcriptions, all written data sources were continuously read, and the notes were taken related to initial ideas in order to extract themes and reveal the patterns in an ongoing cycle. In this step, getting familiar with the data and data collection continued simultaneously. Thus, evaluation of data for having a comprehensive understanding of the content and creating a foundation for the initial analysis were the constant efforts made.

Consistent with the Yamagata-Lynch (2010), the researcher followed the constant comparative method for activity system analysis to code and analyze the data. The constant comparative method described by Strauss (1987) and Strauss and Corbin (1998) was used for code identification, thematic analysis, and identifying findings. The constant comparative method engages investigators in an intense, systematic process of examining and reexamining the data while comparing one source with another to find similarities and differences (Glaser & Strauss, 1967).

After getting familiar with the data, the steps followed in this analysis are outlined in Figure 3.24. The researcher followed the steps proposed by Yamagata-Lynch (2010).

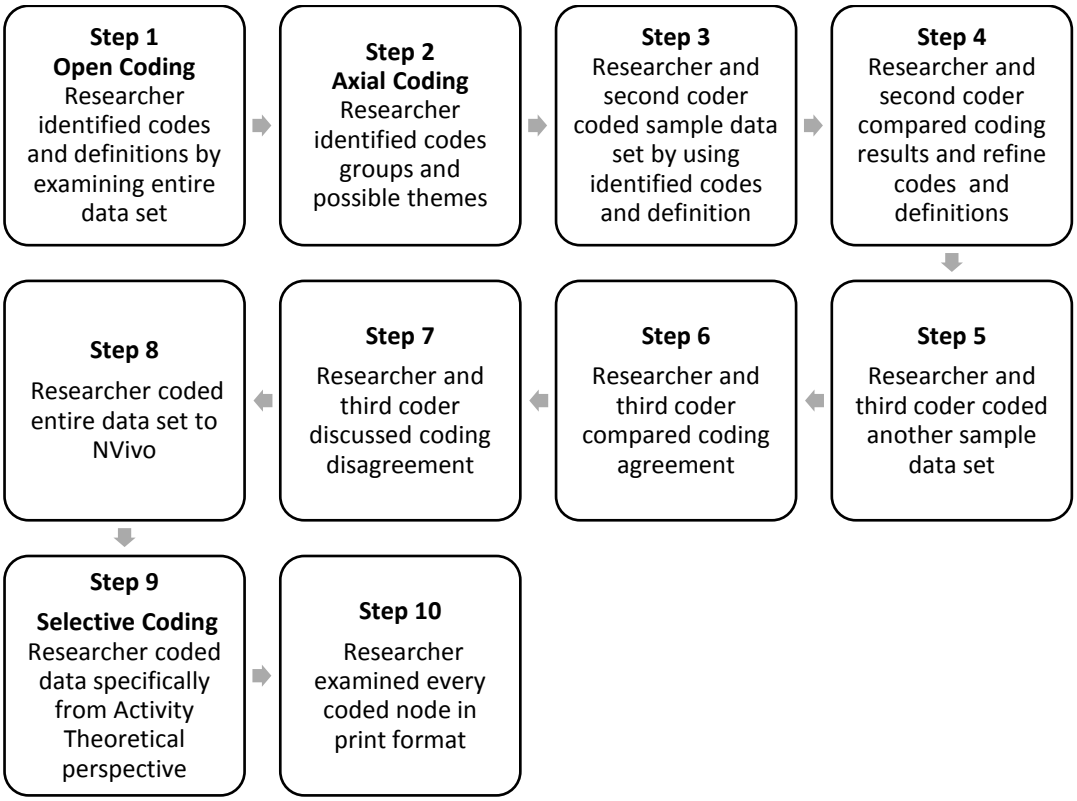


Figure 3.24 Steps Taken for Code identification and Coding

3.8.1.1.1 Coding Data

Steps 1–3 of Figure 3.24 described the processes used to identify an initial set of codes with corresponding definitions.

Step 1: "Open coding - Researcher identified codes and definitions by examining entire data set"

Corbin and Strauss (2015) defined open coding as "breaking data apart and delineating concepts to stand for interpreted meaning of raw data" (p. 240). At this stage, the researcher coded data with a qualitative data analysis software; NVivo 12. The researcher imported all the data into NVivo: participants' responses to surveys (Inquiry Forms, Reflection Forms, General Evaluation Forms from Google Forms), interview transcripts (from Google Drive), and data derived from Modified MUVEEET-Form, and "Emerged Tensions in the 3D VLE-Form (from paper-

based). In this process, the researcher broke down the data into manageable pieces: codes. Each code was represented as the 'minimal thematic unit'. After a set of codes and definitions were drafted, axial coding was employed as indicated in Step 2.

Step 2: "Axial Coding - Researcher identified codes groups and possible themes"

Strauss and Corbin (1998) defined axial coding as "the process of relating categories to their subcategories, termed 'axial' because coding occurs around the axis of the category, linking categories of the level of properties and dimensions" (p. 123). In this process, the researcher examined the codes, attempted to draw out the relationships among them and formulated them into groups of codes. The codes and definitions were either updated or discarded until coding categories have been established as mutually exclusive.

After the determination of the list of possible codes had been saturated, an academician (second coder) who was expert in qualitative research (in the field of Instructional Technology) and who had not participated in this study to take part in Steps 3 and 4.

Step 3: "Researcher and second coder coded sample data set by using identified codes and definition"

The second coder used the codes which were identified by the researcher. Both the second coder and the researcher coded a sample data set independently. The sample data set included 3 participants' all data (more than 10% of the all data). They were selected since they had provided rich data. Three participants' all data were selected given to the second coder electronically. During this coding process, the researcher and the second coder modified, added, and discarded codes that did not fit well with the sample data set. This process took approximately two weeks and, two meetings were organized on a weekly basis to discuss the progress.

Step 4: "Researcher and second coder compared coding results and refined codes and definitions"

After the completion of the independent review, the coded data line by line was compared. As a result, codes and definitions were refined to assure that they were clear, comprehensive, and mutually exclusive.

3.8.1.1.2 Ensuring Trustworthiness of Codes

Steps 5-7 of Figure 3.24 described the processes used to ensure the trustworthiness of codes. The information about these processes are given in Section 3.9.

3.8.1.1.3 Completing Coding Process

Steps 8-10 described the process which the researcher followed to complete the coding.

Step 8 – "Researcher coded entire data set to NVivo"

The whole data set was coded using "NVivo 12" after providing the trustworthiness of the codes. The researcher created the relational structure of the codes in NVivo 12 with the codes and definitions identified in Step 7.

Step 9 – "Selective coding, researcher coded data specifically from Activity Theoretical perspective"

In Step 9, the researcher conducted selective coding that identified the components of the activity system model including the subject, tool, object, rule, community, and division of labor in 3D VLE.

In the process of identification of the components of the activity system, 'a list of questions for selective coding' provided by Yamagata-Lynch (2010, p.75) was used as a guide. They were listed as below:

- *"What is the activity setting in which these activities are situated?"*

- *"Who are the subjects of these activities?"*
- *"What is the shared object of these activities?"*
- *"What tools, rules, community, and division of labor are involved in these activities?"*
- *"What systemic contradictions are bringing tensions into these activities?"*
- *"What are the outcomes of these activities?"* (Yamagata-Lynch, 2010, p.75)

By answering each question related to this research context, the researcher identified "the subject, tool, object, rule, community, and division of labor" roughly for the next step of data analysis.

Step 10 – "Researcher examined every coded node in print format"

Finally, in Step 10, the researcher engaged in several iterations of reading the printed coded text in preparation for identifying substantiated stories in the coded data and ensuring that no further coding was necessary.

3.8.1.1.4 Identifying the Activity System on Cognitive Presence

As mentioned above, after intense engagement with the data through the code identification and coding activities, the researcher developed a thick description of participant experiences in narrative format and identified CP activity system from these narratives. Identification of the CP activity system involved three main steps:

(a) "Develop Thick Description of Participant Experiences in Narrative Format"
(b) "Conduct Activity Systems Analysis of the Narratives" and
(c) "Identify Substantiated Findings and Share with Participants" (Yamagata-Lynch, 2010, p.91).

In the context of research purpose, "To provide cognitive presence of EFL learners in 3D VLE called as TeachinGrid" was viewed as an activity system subject to ASA, and Engeström's (1987) AT triangle was used to inform key themes, and to describe the component structure of this activity. For the ASA process, Jonassen and Rohrer-Murphy's (1999) checklist was followed. In the next chapter, the steps

in the checklist are presented and results of ASA are given in detail. (see Section 4.2)

3.8.1.2 Analysis of Screen Capture Recordings of Task Sessions

During the 6 weeks of the task sessions period, in total 28 sessions (2 Training sessions, 4 in-class task sessions and 4 out-of-class task sessions for each group) were recorded by Camtasia. They were analyzed by using two instruments (Modified MUVEEET and Emerged Tensions in 3D VLE Forms) as below:

3.8.1.2.1 Data Analysis by Modified MUVEEET – Form

Although the CoI survey is a valid instrument to determine the existence and the level of CP, it may not be completely helpful due to the small number of participants for those purposes. The researcher used data triangulation to uncover the CP elements as perceived by EFL learners through interviews, Inquiry and Reflection Form surveys and as perceived by the researcher and experts by the analysis of task sessions' screen capture recordings. Modified MUVEEET-Form guided by the coding scheme suggested by Shea et al. (2010) was used in the analysis of task session recordings. Participants' level of CP in the 3D VLE was examined by using a coding scheme for each phase of CP (i.e., TE, EX, IN, and RE) in modified MUVEEET- Form.

Stenbom, Jansson, and Hulkko (2016) reported that units such as "message", "paragraph", and "sentence", or "thematic units" are commonly used units in CoI Framework research studies. Since multiple data sources were used in this process, multiple units were used in this study. Each participant's answer to the open-ended questions in the surveys and interview were considered as the unit of analysis.

On the other hand, audio messages ("message-level unit of analysis") in the task sessions' recordings were used to explain the experiences reflecting the EFL

learners' CP. The researcher transcribed EFL learners' narrations which reflect indicators of each CP phases and inserted them to the text messages as an example column in the modified MUVEEET - Form. More precisely, qualitative data derived from the mentioned data source were used to triangulate the data derived from the CoI Survey and presented in the next chapter (see Section 4.1).

A message-level unit corresponding to what one participant conversation on one occasion in 3D VLE was selected as the unit of analysis. Each message evidencing CP was counted at only one phase (TE, EX, IN, RE). Garrison, Anderson and Archer (2001) developed a "code up" (to the later phase) or "code down" (to the earlier phases) heuristics for coders since a unit of analysis (in this case, a message) "may contain contradictory categorization cues or evidence of multiple phases of cognitive presence" (p.9). Consistent with Garrison et al.'s (2001) heuristics, when it was not clear which CP phase was represented, the researcher 'coded down' to the earlier phase of CP. On the other hand, when there was strong evidence of multiple phases, the researcher 'coded up' to the later phase. It was justified by Garrison et al. (2001) as "…higher levels of critical thinking, such as integration and resolution, borrow characteristics and process from previous phases" (p.17).

For inter-rater reliability, all 26 screen capture recordings were uploaded to YouTube (as unlisted videos in an unlisted playlist) to share them with the inter-raters easily. The researcher asked the inter-rater to analyze the preparation part of out-of-class tasks sessions to enrich the data.

For the inter-rater analysis, 4 out-of-class task sessions (Task 1, Task 2, Task 3, and Task 4) were selected. Four out-of-class task recordings of each task included EFL learners' preparation of their roleplay (In Task 1 and Task 2) and presentation (In Task 3 and Task 4) as a group. A group was selected randomly for the analysis in each task (G5 for Task 1, G1 for Task 2, G3 for Task 3, and G4 Task 4). In the process of identification of CP indicators in the screen recordings, "Coding Scheme for cognitive presence" proposed by Shea et al. (2010) was used as a guide.

The researcher shared 4 screen capture recordings of out-of-class task sessions with inter-coder reliability. The performance part of out-of-class tasks sessions were assumed as resolution phase (for the group who performed) and evaluated by the inter-raters in field of ELT to check the progress in the speaking skill. The unlisted playlist's link was shared with the second coder and sent the modified MUVEEET - Form in the paper format. During this coding process, the researcher and the second coder modified, added, and deleted codes not fitting the data set correctly. This process took a week. A meeting was organized to discuss the codes' similarities and discrepancies.

To evaluate the intercoder agreement, the formula proposed by Miles and Huberman (1994) was used: "Intercoder agreement = Number of agreements / Total number of agreed and disagreed codes". The two coders met after the coding and reviewed and reported on the codes' similarities and discrepancies to create consensus. The score of intercoder agreement was .86. After discussion, the researcher and the intercoder reached the consensus. After that, the researcher kept the derived data for the next step (gathering all data together for analysis - Constant Comparative Method).

Then, the researcher analyzed all the screen capture recordings of task sessions data (4 in-class and 22 out-of-class-preparation part) by using modified MUVEEET. To ensure the accuracy of observation, researcher reviewed them again by watching the recordings one more time.

For the reporting the results, McKerlich et al.'s (2011) original method was followed. The data obtained from modified MUVEEET was used to triangulate the data obtained from CoI Survey by providing specific examples related to CP phases in the task sessions.

3.8.1.2.2 Data Analysis by Emerged Tensions in 3D VLE – Form

‘Emerged Tensions in 3D VLE’ Form including column of examples of occurred emerged tensions and the elements of AT was used to observe the tensions in which phases of CP occurred during the TeachinGrid sessions. The researcher selected 4 screen capture recordings (2 in-class & 2 out-of-class) of task sessions randomly and shared with a researcher, who did not participate in the study and an expert in the field of Instructional Technology and coded the same data independently in order to provide inter-coder reliability. Performance part (group’s performance of roleplay or presentation after the discussion) of the out-of-class task sessions also included for the analysis.

In-class task recordings included all groups activities whereas out-of-class task recordings included only one group activity. Among the in-class task session recordings Task 2 and Task 4 was selected. On the other hand, two groups were selected randomly for the analysis of two out-of-class task session recordings (G2 for Task 1 and G4 for Task 3).

For interrater reliability, the link of unlisted playlist in YouTube was shared with the inter-coder. The researcher sent the “Emerged Tensions in 3D VLE” - Form in the paper format. In addition, the researcher provided explicit instructions by sharing a document covered the information about AT and its components (Krippendorff, 2018). During the coding process, the researcher and the inter-coder modified, added, and deleted codes not fitting the data set correctly. This process took 2 weeks and, 2 meetings were organized to discuss the codes’ similarities and discrepancies.

To evaluate the intercoder agreement, the formula proposed by Miles and Huberman (1994) was used: “Intercoder agreement = Number of agreements / Total number of agreed and disagreed codes”. The two coders met after the coding and reviewed and reported on the codes' similarities and discrepancies to create consensus. The score of intercoder agreement was .89. After discussion, the

researcher and the intercoder reached the consensus. After that, the researcher kept the derived data for the next step (gathering all data together for analysis - Constant Comparative Method). The researcher analyzed the rest of the screen capture recordings of task sessions (2 in-class and 20 out-of-class) uploaded on YouTube, by using Emerged Tensions in 3D VLE Form and then reviewed by watching the recordings one more time to ensure the accuracy of observation.

3.8.1.3 Transcription of Interviews

After the analysis of screen capture recordings of task sessions in 3D VLE, the researcher followed the following steps for the rest of the data set: The researcher listened to all audio recordings of interviews, Moreover, all documents that were collected were evidently read, arranged, and systematized. Then, "Listen N Write", a free transcription software, was used to transcribe audio recordings in this study. Following the verbatim transcription of each interview data, the transcription was reviewed by listening to the audio-record one more time to ensure the accuracy of transcriptions.

3.8.1.4 Additional Information – Quotations from Research Participants

In the results chapter, the researcher used a narrative style, by adding quotations from the research participants as shown below Figure 3.25.

Some of the EFL learners' thoughts related to TeachinGrid's being enjoyable were presented below:

> *It is very enjoyable while using the character* [avatar] *since it gives a feeling of playing. Such environments can also make learning more active. (Lily G2-RS-T0) (Q7).*

Figure 3.25 An Example of Quotation from Research Participant

As seen from the example in the figure, the researcher quoted the participants' statements with the source of data and additional information (Task #, coded names/pseudonym, related phases of CP). The researcher added his comments on the various part of the quotes in brackets to clarify meaning and shortened quotes with ellipsis. The abbreviations used in the quotations and their expansion are listed below:

- IS: Inquiry Form of the EFL Learner
- RS: Reflection Form of the EFL Learner
- RI: Reflection Form of the Instructor
- INTWS: Interview of the EFL Learner
- GES: General Evaluation Form of the EFL Learner
- GEI: General Evaluation Form of the Instructor
- Q#: Quotation Number
- TE: Triggering Event Phase of Cognitive Presence
- EX: Exploration Phase of Cognitive Presence
- IN: Integration Phase of Cognitive Presence
- RE: Resolution Phase of Cognitive Presence
- T0: Task 0 – Training
- T1: Task 1 – Department Stores
- T2: Task 2 – Phobias
- T3: Task 3 – Railway Station of Future
- T4: Task 4 – Fake or Real News

3.9 Trustworthiness

While the positivist criteria of quantitative research include "internal and external validity, reliability, and objectivity" to establish reliability and validity, in qualitative research the following criteria are considered: "credibility, transferability, dependability, and confirmability" (Denzin & Lincoln, 2018, p.57). These criteria were applied for the establishing trustworthiness of qualitative research (Denzin & Lincoln, 2018, p.1380). To establish trustworthiness of the study, the following strategies were employed. Firstly, the fundamental rules of ethics were followed throughout the study. The study was approved by the Ethics Committee of Başkent University and METU (see Appendix S). Secondly, all

participants were selected based on their willingness to participate. They were informed about the study and filled Code of Conduct Form (see Appendix F). All participants in any part of data collection treated with respect and a pseudonym was given to each participant to keep their identity confidential in 3D VLE. In order to protect participants' data and maintain confidentiality, only researcher, instructor and the participants had access to the virtual environment (Moodle, Zoom, and OpenSimulator). The study did not include any harm (physical or psychological), illegal or misbehaviors for the participants. They were not deceived in any way throughout the study. Thirdly, all instruments were reviewed by subject matter experts and researchers in the field to ensure the content validity. In order to enhance internal validity, a reliable and valid instrument, CoI Survey, was used in the quantitative data collection process of the study. Validity and reliability of CoI Survey was provided in previous empirical findings (see Arbaugh et al., 2008; Garrison, 2017, 2018; Swan et al., 2008).

In the qualitative data collection process of the study, for credibility, triangulation, peer review, member checks, prolonged engagement strategies and persistent observation; for transferability, thick description strategy and for dependability and confirmability, audit trail (External audit) were applied. The validity and reliability issues and the precautions to avoid them were summarized in Table 3.20. In addition, demographics of the expert group are given in Table 3.21.

Table 3.20 Summary of Trustworthiness and Applied Strategies in the Study

Trustworthiness / Applied Strategy		Details
Credibility		
Data Triangulation	-	Using multiple sources of data
	-	Collecting data from the instructor as a different point of view.
Investigator	-	Analyzing same qualitative data and comparing findings

Trustworthiness / Applied Strategy	Details
Triangulation	by two experts independently

Table 3.20 (continued)

Trustworthiness / Applied Strategy	Details
Peer review	- Working with another researcher during the research - Reviews and comments of the advisor and the doctoral committee members during the study
Member check	- All verbatim transcripts were sent to the participants via e-mail (attachment in a Microsoft Office Word document) for verification of content and correctness. - Preliminary results and emerged theoretical codes/themes (emerged tensions and factors) were sent to the participants via email (including the link for Google Form) for validation findings and feedback. They were asked to suggest any additional factors the researcher might have missed. - Feedback from the instructor about the experience and findings of the study were asked.
Prolonged engagement	- Spending as much time as possible with the participants and the instructor, attending to all 28 sessions in the 3D VLE, and building a close relationship with them.

	- Working actively with the instructor and group of subject matter experts in the field of English Language Teaching) at the process of task preparation and planning each session. - Additionally, the pilot 1 was conducted with this group of EFL learners and analyzed the applicability of the research in this course and with the typical participants.

Table 3.20 (continued)

Trustworthiness / Applied Strategy	Details
Persistent observation	- During the research process, each task sessions were recorded by Camtasia Screen Recording Software (avatar activity in 3D VLE) and Zoom (conversations among participants in 3D VLE).
Transferability	
Thick description of data	- Detailed information on the case, research setting, participants, and detailed description of data collection and analysis procedure and findings with adequate evidence were given.
Dependability	
Intercoder Agreement	- After the analysis of a sample data set of 3 participants including the most informative data by two intercoders (i.e., the researcher and the second coder), the third coder coded a sample data set included another 3 participants' all data (more than 10% of the all data) randomly by using the codes which were identified by the agreement of them (i.e., the researcher and the second coder)

Audit trail	- All details about the research including research context, participants, data collection and data analysis processes/procedures of the study was presented to construct a traceable trail. - The researcher's notes were also helpful to provide details about the research process.

Table 3.20 (continued)

Trustworthiness / Applied Strategy	Details
Confirmability	
Data triangulation	- Multiple sources of data and data types were used.
Audit trail	- Each phase of the study was presented with the help of diagrams and explained in detail.
Researcher's role and biases	- The researcher's role was explained. - Researcher's background and assumptions, limitations, delimitations were provided.

Table 3.21 Demographics of the Expert Group

Expert ID	Title	Department	Gender
Expert 1	Assoc. Prof. Dr.	CEIT	Female
Expert 2	Assoc. Prof. Dr.	CEIT	Female
Expert 3	Asst. Prof. Dr.	CEIT	Male
Expert 4	Lecturer, Ph.D. Candidate	CEIT	Male
Expert 5	Assoc. Prof. Dr.	ELT	Male
Expert 6	Asst. Prof. Dr.	ELT	Female
Expert 7	Asst. Prof. Dr.	ELT	Female
Expert 8	Asst. Prof. Dr.	ELT	Male
Expert 9	Research Assistant	ELT	Female
Expert 10	Lecturer, Ph.D. Candidate	EP	Male
Expert 11	Lecturer, Ph.D. Candidate	EP	Male

3.9.1 Credibility

In qualitative research, credibility criterion indicates the 'truth value' of the research findings (Lincoln & Guba, 1985; Miles, Huberman, & Saldaña, 2014). It is a re-validation attempt to determine "the consistency of the researchers and participants' results.".

The credibility of the study was enhanced by using the following strategies: triangulation (investigator triangulation, data triangulation), peer review (debriefing), member check, prolonged engagement in the research site, persistent observation and each of them is explained below.

3.9.1.1 Triangulation

Merriam and Tisdell (2015) defined triangulation as "using multiple investigators, sources of data, or data collection methods to confirm emerging findings." (p.259). Denzin (1978) proposed four types of triangulation; "the use of multiple methods, multiple sources of data, multiple investigators, and multiple theories to confirm emerging findings" (as cited in Merriam & Tisdell, 2015). In this study, triangulation types were employed as below:

Merriam and Tisdell (2015) referred data triangulation or triangulation using multiple sources of data as "comparing and cross-checking data collected through observations at different times or in different places, or interview data collected from people with different perspectives or from follow-up interviews with the same people" (p. 245). The data triangulation was established by using the multiple sources, verifying the findings and check the converging relationships. In order to increase the credibility of the research and to strengthen the reliability of the existing evidence, the data collected from not only from the EFL learners but also the instructor. Data derived from the instructor's responses to the questionnaires were compared with data obtained from the EFL learners.

3.9.1.2 Peer Review

Peer review (or peer examination or debriefing), another strategy for enhancing trustworthiness of a study, is described as "discussions with colleagues regarding the process of study, the congruency of emerging findings with the raw data, and tentative interpretations" (Merriam & Tisdell, 2015, p.259). The aim of this process was to ensure valid and unbiased research findings and methodologies. In this study, the peer reviews were employed as below:

- The researcher asked an expert in the field of Instructional Technology and qualitative design about the research design, data collection, and data analysis of the study. At the end of each step in the study, meetings were organized with the expert for the evaluation.
- In addition, reviews and comments of the advisor and the doctoral committee members were provided insights and helped on decision making in the research process.

3.9.1.3 Member Checks

Member checks or respondent validation, another strategy for ensuring internal validity or credibility, is defined as "Taking tentative interpretations/findings back to the people from whom they were derived and asking if they are plausible" (Merriam & Tisdell, 2015, p.259). In this study, member checks were employed as below:

- Following by the transcription of the interviews, all verbatim transcripts were sent to the participants via e-mail (attachment in a Microsoft Office Word document) for verification of content and correctness (see Appendix T). They were asked to make comments, correction, and additional thoughts by marking all necessary corrections on the Word document and uploaded the corrected interview transcription to the Google Forms link. Four EFL

learners filled the form and the corrections included unnecessary, meaningless words in the conversation (e.g., “and so on”, “bla bla”).

- After the data analysis, preliminary results and emerged theoretical codes / themes (emerged tensions and factors) were sent to the participants via email (including the link for Google Form) for validation findings and feedback (see Appendix T). They were asked to suggest any additional factors the researcher might have missed. Five EFL learners responded to the email and filled the form.
- In addition, the researcher asked feedback from the instructor about the experience by the General Evaluation Form for the Instructor. The researcher sent the instructor the member check form for the preliminary results via an e-mail. The instructor filled the member check form.

3.9.1.4 Prolonged Engagement

Lincoln and Guba (1985) describe prolonged engagement (“spending sufficient time at your research site”) and persistent observation (“focusing in detail on those elements that are most relevant to your study”) as critical in attending to credibility. “If prolonged engagement provides scope, persistent observation provides depth” (as cited in Patton, 2015, p.989). The researcher spent enough time in the field to learn and understand the phenomenon of interest. In this study, prolonged engagement was employed as below:

- In order to familiarize with the site and typical participants(characteristics) of the study, before the data collection, the researcher administered Computer II course in the Spring semester of the 2017-2018 Academic Year for the EFL learners (pre-service English teachers). The pilot 1 was conducted with this group of EFL learners and analyzed the applicability of the research in this course and with the typical participants.
- Researcher spent as much time as possible with the participants and the instructor during the study, attended to all 28 sessions (2 training, 4 in-

class-task sessions, 22 out-of-class task sessions (4 sessions for each 6 groups, 2 sessions not occurred) in the 3D VLE and built a close relationship with them.

- In addition, the researcher was actively working with the subject matter experts in the field of ELT and the instructor at the process of task preparation and planning each session.

3.9.1.5 Persistent observation

Persistent observation "poses the question as to whether the researcher or the research team have done an in-depth study to gain detail" (Bitsch, 2005, p. 83) and helps discover participants' qualities and unusual characteristics. In this study, persistent observation was employed as below:

- During the study, in total 28 sessions in TeachinGrid (2 Training sessions, 4 in-class task sessions and 4 out-of-class task sessions for each group, a total of 6 groups) were recorded by Camtasia screen recording software. The researcher constantly watched and analyzed the screen recordings for depth insight.

- Conversations among participants and/or the instructor in task sessions were recorded by Zoom. Recording all participant avatar activity and conversations within the 3D VLE as much as possible, without any lost was aimed by this way.

3.9.2 Transferability

Transferability (or External Validity or Fittingness) "concerned with the extent to which the findings of one study can be applied to other situations" (Merriam & Tisdell, 2015, p. 253). The researcher needed to provide sufficient descriptive data of the phenomenon and the context to make transferability possible (Lincoln &

Guba, 1985, p. 298). Thick description strategy was employed to enhance transferability of the study. Thick description or rich, thick description, which is the most commonly strategy for enhancing transferability, refers to “a description of the setting and participants of the study, as well as a detailed description of the findings with adequate evidence presented in the form of quotes from participant interviews, field notes, and documents”(Merriam & Tisdell, 2015, p. 257).

In this study, thick description was employed by providing detailed information on the case, research setting, participants, and detailed description of data collection and analysis procedures. Moreover, the findings were provided with adequate evidence and explained clearly as much as possible in the study to enable researchers to understand the investigated phenomenon and assess the findings of the study. As more detailed descriptions were given, it was made easier for the researchers to familiarize and understand the context in which the research was conducted.

3.9.3 Dependability

Dependability or consistency, equivalent of reliability, is an issue related to the internal consistency and stability of the findings over time (Lincoln & Guba, 1985; Miles & Huberman, 1994; Bitsch, 2005). Intercoder agreement and audit trail were employed to enhance dependability of the study.

3.9.3.1 Intercoder Reliability / Agreement

3.9.3.1.1 Modified MUVEEET – Form

The data analysis procedure of the Modified MUVEEET – Form was given in Section 3.8.1.2.1. The researcher selected 4 out-of-class task sessions videos randomly, shared them with the second coder, and sent the modified MUVEEET – Form in the paper format. The two coders met after the coding and reviewed and

reported on similarities and discrepancies of the codes to create consensus. The score of intercoder agreement calculated by the formula proposed by Miles and Huberman (1994) was .86. After discussion, the researcher and the intercoder reached the consensus.

3.9.3.1.2 Emerged Tensions in 3D VLE – Form

The data analysis procedure of the 'Emerged Tensions in 3D VLE' Form was given in Section 3.8.1.2.2. The researcher selected 4 screen capture recordings (2 in-class & 2 out-of-class) of task sessions randomly and shared with a researcher (Expert 4), who did not participate in the study and expert in the field of Instructional Technology and coded the same data independently in order to provide inter-coder reliability. The unlisted playlist's link was shared with the inter-coder and sent the "Emerged Tensions in 3D VLE" Form in the paper format. In addition, the researcher provided explicit instructions by sharing a document covered the information about AT and its components (Krippendorff, 2018). During the coding process, the researcher and the inter-coder modified, added, and deleted codes not fitting the data set correctly. This process took 2 weeks and, 2 meetings were organized to discuss the codes' similarities and discrepancies.

The two coders met after the coding and reviewed and reported on the codes' similarities and discrepancies to create consensus. The score of intercoder agreement calculated by the formula proposed by Miles and Huberman (1994) was .89. After discussion, the researcher and the intercoder reached the consensus.

3.9.3.1.3 Interview

In order to ensure validity of the questions, the interview protocol was checked by field trials and expert reviews. To ensure its content validity, understandability, and suitability, three full-time academicians in the field of Instructional Technology (expert in IT and experienced in qualitative research) were invited and discussed on

each question. They checked the questions in terms of clearness, simplicity, meaning and understandability. After reaching consensus, pilot tests were performed face to face with two EFL students not involved in the research at the Faculty of Education.

After the analysis of screen recordings and interview transcriptions, all written data sources were continuously read, and the notes were taken related to initial ideas in order to extract themes and reveal the patterns in an ongoing cycle. In this step, getting familiar with the data and data collection continued simultaneously. Thus, evaluation of data for having a comprehensive understanding of the content and creating a foundation for the initial analysis were the constant efforts made as well.

The forms were reviewed in terms of content validity, understandability and suitability by three full-time academicians in the field of Instructional Technology; one of them (Assoc. Prof. Dr.) was an expert in Qualitative research method (in terms of data collection), the other (Asst. Prof. Dr.) was in research design (instrument development) and the last one (Assoc. Prof. Dr.) was in 3D VLE (in terms of design and development of 3D VLE).

3.9.3.2 Audit Trail

Merriam and Tisdell (2015) defined audit trail as "A detailed account of the methods, procedures, and decision points in carrying out the study." (p.259). In this study, audit trail was employed as below:

- All details about the research including research context, participants, data collection, and data analysis processes/procedures of the study was presented to construct a traceable trail.
- The researcher's notes were also helpful to provide details about the research process.

3.9.4 Confirmability

Confirmability (or Objectivity) refers to a degree of neutrality in interpreted findings. This means that findings should reflect what informants really say regardless of researcher bias. Objectivity might be possible if a researcher acknowledges his own prejudices and tendencies (Miles & Huberman, 1994). Thus, in qualitative studies, researcher's roles, biases, beliefs, and dispositions should be clearly reported. To establish confirmability, employing triangulation and reflexivity strategies could be used (Guba,1981).

3.9.4.1 Triangulation

At the beginning of this section (see Section 3.9.1.1), the triangulation strategy for credibility was clarified In addition, multiple sources of data and data types were collected for confirmability.

3.9.4.2 Audit Trail

For confirmability, audit trail was also employed. Each phase of the study was presented with the help of diagrams and explained in detail for audit trail. Additionally, all in-class task sessions and out-of-class sessions were recorded by Camtasia screen recording software and uploaded to YouTube (as unlisted videos in unlisted playlists). Interviews and speaking exams were recorded by a voice recorder (Windows Voice Recorder). In addition, all participants' conversation in each task session were recorded separately by using Zoom. All those documents (including transcriptions of interviews) and links (YouTube playlists) were uploaded to Google Drive to document them in structured way and share them with the inter-raters easily.

3.9.4.3 Reflexivity

Merriam and Tisdell (2015) defined researcher's position or reflexivity as "Critical self-reflection by the researcher regarding assumptions, worldview, biases, theoretical orientation, and relationship to the study that may affect the investigation." (p.259). Keeping a diary during all phases of the study was also helpful to examine "the researcher's own conceptual lens, explicit and implicit assumptions, preconceptions and values, and how these affect research decisions in all phases of the study." (Korstjens & Moser, 2018, p.121). In this study, the researcher explained the researcher's role, biases and background, limitation, and delimitations.

3.9.4.3.1 Researcher's Role and Bias

The researcher is the primary instrument of data collection and analysis in qualitative research (Merriam & Tisdell, 2015; Patton, 2015). The qualitative researcher should provide a framework within which people can respond in a manner that adequately reflects their points of view (Patton, 2015, p.74) and be honest about beliefs, biases, values, feelings, and point of views (Miles, Huberman & Saldana, 2014).

The researcher of this study being an instructional designer and language teacher created reasoning gap speaking tasks with the collaboration of ELT experts. The speaking tasks took place on the educational island of TeachinGrid in OpenSimulator which was designed based on 3DLE Design Principles proposed by Kapp & O'Driscoll (2010) and owned by the researcher. It helped him better understand, interpret, manage overall research process.

Four different positions offered by Gold (1958) for researcher's stance: "Complete participant", "Participant as observer", "Observer as participant", and "Complete observer". The researcher was observer as participant and did not interfere with the

course of the task sessions in 3D VLE, but responsible for supporting the EFL learners and instructor for technical help and problems.

The researcher managed and observed the training sessions on TeachinGrid. He built a balanced relationship with participants and answered their questions, respectively. He took notes during the training process. In 3DLE task sessions, the researcher recorded the task sessions via Camtasia and did not disturb and interrupt the session. Throughout the research process, the researcher kept a journal recording descriptions of interactions among participants in TeachinGrid. The researcher took notes in all process of each synchronous in-class and out-of-class task session. The researcher described actions of EFL learners and the instructor in 3D VLE, the difficulties encountered and potential drawbacks of the tasks.

Moreover, Patton (2015) stated that "the credibility of qualitative methods, therefore, hinges to a great extent on the skill, competence, and rigor of the person doing the fieldwork—as well as the things going on in a person's life that might prove to be a distraction" (p.67). Therefore, in addition to the researcher's role, background of the researcher is presented briefly below:

The researcher was graduated from the undergraduate program of Computer Education and Instructional Technology (CEIT) and English Language Teaching (ELT) (as a double major), Faculty of Education in Turkey. He finished his Master's degree on Computer Engineering. Then, he started his Ph.D. degree in CEIT at METU. In addition, he was working as a research assistant at the same department in Başkent University. During his Ph.D., he attended the course related to 3D VLEs and involved 3D VLE projects. He designed and developed 3D VLE and took part in related conference (see Kilis et al., 2015). His research interests include virtual reality, augmented reality, and distance education.

3.10 Ethical Considerations

Ethical issues in the data collection and dissemination of findings are likely to arise in qualitative studies (Merriam & Tisdell, 2015). In this study, the ethical issues were considered detailed throughout the research process:

After reviews and corrections of the instruments, to conduct research and start data collection, permission from the Ethics Committee was necessary to obtain from both institutions, Başkent University and METU. Therefore, all instruments and voluntary participation forms and information form including the purpose and summary of the thesis were sent to the Ethics Committee of the Başkent University (where the research setting is located) and Institutional Review Board (IRB), namely METU Applied Ethics Research Center. The research permit was approved by the Ethics Committee of Başkent University and METU (see Appendix P).

At the beginning of the study, the researcher contacted participants, and informed them of the general purpose and research process of the study. All participants were selected based on their willingness to participate in the research by filling Code of Conduct Form (see Appendix F). They were informed that the research did not include any harm (physical or psychological), illegal or misbehaviors for the participants. They were not deceived in any way throughout the study.

A pseudonym (e.g., Mila, Thomas) was given to each participant to keep their identity confidential during the research. Each participant attended to the speaking exams (a pre-test and a post-test), participated in in-class and out-of-class task sessions in TeachinGrid, filled the questionnaires and was interviewed by using the given pseudonym.

During the data collection process, the researcher respected the site, and disrupt as little as possible. The researcher provided rewards to participants for participating in the research. Participants who were accepted to attended to the research would be awarded by the Computer II course instructor. Each participant could get maximum 10 points. The point that the EFL learners would be awarded was

determined according to the performance of the participant by the EFL instructor. All participants in any part of data collection treated with respect.

Moreover, in order to protect participants' data and maintain confidentiality, only researcher, instructor and the participants had access to the virtual environments including Moodle, Zoom and TeachinGrid 3D VLE. Additionally, the data obtained from the data collection were not shared with any third party and names of the participants were not associated with the particular set of data anywhere.

During the data analysis, the researcher reported multiple perspectives and contrary findings. The findings were compared with the findings of other studies in the literature as well. He respected the privacy and anonymity of participants.

Additionally, while writing the findings and conclusion of the study, the neutrality of the researcher maintained by depending only on the data being derived from questionnaires, interviews, documents, and observations. Unbiased language appropriate for audiences of the research were used by the researcher.

3.11 Delimitations and Limitations of the Study

3.11.1 Delimitations

The delimitations in this qualitative research are related to transferability (Lincoln & Guba, 1985). Merriam and Tisdell (2015) pointed out "In qualitative research, a single case or a small, nonrandom, purposeful sample is selected precisely because the researcher wishes to understand the particular in depth, not to find out what is generally true of the many" (p.254).

In this context, a rich and thick description was employed in the study as follows: detailed information on the case, research setting, participants, and detailed description of data collection and analysis procedure and findings with adequate evidence were given. They were explained clearly as much as possible in the study

to enable researchers understand the investigated phenomenon and assess the findings of the study.

Another delimitation is related to nature of the case study. This case study was a bounded system, delimited by place (situated at a foundation university-Başkent University Faculty of Education, Department of Foreign Languages, Program in English Language Teaching), by the group of people (Department of Foreign Languages, Program in ELT– EFL learners), by time (limited to data collection). Specifically, it was delimited to EFL learners' level of cognitive presence in the English-speaking module context within 3D VLE in Başkent University, Faculty of Education. After the pilot study following by consultation with experts (from CEIT and ELT program), EFL students from the ELT Program were included.

3.11.2 Limitations

The nature of qualitative analysis techniques and the context of the study was also put some limitations on this study. A variety of the EFL learners' motivations on the language education may affect the data collection process and the findings of this study were limited by their honest responses to the surveys, nonbiased participation to the research and honesty during the interview process.

In addition, the 'Speaking Tasks in 3D Virtual Learning Environment' module was integrated to Computer II- a must course including topics related to 3D VLEs. Due to the limitation of the course curriculum, limited number of speaking tasks were created for short time period (4 weeks). Moreover, although the Computer II course was a first-year course (for freshmen), there were 12 freshmen, 4 sophomores and 5 juniors enrolled in the course in the Spring semester of 2018-2019 Academic Year. The year of study could affect the results of the CoI Survey.

Although the findings of the data analysis are largely limited to interpretations of the researcher, the researcher gathered, analyzed, and interpreted the data by testing

reliability and validity of data and the data analysis, to ensure that the findings are separated from his personal beliefs and values.

CHAPTER 4

RESULTS

This chapter presents the findings of the study. The findings are organized and presented in parallel with the research questions, respectively in two parts.

In the first part, the findings of descriptive statistics about EFL learners' community of inquiry, cognitive presence, social presence, and teaching presence are presented by the analysis of CoI Survey. Since one of the unit of interest in the study was CP level in 3D VLE, the screen capture recordings of task sessions (in-class and out-of-class) were analyzed by modified MUVEEET and examples (messages) of CP indicators were provided to support the CP results derived from the CoI Survey.

Participants' responses to the CoI Survey were analyzed by descriptive statistics to determine the answers to the first research question by utilized SPSS statistical software (IBM SPSS Statistics 22). Mean, standard deviation, minimum and maximum scores of each item of CP were calculated. Additionally, the various descriptive results are also given in this chapter as listed below:

- CoI, CP, SP, TP
- CP Grouped by its sub-categories (CP, Triggering Event, Exploration, Integration, Resolution)
- Cognitive Presence Grouped by its items (from item 23 to item 34 in the CoI Survey)
- Frequency of responses to each CP item(indicator)

In the second part, the findings were given related to the second research question. In consideration of second research question, ASA was conducted to understand the dynamics of 3D VLE and to analyze what factors influenced EFL learners' CP

in 3D VLE both positively and negatively. The CP activity system was examined in detail to reveal all the components and dynamics of it by following each step in the updated version of Jonassen and Rohrer-Murphy's (1999) checklist.

4.1 EFL Learners' Level of Cognitive Presence

In the study, data related to 21 EFL learners' levels of CP were collected with the self-report data obtained using the CoI Survey and using descriptive statistical techniques. Although the CoI survey was considered as a valid instrument to determine the existence and level of CP, it may not be completely helpful due to the small number of participants. The researcher used data triangulation to uncover the CP elements as perceived by EFL learners through interviews, Inquiry and Reflection Form surveys, and as perceived by the researcher and experts by the analysis of task sessions' screen capture recordings. Modified MUVEEET-Form guided by the coding scheme suggested by Shea et al. (2010) was used in the analysis of task session recordings.

The first research question "*RQ1. What are the Cognitive Presence levels of EFL learners engaging in reasoning-gap activities in the synchronous online English-speaking module within a 3D VLE (specifically OpenSimulator with SLOODLE) based on self-report and direct observation?"* examined in this part. In addition to CP, TP, SP and CoI levels were also examined to evaluate the general levels of CoI and its components in 3D VLE. Reported descriptive statistics in this study included the means, standard deviations, and the minimum to maximum scores for the CoI survey and its components.

The findings of descriptive statistics about EFL learners' CoI, CP, SP, and TP levels from the CoI Survey (5-point Likert-type including 34 items; TP with 13 items, SP with 9 items, CP with 12 items) are presented in Table 4.1.

Table 4.1 Descriptive Statistics of EFL Learners' CoI, TP, SP, CP

CoI Survey	*M*	*SD*	Min.	Max.
CoI	4.19	.17	3.26	4.95
TP	4.44	.41	3.46	5.00
SP	4.03	.72	2.44	5.00
CP	4.11	.74	2.58	5.00

Note. *N*=21
"1 = *Strongly Disagree*; 2 = *Disagree*; 3 = *Neutral*; 4 = *Agree*; 5 = *Strongly Agree*"

According to the results, EFL learners' levels of the CoI had a mean score of *M*=4.19 (*SD*=0.17). The descriptive analysis of data derived from the CoI Survey showed that EFL learners had high scores on each presence of CoI in 3D VLE. Considering three-presences of the CoI, TP mean score was relatively higher than CP and SP. TP had the highest mean score (*M*=4.44) whilst the SP was the lowest (4.03).

Although all presences had similar mean scores (higher than 4.0 – agreement on the items), a mean score of 4.0 in any item equated to an agreement with the statement in the CoI Survey, and a standard deviation of less than 1.0 suggested stronger agreement. They mostly agreed all the items in the CoI survey. The mean scores and standard deviations of CP and SP were relatively similar. The standard deviations of CP and SP were relatively higher than the standard deviation of TP.

4.1.1 Cognitive Presence Grouped by its sub-categories

The results of descriptive statistics about EFL learners' CP grouped by its sub-categories are presented in Table 4.2.

Table 4.2 Descriptive Statistics of CP Grouped by its sub-categories

CoI Survey	*M*	*SD*	Min.	Max.
CP	4.11	.74	2.58	5.00
Triggering Event	4.08	.84	2.00	5.00
Exploration	4.02	.84	2.33	5.00
Integration	4.16	.82	2.00	5.00
Resolution	4.17	.80	2.33	5.00

N=21

Considering sub-categories of CP, Resolution had the highest mean score of 4.17 and standard deviation .80, while the Exploration had the lowest mean score of 4.02 and standard deviation .84. Resolution and Integration means scores were very close to each other. The EFL learners have reported high levels of agreement for all four categories of CP items. Each of these sub-categories and their items with their descriptive statistics were presented in Table 4.3.

Table 4.3 Descriptive Statistics of the CoI Survey Grouped by its CP items

CP Phase / Item #	Definition	*M*	*SD*	Min.	Max.
Triggering Event					
Item-23	"Problems posed increased my interest in course issues."	4.29	.96	2.00	5.00
Item-24	"Course activities piqued my curiosity."	3.90	1.14	1.00	5.00
Item-25	"I felt motivated to explore content related questions."	4.05	.92	2.00	5.00

Table 4.3 (continued)

CP Phase / Item #	Definition	*M*	*SD*	Min.	Max.
Exploration					
Item-26	"I utilized a variety of information sources to explore problems posed in this course."	3.86	1.11	2.00	5.00
Item-27	"Brainstorming and finding relevant information helped me resolve content related questions."	4.19	.81	2.00	5.00
Item-28	"Online discussions were valuable in helping me appreciate different perspectives."	4.00	1.22	2.00	5.00
Integration					
Item-29	"Combining new information helped me answer questions raised in course activities."	4.14	.91	2.00	5.00
Item-30	"Learning activities helped me construct explanations/ solutions."	4.24	.83	2.00	5.00
Item-31	"Reflection on course content and discussions helped me understand fundamental concepts in this class."	4.10	1.14	2.00	5.00
Resolution					
Item-32	"I can describe ways to test and apply the knowledge created in this course."	4.19	.87	3.00	5.00
Item-33	"I have developed solutions to course problems that can be applied in practice."	4.24	.89	2.00	5.00
Item-34	"I can apply the knowledge created in this course to my work or other non-	4.10	1.10	2.00	5.00

CP Phase / Item #	Definition	*M*	*SD*	Min.	Max.
	class related activities."				

The mean scores of each item of CP in the CoI survey showed that all the items in each phase had mean score around overall mean scores of CP and the CoI. The highest mean score belonged to the item 23 - "Problems posed increased my interest in course issues" (*M*=4.29, *SD*=.96). whereas the lowest mean score was items 26 - "I utilized a variety of information sources to explore problems posed in this course." (*M*=3.86, *SD*=1.11). Frequency and percentages of responses to each CP item(indicator) of the CoI Survey is presented in Table 4.4.

Table 4.4 Frequency and Percentage of Responses to each CP Item

CP Phase/ Item #	Strongly Disagree (1)		Disagree (2)		Neutral (3)		Agree (4)		Strongly Agree (5)	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%
Triggering Event										
Item 23	0	0%	1	4.76%	4	19.05%	4	19.05%	12	57.14%
Item 24	1	4.76%	2	9.52%	2	9.52%	9	42.86%	7	33.33%
Item 25	0	0%	1	4.76%	5	23.81%	7	33.33%	8	38.10%
Exploration										
Item 26	0	0%	3	14.29%	5	23.81%	5	23.81%	8	38.10%
Item 27	0	0%	1	4.76%	2	9.52%	10	47.62%	8	38.10%
Item 28	0	0%	4	19.05%	3	14.29%	3	14.29%	11	52.38%
Integration										
Item 29	0	0%	1	4.76%	4	19.05%	7	33.33%	9	42.86%
Item 30	0	0%	1	4.76%	2	9.52%	9	42.86%	9	42.86%
Item 31	0	0%	3	14.29%	3	14.29%	4	19.05%	11	52.38%
Resolution										
Item 32	0	0%	0	0%	6	28.57%	5	23.81%	10	47.62%

Item 33	0	0%	1	4.76%	3	14.29%	7	33.33%	10	47.62%
Item 34	0	0%	3	14.29%	2	9.52%	6	28.57%	10	47.62%

After the descriptive statistics, results of each phase of CP were presented in detail in the following section. Additional supportive data derived from interviews and Inquiry Forms were given in each phase of CP. Moreover, the examples of each phase which were coded from screen capture recordings by using the modified MUVEEET-Form analyzed by the researcher and the intercoder (expert).

4.1.1.1 Triggering Event

The results of descriptive analysis of the CoI Survey in terms of Triggering Event phase of CP were summarized below:

- The highest mean score belonged to the item 23 - "Problems posed increased my interest in course issues" (*M*=4.29, *SD*=.96) whereas the lowest mean score was item 24 - "Course activities piqued my curiosity (*M*=3.86, *SD*=1.11).
- Majority of the EFL learners (76.19%, *N*=16) thought that "problems posed increased their interest in course issues", while some others (23.81%, *N*=5). was undecided about this item.
- Similarly, majority of them (76.19%, *N*=16) thought that "course activities piqued their curiosity" while some students (14.29%, *N*=3) did not report the same way.
- Similarly, majority of the EFL learners (71.43%, *N*=15) felt motivated to explore content related questions, while some students (23.81%, *N*=5) were undecided about this item.

Some of the EFL learners' messages and/or answers which were coded in the Triggering Event level were presented below:

The questions and answers made, and the video watched before the task were the first steps that started us talking. After that, short speeches were organized. (Jessica G1-IS-T1) (Q1).

The fact that our teacher asked us questions before the task started [before the task cycle] *allowed us to do something for the task. (Evelyn G4-IS-T2) (Q2).*

An example of Triggering Event message in Task 3 is Oliver asking question at the beginning of the task preparation:

Oliver G3: So, who's gonna present the physical appearance?

To which Megan replies:

Megan G3: me.

Oliver G3: Give us your idea. (G3-MUVEEET-T3 out-of-class-task session).

Another example of Triggering Event message in Task 4 is Eva-The Instructor asking question at the beginning of the task: "*How can you spot fake news?"(The Instructor - MUVEEET-T4 in-class-task session).*

4.1.1.2 Exploration

The results of descriptive analysis of the CoI Survey in terms of Exploration phase of CP were summarized below:

- The highest mean score belonged to the item 27 – "Brainstorming and finding relevant information helped me resolve content related questions". Whereas the lowest mean score was item 26 – "I utilized a variety of information sources to explore problems posed in this course.".
- Majority of the EFL learners (61.9%, *N*=13) thought that they "utilized a variety of information sources to explore problems posed in the course".

- Similarly, majority of them (85.71%, *N*=18) also rated that "brainstorming and finding relevant information helped them resolve content related questions".
- In addition, majority of them (66.67%, *N*=14) rated that "online discussions were valuable in helping them appreciate different perspectives".

Noting that the instructor did not attend to out-of-class task sessions and EFL learners did not assigned to breakout rooms since they were the only one group in TeachinGrid. The instructor visited each group at least minimum one time to answer their questions related to the task. She provided clarification on the related task by summarizing the task, negotiated on the roles, and talked about what they were going to do in their role-plays. The instructor asked questions that incited exploration in EFL learners. These were generally focus on asking for clarification, exploring different sides of an issue, or asking for evidence to move the discussion along towards integration. When each group visiting had finished, she was moved to another breakout room. In each task the same procedure was followed.

EFL learners began to understand the nature of problem and started to search for relevant information and possible explanations for the task topic in Exploration phase. They sometimes shared their rationale, started brainstorming ideas, and exchanged resources or examples and conclusions about the task topic. However, these conclusions were primarily based on personal experience in this phase.

Some of the EFL learners' messages and/or answers which were coded in the Exploration level were presented below:

> *I went around the virtual environment* [TeachinGrid] *and examined the surrounding objects. I tried to interact with objects, I tried to move objects in the store. (Michelle G5-IS-T1) (Q3).*
>
> *I searched for a few flower terms on web pages and thought how I could add something new and beautify the environment* [the assigned stop]. *(Mila G5-IS-T1). (Q4).*

An example of Exploration message in Task 1 is Thomas offering suggestion for consideration to Mila: "You can talk about flowers origins, colors" *(Thomas G5-MUVEEET out-of-class-task session-T1).*

Another example of Exploration message in Task 3 is Oliver sharing opinion to the group members:

> *I think if the railway station in 2030s, probably it can be very technological… (Oliver G3-MUVEEET-T3 out-of-class-task session).*

4.1.1.3 Integration

The results of descriptive analysis of the CoI Survey in terms of Integration phase of CP were summarized below:

- The highest mean score belonged to the item 30 – "Learning activities helped me construct explanations/solutions." whereas the lowest mean score was item 31 – "Reflection on course content and discussions helped me understand fundamental concepts in this class.".
- Majority of them (76.19%, *N*=16) thought that "combining new information helped them answer questions raised in course activities".
- Similarly, again majority of them (85.71%, *N*=18) thought "learning activities helped them construct explanations and solutions".
- In addition, majority of them (71.43%, *N*=15) rated that reflection on course content and discussions helped to understand fundamental concepts in this class.

EFL learners had 15 minutes for collaboration with their group members in breakout rooms in order to find solution for the task (task plan) The instructor informed the EFL learners how much time left for the closing of breakout rooms.

According to the data analysis of screen recordings, an example of the message coded in Integration level was Evelyn's commenting on the news in Task 2:

It's medical problem and it's very bad, I think. Because she has a rare genetic mutation it's so bad, I don't want to be like her Evelyn.

To which David connecting his ideas on Evelyn's ideas:

I think it has advantages and disadvantages you can't feel any pain that is a good thing but it when you cut yourself you can d because you can't feel it. You cannot feel that you are losing blood, the pain… (Evelyn G4 & David G4-MUVEEET-T4 out-of-class-task session).*

4.1.1.4 Resolution

The results of descriptive analysis of the CoI Survey in terms of Resolution phase of CP were summarized below:

- The highest mean score belonged to the item 33 – "I have developed solutions to course problems that can be applied in practice.". Whereas the lowest mean score was item 34 - "I can apply the knowledge created in this course to my work or other non-class related activities.".
- Majority of them (71.43%, *N*=15) rated that they can describe ways to test and apply the knowledge created in this course.
- Majority of them (80.95%, *N*=17) rated that they have developed solutions to course problems that can be applied in practice.
- And majority of them (76.19%; *N*=16) also rated that they can apply the knowledge created in this course to their work or other non-class related activities.

According to screen recordings, the instructor asked the EFL learners begin for the role-play and informed them for the possible technical problems (e.g., microphone) which could affect their performance on the task negatively. At the end of each group performance on the task, she asked and encouraged EFL learners for the comments related to the performance. They defended and performed their solutions

for the task problem. They teleported to Social Area to vote for other groups' performance after all groups' roleplay or presentation.

Some of the EFL learners' messages and/or answers which were coded in the Resolution level were presented below:

> *For example, when I go abroad, I may be in a position to work as a sales assistant. There I got an idea of how I should communicate with customers, or how I should prepare myself, that I should make a research on things I don't know beforehand. I think I can use it later in my life. (David-INTWS-T1) (Q5).*

4.1.2 Modified MUVEEET Results

With an inter-rater, four out of class task sessions were analysed. The observation in Task 1 was the Group 5 consisting of Michelle, Mila, and Thomas. Mila explained the roles for the clarification at the beginning of the task preparation. They shared their roles and Michelle stated ideas about the task. After brainstorming among group members, they clicked on the TeachinGrid Map to teleport to the assigned shop ("Emerald Florist"- shop) to perform the task. Then, the researcher and store manager teleported to the "Free Materials Area" by using the TeachinGrid Map near the assigned shop. Store manager decided to which poster is suitable for their shop to make it attractive for other customers. During this process, other group members shared their opinions to each other. After choosing, the researcher took the posters and teleported back to the assigned shop by using the TeachinGrid Map. Other group members suggested and connecting their ideas on the place of poster to be hanged. After that they applied the knowledge into the roleplay.

The observation in Task 2 was the Group 1 consisting of Isabella, Jessica, Olivia, and William. The preparation process started with the question of Isabella to define the task. They shared their roles. Then, they exchanged their ideas about what they

would do related to the selected role in the task. Isabella connected her ideas on other group member's ideas. After that they applied the knowledge into the roleplay.

The observation in Task 3 was the Group 3 consisting of Megan, Oliver, Samantha, and Tracy. The preparation process started with the question of Oliver on role sharing for the presentation. They chose their roles and shared their opinions. Occurrence of integration of the ideas was not identified. After that they applied the knowledge into the presentation.

The observation in Task 4 was the Group 4 consisting of David, Evelyn, Grace, and Lauren. The preparation process started with the suggestion of David on his role in the presentation without sharing the roles among the group. They used the same roles as in in-class task session. After other group members approved David's suggestion, they stayed silent for a short time. They searched about the fake or real news on the web sources. They downloaded the news template from Moodle page. They decided on the news to be used in the presentation. David uploaded the presentation to Moodle and the researcher made it available on Presentation Area. Each of the group member justified the prepared news and shared their ideas. After that they applied the knowledge into the presentation.

Based on the observations by the researcher and the inter-coder, evidence of each category of CP was found. However, integration level of CP was limited in the number of occurrences in the out-of-class task recordings.

4.1.3 Summary of the findings related to the CoI Survey

According to the results, EFL learners' levels of the CoI has a mean score of 4.19. (*SD*=0.17). The descriptive analysis of survey data shows that EFL learners' ratings for each presence of COI in 3D VLE was high. Considering three-presences of the CoI, TP mean score was relatively higher than CP and SP. TP had the highest mean score (4.44) whilst the SP was the lowest (4.03).

Considering sub-categories of CP, Resolution had the highest mean score of 4.17 and standard deviation .80, while the Exploration had the lowest mean score of 4.02 and standard deviation .84. Resolution and Integration means scores very close to each other. The findings suggested that the EFL learners reported a high level for the four categories of CP.

4.2 Factors Influencing EFL learners' Cognitive Presence within Activity Theory Scope

In consideration of second research question, activity system analysis was performed to understand the dynamics of 3D VLE and to analyze what factors infuenced EFL learners' CP in 3D VLE both positively and negatively. The research question that was investigated in this part is the following.

RQ2. What are the factors that influence Cognitive Presence levels of EFL learners engaging in reasoning-gap activities in the synchronous online English-speaking module within a 3D VLE (specifically OpenSimulator with SLOODLE)?

In this study, an updated version of Jonassen and Rohrer-Murphy's (1999) checklist, a detailed checklist to implement AT as an analysis tool, was used to understand the context and focus on some important parts of the data (Jonassen and Rohrer-Murphy, 1999; Karakuş, 2011; Reisoğlu, 2014)

Updated version of Jonassen and Rohrer-Murphy's (1999) checklist was listed below:

1. "Clarification of the purpose of activity system"
   1.1. "Understand relevant context(s) within which activities occur"
   1.2. "Understand the subject(learner), his/her motivations, and interpretations of perceived contradictions"
2. "Analysis of the activity system by identifying and describing its components"
   2.1. "Define the subject"
   2.2. "Define community - communities "

2.3. “Define the object”

3. “Analyze Mediators”
   3.1. “Tool mediators and mediation”
   3.2. “Rule mediators and mediation”
   3.3. “Division of labor”
4. “Analysis of the activity structure”
   4.1. “Define the activities, actions, and operations”
5. “Analysis of the activity system’s dynamics”
   5.1. “What are the interrelationships that exist within the components of the system and how they influenced the processes?” (pp. 71-78).

In the following sections, the results of the study for the second research question will be presented within the activity system scope, with its components and dynamics.

4.2.1 Step 1 - Clarification of the Purpose of Activity System

In this study, the ‘purpose of the activity system’ was to provide and ensure cognitive presence of EFL learners in 3D VLE (TeachinGrid). By the activity system analysis (ASA), it was aimed to understand the dynamics of 3D VLE in depth and to explore what factors influenced CP in the 3D VLE. Detailed information about TeachingGrid and all procedures were provided in the Method section regarding this step.

4.2.2 Step 2 - Analysis of the activity system by identifying and describing its components

In this step, the components of the given activity, namely the ‘subject’, ‘object’, ‘community’, ‘tools’, ‘rules’ and ‘division of labour’, are defined in depth. (Dimitrakopoulos, Uden, and Varlamis, 2020; Uden, Valderas, & Pastor, 2008). The components of the CP activity system were summarized in Table 4.5.

Table 4.5 The Components of the Activity System on CP

Component	Definition
Subject	EFL Learners
Object	To provide/ensure cognitive presence of EFL learners in 3D VLE (TeachinGrid)
Community	Instructor, researcher (as a technician and a designer), EFL learners, and group members
Tools	- Presentation Tools - Communication-Interaction Tools - Information Tools - Navigation Tools - Motivation Tools - Technical Infrastructure - Speaking Tasks
Rules	- Code of Conduct - General rules - Task rules
Division of labour	- Helping and assisting the group members during the speaking task by sharing information and the roles equally by EFL learners - Assigning tasks to EFL learners, presenting the content, and providing information exchange among them by Instructor - Dealing with the technical problems and helping the instructor about the flow of tasks' procedure by the Researcher.

The elements of the CP activity system; the subject, object, outcome, community, tools, rules, division of labour, which were identified as a result of the analysis of qualitative data (Reflection, Inquiry and General Evaluation Forms, interview transcriptions, observation data from screen capture recordings (Emerged Tensions in 3D VLE - Form), are described in detail below:

4.2.2.1 Subject

The subject within an activity system as 'the individual or groups of individuals in an activity' (Jonassen & Rohrer-Murphy, 1999; Yamagata-Lynch, 2010). In this case, the subject was the EFL learners in activity system of CP. On the other hand, the instructor and the researcher (designer and technician) were in the role of subjects who were trying to provide TP, SP and CP of the EFL learners.

As mentioned before, EFL learners were enrolled in Computer II course ('Speaking Tasks in a 3D Virtual Learning Environment' Module was integrated to it) in the Spring Semester of 2018-2019 at the Programme of ELT, Department of Foreign Languages, Faculty of Education, Başkent University. The Computer II course, in which the 'Speaking Tasks in a 3D Virtual Learning Environment' was integrated, was mandatory for freshman EFL learners. In addition to 12 freshman EFL learners, five junior (Anna G6, Bella G6, David G4, Margaret G2, and William G1) and four sophomore (Grace G4, Jack G2, Mila G5, and Tracy G3) EFL learners were enrolled in the course. Majority of the EFL learners were took the course for more than one time due to different purposes and failing reasons. Specifically, they were given in Table 4.6 below:

Table 4.6 Reasons to repeating the ‘Computer II’ course

Group	F1 Grade	F2 Grade	Upgrade the CGPA
G1	Isabella, William [a]	William	-
G2	-	-	Jack, Lily, Margaret
G3	Tracy	-	Megan
G4	David [b]	Grace	-
G5	Thomas [b]	Mila	-
G6	Anna, Lucas	-	Bella

Note. F1 grade is given to students who attended the course but failed, F2 is given to student who failed the course due to unattendance. CGPA stands for Cumulative Grade Point Average.

[a] William G1 took 2 times; first F2, then F1 was taken.

[b] David G4 and Thomas G5 took 2 times and both failed by F1 grade.

EFL learners met with instructor and the researcher for the first time in this course. An EFL learner who failed the course with ‘F1’ grade was not required to attend to the course; however, they were attended to this course at satisfactory level.

4.2.2.1.1 Beliefs of EFL learners about the usefulness of VW

Since using a VW required some level of technical knowledge, the EFL learners’ level of Computer Technology, being technologically savvy and confidence in being able to use the VW were explored. Majority of EFL learners considered themselves as intermediate level in terms of Computer Technology (71.43%, *N*=15) (beginner level: 28,57%, *N*=6). None of them considered themselves as experts in this area. Moreover, majority of EFL learners did not consider themselves technologically savvy (81%, *N*=17). About their confidence in being able to use the VW, students were either undecided (38.1%, *N*=8) or disagreed (23.8%, *N*=5) On the other hand, they were more likely to agree or strongly agree with the perceived benefits of a VW in terms of usefulness in improving English

speaking skill, usefulness for social interaction, usefulness to themselves, and usefulness in terms of improving the quality of life. Reporting the differences between individuals participating in the same activity was important to understand the experience of individuals, in depth. As previously mentioned, EFL learners attended to this course at satisfactory level and had different speaking durations depending on the role taken by the group members.

4.2.2.1.1.1 Additional information of EFL learners

Reporting the differences between individuals participating in the same activity was important to understand the experience of individuals, in depth. As previously mentioned, EFL learners attended to this course at satisfactory level and had different speaking durations depending on the role taken by the group members. Some of the important aspects of the subject were given in Table 4.7 below and more details can be found in the previous chapter (see Section 3.5.1 Participants of the study).

Table 4.7 Attendance and Speaking Exam Scores of EFL learners

Pseudonym / Group Name	Group Name	Attendance at Task Sessions (#)			Speaking Exam Scores (points)	
		In-class [a]	Out-of-class [b]	TOTAL Attendance	Pre-test	Post-test
Anna	G6	6 (100%)	4 (100%)	10 (100%)	48.00	48.00
Bella	G6	3 (50%)	3 (75%)	6 (60%)	46.00	60.00
David	G4	3 (50%)	4 (100%)	7 (70%)	48.00	60.00
Evelyn	G4	6 (100%)	4 (100%)	10 (100%)	26.00	48.00
Grace	G4	5 (83.3%)	4 (100%)	9 (90%)	46.00	58.00
Isabella	G1	5 (83.3%)	4 (100%)	9 (90%)	58.00	60.00

Table 4.7 (continued)

Pseudonym / Group Name	Group Name	Attendance at Task Sessions (#)			Speaking Exam Scores (points)	
		In-class [a]	Out-of-class [b]	TOTAL Attendance	Pre-test	Post-test
Anna	G6	6 (100%)	4 (100%)	10 (100%)	48.00	48.00
Bella	G6	3 (50%)	3 (75%)	6 (60%)	46.00	60.00
David	G4	3 (50%)	4 (100%)	7 (70%)	48.00	60.00
Evelyn	G4	6 (100%)	4 (100%)	10 (100%)	26.00	48.00
Grace	G4	5 (83.3%)	4 (100%)	9 (90%)	46.00	58.00
Isabella	G1	5 (83.3%)	4 (100%)	9 (90%)	58.00	60.00
Jack	G2	6 (100%)	3 (75%)	9 (90%)	48.00	60.00
Jessica	G1	6 (100%)	4 (100%)	10 (100%)	38.00	50.00
Lauren	G4	6 (100%)	4 (100%)	10 (100%)	22.00	32.00
Lily	G2	6 (100%)	3 (75%)	9 (90%)	38.00	48.00
Lucas	G6	2 (33.3%)	4 (100%)	6 (60%)	60.00	60.00
Margaret	G2	1 (16.7%)	3 (75%)	4 (40%)	36.00	38.00
Megan	G3	4 (66.7%)	4 (100%)	8 (80%)	24.00	36.00
Michelle	G5	6 (100%)	3 (75%)	9 (90%)	48.00	60.00
Mila	G5	4 (66.7%)	3 (75%)	7 (70%)	46.00	60.00
Oliver	G3	5 (83.3%)	4 (100%)	9 (90%)	60.00	60.00
Olivia	G1	6 (100%)	4 (100%)	10 (100%)	38.00	46.00
Samantha	G3	6 (100%)	4 (100%)	10 (100%)	32.00	50.00

Pseudonym / Group Name	Group Name	Attendance at Task Sessions (#)			Speaking Exam Scores (points)	
		In-class [a]	Out-of-class [b]	TOTAL Attendance	Pre-test	Post-test
Thomas	G5	5 (83.3%)	3 (75%)	8 (90%)	44.00	50.00

Table 4.7 (continued)

Pseudonym / Group Name	Group Name	Attendance at Task Sessions (#)			Speaking Exam Scores (points)	
		In-class [a]	Out-of-class [b]	TOTAL Attendance	Pre-test	Post-test
Tracy	G3	5 (83.3%)	4 (100%)	9 (90%)	34.00	44.00
William	G1	2 (33.3%)	4 (100%)	6 (60%)	48.00	58.00

Note.

[a] In-class task sessions included 2 training and 4 in-class task session.

[b] Out-of-class task sessions included 4 out-of-class task session.

4.2.2.1.2 External and Internal Motives Driven the Subject

EFL learners' motives to complete the tasks in 3D VLE were driven by external and internal factors as explained below:

External motives

EFL learners who attended participated to the research and completed the requirements would be were awarded by the Computer II course instructor. Each EFL learner could get maximum 10 points to the term grade. The point that the EFL learners would be awarded by the EFL instructor was determined according to their performance. Moreover, at the end of each in-class-task session, the best performed group who was voted by the other groups' members would get extra 5 points to the task performance grade. One of EFL learners mentioned their motivation related to the course in the interview and stated as:

What really motivated me was getting good grades from the lesson. So, we forced ourselves as a group … We never gave up, we really tried to do all the tasks in the best way. Of course, it is for passing the course. (Isabella G1-INTWS) (Q6).

Internal motives

After TeachinGrid was introduced to EFL learners by the researcher, majority of the EFL learners reflected that they had positive thoughts related to TeachinGrid as first-time users. Some of the EFL learners' thoughts related to TeachinGrid's being enjoyable were presented below:

It is very enjoyable while using the character [avatar] *since it gives a feeling of playing. Such environments can also make learning more active. (Lily G2-RS-T0) (Q7).*

... it is actually like a game; people are eager to achieve something. It is a beautiful thing. (Thomas G5-INTWS) (Q8).

Moreover, some of them reported TeachinGrid's role on speaking skills as stated below:

I think this environment is a fun application that helps improve foreign language skills. (Michelle G5-RS-T0) (Q9).

As a first-time user of the TeachinGrid environment, it is a fun, enjoyable environment that allows English speaking. (Samantha G3-RS-T0) (Q10).

In addition to them, some of them also thought that they can use 3D VLEs in their future careers as stated below:

… I think it will contribute to language development. it is also one of the applications that we can do to our students professionally (Evelyn G4-RS-T0) (Q11).

Since I will continue as a teacher when my university life is over, I want to use this environment if I have the opportunity (Grace G4-RS-T0) (Q12).

EFL learners' expectations and motivations can be summarized in Table 4.8 below.

Table 4.8 EFL Learners' Expectations and Motivations

Source	Expectation and Motivation of Participants
External	- Completion of the requirements brings maximum 10 points to the term grade *(Summative evaluation) (External motive item 1)* - The best performed group who was voted by the other groups' members would get extra 5 points to the task performance grade in each task (*Formative evaluation) (External motive item 2)* - Compulsory attendance to the course *(Undergraduate Regulations) (External motive item 3)*
Internal	- Active learning because of enjoyable learning environment *(Internal motive item 1)* - Helping to develop foreign language skills *(Internal motive item 2)* - Providing enjoyable environment to speak in English *(Internal motive item 3)* - The purpose of using such environment in the future careers *(Internal motive item 4)*

Moreover, 5 EFL learners shared their opinions on their motivations using by the member check form related to preliminary results of the study. The instructor also confirmed all the items related to the preliminary results of the EFL learners' motivations by the member check form. In addition, three EFL learners confirmed on all items. One of the EFL learners was undecided on External motive item 3 and Internal motive item 1 and the other one was on Internal motive item 2 and item 3. They did not add any comment on them. But one of the EFL learners stated on the confirmed items as below:

It was good for me to be given 10 points to the term grade as a result of the completion of the tasks, I completed the tasks and it made me highly motivated for the next tasks. (Megan G3 – Member Check) (Q13).

On the other hand, a few EFL learners reported not only positive thoughts including its being enjoyable and well-designed, but also negative thoughts including its being slow, need to be improved, not practical/convenient and having restrictions, about TeachinGrid environment. One of the EFL learners having negative thoughts about TeachinGrid environment reported its having restrictions and technical problems as below:

As a someone who uses it [TeachinGrid] for the first time, I think it is too strict. The location of everything is certain, the things that the teacher will make us do are certain, you cannot do anything else. In terms of appearance, it was inadequate... I would not play, if it was a game. (David G4-RS-T0) (Q14).

Additionally, EFL learners' thoughts on the 3D VLE can be summarized in Table 4.9 below.

Table 4.9 Summary of EFL learners' thought on the 3D VLE

Thoughts on 3D VLE	
Positive	Being enjoyable
	Well-designed environment
	Game like environment
	Helpful to improve the speaking skill
Negative	Being slow
	Need to be improved
	Not practical/convenient
	Having restrictions
	Having technical problems

EFL learners were expected to learn about the use of 3D VLE, perform reasoning gap speaking tasks, and synthesize information from different sources at as outcomes of the activity system. Since EFL learners had also worked as groups at most of the time, the 'subject' consisted of both individual EFL learners and groups (any group member). In group activities of the tasks, there were some issues influenced individuals. Therefore, individual issues in group activities were also reported as subject's issues. Moreover, groups were also assumed as a part of community. When an issue is related the whole group, it is reported in Group members part. A list of problems that EFL learners typically deal with will be presented in the next section under Community headline with the Group members category together.

4.2.2.2 Object and Outcome

The object of the activity is "the physical or mental product that is sought" (Jonassen et al., 1999, p. 63). It relates to the goal of the learning activity (Kaptelinin & Nardi, 2006). The object of the CP activity system was 'to provide cognitive presence of EFL learners in 3D VLE called as TeachinGrid'.

Reasoning gap speaking tasks were integrated into TeachinGrid in order to engage EFL learners cognitively and promote their CP. By participating in and completing the reasoning gap speaking tasks successfully in TeachinGrid, EFL learners were expected to achieve better command of English language speaking in various real-life contexts created in 3D VLE.

As mentioned before, the object of this 3D VLE activity was aligned to four reasoning gap speaking tasks that EFL learners worked in groups, applied a variety of resources, synthesizing information from a variety of sources, made roleplays and presentations to the other groups.

4.2.2.3 Community

Community refers to "the sociocultural context in which the activity takes place" (Collis & Margaryan, 2004, p.41). The community includes EFL learners, group members, the instructor, and the researcher (as a designer and technician). Each community member played important roles in achieving the object of the activity system. Detailed information on the roles of the community members is presented in the following sections.

It's noteworthy that, an EFL learner as being the subject of the activity would be carrying out the speaking task either individually (e.g., discussions in pre-task phase of task sessions took place in Social Area or collaborating with other EFL learners or as a group (e.g., in all tasks in task-cycle phases of task sessions took place in Social Area, Presentation Area or various areas). The community (the other EFL learners, and the instructor) was constantly involved in the task. In addition, there were no disincentives existed for not completing the task sessions. Each community member roles were explained in detail below.

4.2.2.3.1 EFL learners and Group members

The EFL learners were one of the community members in the activity system. In CP activity system, EFL learners had roles and responsibilities categorized into speaking tasks and technical roles mentioned in Table 4.10.

Table 4.10 Roles and Responsibilities of EFL learners and Group Members

Community Members	Roles and responsibilities
EFL Learners	Speaking Tasks 1. Performing the role-plays, presentations, other activities in given tasks accurately, 2. Gaining knowledge and performing practices related to speaking tasks, 3. Sharing information with group members (brainstorming), 4. Answering the instructor's questions, 5. Following the task procedure accurately, 6. Using different kind of sources (instructor, 3D VLE, group members, web sources), 7. Answering questions with the help of information acquired in 3D VLE, 8. Solving problems with the help of personal experiences, 9. Making decisions about integration of ideas.
	Technical 1. Checking the Internet connection (infrastructure) before the task sessions, 2. Checking the sound system before the task sessions. 3. Login to Zoom and TeachinGrid 3D VLE
Group members (EFL learners as a group member)	1. Sharing the roles equally, 2. Sharing information related to the speaking tasks, 3. Assisting the group members during the task performance.

EFL learners had individual problems related to their lack of enough vocabulary knowledge, lack of technical skill, and being afraid to use the 3D VLE. Some of the EFL learners' thoughts were presented below:

> *During the event, I had to use a word that I did not know, and since I did not know the word, I had to express myself in another way. Although I learned the word afterwards, it was a negative situation for me at that moment (Bella G6-RS-T1) (Q15).*

> *I did not know anything. I was also very scared. I was worried how to do it. I could not connect [to TeachinGrid] many times. (Lauren G4-RS-T1)(Q16).*

Group members (EFL learners as a group member) are also assumed as a community member of the CP activity system. The EFL learners toured TeachinGrid with their group members, played games (scavenger hunt & online news game), and performed the reasoning gap speaking tasks together. Each group members' attendance to and speaking duration in the in-class and out-of-class task sessions, were given in Table 4.11. Additionally, pre and post speaking exams scores and CP scores were also given.

Table 4.11 Each group members' attendance, speaking duration and exam score, CP level

Group / Pseudonym	Attendance at Task Sessions (#)			Speaking Duration in the Out-of-class Task Sessions (seconds)					Speaking Exam Scores			CP Level
	In-class-task sessions	Out-of-class-task sessions	TOTAL Attendance	Task 1	Task 2	Task 3	Task 4	TOTAL Duration	Pre-test	Post-test	Change	
G1												
Isabella	5 (83.3%)	4 (100%)	9 (90%)	72	123	150	205	550	58.00	60.00	2.00	3.42
Jessica	6 (100%)	4 (100%)	10 (100%)	453	161	211	207	1032	38.00	50.00	12.00	3.67
Olivia	6 (100%)	4 (100%)	10 (100%)	76	82	81	114	353	38.00	46.00	12.00	4.50
William	2 (33.3%)	4 (100%)	6 (60%)	124	44	129	97	394	48.00	58.00	10.00	4.00
G2												
Jack	6 (100%)	3 (75%)	9 (90%)	317	86	150	N.A.	553	48.00	60.00	12.00	4.83
Lily	6 (100%)	3 (75%)	9 (90%)	259	118	69	N.A.	446	38.00	48.00	10.00	4.17
Margaret	1 (16.7%)	3 (75%)	4 (40%)	224	113	137	N.A.	474	36.00	38.00	2.00	4.58

Table 4.14 (continued)

Group / Pseudonym	Attendance at Task Sessions (#)			Speaking Duration in the Out-of-class Task Sessions (seconds)					Speaking Exam Scores			CP Level
	In-class-task sessions	Out-of-class-task sessions	TOTAL Attendance	Task 1	Task 2	Task 3	Task 4	TOTAL Duration	Pre-test	Post-test	Change	
G3												
Megan	4 (66.7%)	4 (100%)	8 (80%)	39	60	92	5	196	24.00	36.00	12.00	4.17
Oliver	5 (83.3%)	4 (100%)	9 (90%)	78	251	146	179	654	60.00	60.00	0	3.33
Samantha	6 (100%)	4 (100%)	10 (100%)	62	278	80	217	637	32.00	50.00	18.00	4.67
Tracy	5 (83.3%)	4 (100%)	9 (90%)	3	106	67	11	187	34.00	44.00	10.00	2.58
G4												
David	3 (50%)	4 (100%)	7 (70%)	197	146	153	142	638	48.00	60.00	12.00	3.00
Evelyn	6 (100%)	4 (100%)	10 (100%)	114	119	159	160	552	26.00	48.00	22.00	5.00
Grace	5 (83.3%)	4 (100%)	9 (90%)	83	208	117	107	515	46.00	58.00	12.00	4.17
Lauren	6 (100%)	4 (100%)	10 (100%)	229	41	62	22	354	22.00	32.00	10.00	5.00

Table 4.14 (continued)

Group / Pseudonym	Attendance at Task Sessions (#)			Speaking Duration in the Out-of-class Task Sessions (seconds)					Speaking Exam Scores			CP Level
	In-class-task sessions	Out-of-class-task sessions	TOTAL Attendance	Task 1	Task 2	Task 3	Task 4	TOTAL Duration	Pre-test	Post-test	Change	
G5												
Michelle	6 (100%)	3 (75%)	9 (90%)	106	186	121	N.A.	413	48.00	60.00	12.00	4.92
Mila	4 (66.7%)	3 (75%)	7 (70%)	242	137	24	N.A.	403	46.00	60.00	14.00	2.92
Thomas	5 (83.3%)	3 (75%)	8 (90%)	167	176	135	N.A.	478	44.00	50.00	6.00	4.00
G6												
Anna	6 (100%)	4 (100%)	10 (100%)	97	96	141	353	687	48.00	48.00	0	4.92
Bella	3 (50%)	3 (75%)	6 (60%)	348	209	290	N.A.	847	46.00	60.00	14.00	4.75
Lucas	2 (33.3%)	4 (100%)	6 (60%)	99	50	202	361	712	60.00	60.00	0	3.67

Note. N.A. stands for not attendance to the task session.

In-class task sessions included 2 training and 4 task sessions whereas out-of-class task sessions included 4 tasks. Only speaking duration in the out-of-class task sessions were calculated since the in-class-task sessions included.

General thoughts of the group members and the instructor for the groups were given first, then thoughts of group members on each task performance presented below:

Majority of the members of the groups (*N*=14) reported that they had positive thoughts about their group members. Some of the members of the groups' positive thoughts were presented below:

> *The fact that we were able to make the necessary conversations with my group friends and there was no problem in planning, made me have no negative opinions about them. (Lucas G6-GES) (Q17).*
>
> *I think my group members were very positive and solution-oriented people. They were the people who helped and supported in any problem. (Olivia G1-GES) (Q18).*

On the other hand, few the members of the groups (*N*=4) reported that they had negative thoughts about their group members. Some of the members of the groups' negative thoughts were presented below:

> *In general, we got along with each other and tried to establish group dynamics, but when they did absenteeism, they damaged the group dynamics. (Anna G6-GES) (Q19).*
>
> *We could not make enough information exchange and bring into harmony with my group members. (Lily G2-GES) (Q20).*

In addition to the EFL learners' thoughts to their group members, the instructor reported both positive and negative thoughts about groups. The instructor's thought on groups were presented as below:

> *While some groups worked very harmoniously, some groups had problems in communicating while doing group work. The reason for this may be that students do not prefer to communicate via virtual environment and therefore do not use the breakout rooms opened through Zoom effectively. Groups working in harmony shared their tasks [roles] and completed group*

work and tasks successfully. (The instructor-GEI) (Q21).

It is noteworthy that, the group formation also influenced the members of the groups both positively and negatively. EFL learners were randomly assigned by the researcher at the beginning of the research and group formation was not changed throughout the task sessions. One of the members of the groups' positive thoughts on group formation were presented below:

> *We got along very easily with my group friends and everyone did their duty easily, so nothing went wrong. It made me happy that my group friends remained the same in the other task because mutual English speaking was easily provided, and this made me feel comfortable (Evelyn -INTWS) (Q22).*

On the other hand, one of the members of the groups' negative thoughts on group formation were presented below:

> *Task 1- There were some communication disruptions in the Shopping Centers event* [task] *since we were not able to form our groups by ourselves (Samantha G3-RS-T1) (Q23).*

After the general thoughts of EFL learners and the instructor on group members, thoughts on each task performance of EFL learners as a member of the group were presented briefly and respectively below.

In Task 1, majority of the members of the groups (*N*=9) reported about they had positive thoughts about their group members. One of the members of the groups' positive thoughts was presented below:

> *I think nothing went wrong for our group. In the distribution of roles, everyone approached moderately, chose the role they wanted and there was no dispute. While preparing our speech, everyone determined what to speak and mentioned briefly so that there were no disconnections or disagreements in the speech. (Olivia G1-RS-T1) (Q24).*

On the other hand, few members of the groups (*N*=7) reported negative thoughts due to task context (*n*=1), group harmony(*n*=3), role sharing problems(*n*=3) in Task 1.

In Task 2, majority of the members of the groups (*N*=9) reported about they had positive thoughts about their group members. One of the members of the groups' positive thoughts were presented below:

> *Everything was fine for our group, we got a nice group and we discussed everything and made good decisions and showed them in our conversation* [in task performance]. *(Evelyn G4-RS-T2) (Q25).*

On the other hand, few members of the groups reported negative thoughts (*N*=4) due to absence of group member, task context, group harmony, and technical problems in Task 2.

In Task 3, majority of the members of the groups (*N*=11) reported about they had positive thoughts about their group members. One of the members of the groups' positive thoughts were presented below:

> *In this task, I think we do our research better and communicate better in the event. After each activity, we started talking easily and researching more (David G4-RS-T3) (Q26).*

On the other hand, few members of the groups (*N*=1, and also 2 of them presented both positive and negative thoughts) reported negative thoughts due to group harmony problem in Task 3.

In Task 4, majority of the members of the groups (*N*=9) reported about they had positive thoughts about their group members. One of the members of the groups' positive thoughts was presented below:

> *Our group was in good communication. In this way, we found the news and took each other's ideas and proceeded. We did not encounter something not going well or any problems. (Evelyn G4-RS-T4) (Q27).*

On the other hand, few the members of the groups (*N*=4) reported negative thoughts due to absence of group member, task context, and group harmony problems in Task 4. The problems reported by the group members and the instructor that they dealt with in each task were summarized in Table 4.12.

Table 4.12 The problems reported by the group members and the instructor that they dealt with in each task

Task #	Problems that the group members dealt with
Task 1	Contextual - Task related, Group harmony, Role Sharing
Task 2	Absence of group member, Contextual - Task Related, Group Harmony, Technical
Task 3	Group Harmony
Task 4	Absence of group member, Contextual - Task Related, Group harmony

To summarize, findings indicated that the group members dealt with the problems listed below:

- Task context
- Group harmony
- Role sharing
- Technical problems
- Absence of group members
- Lack of adequate communication

4.2.2.3.2 Instructor

Another member of the community in the activity system was the instructor. The role of the instructor was to provide and sustain CP in 3D VLE. In CP activity system, the instructor had pedagogical, social, managerial, and technical roles mentioned in Table 4.13. Instructor roles were categorized based on the "Instructor's Roles" -classification of Berge (2008).

Table 4.13. Roles of the Instructor in the study

Type of the role	Roles of the Instructor
Pedagogical	
	1. Giving EFL learners tasks to exchange ideas, 2. Giving information to EFL learners about speaking tasks, 3. Asking EFL learners questions related to speaking tasks' topic.
Social	
	1. Ensuring that EFL learners share information respectfully, 2. Motivating EFL learners to exchange ideas, 3. Encouraging EFL learners to discuss, 4. Reinforcing EFL learners' contributions, 5. Supporting EFL learners to perform the assigned tasks, 6. Giving EFL learners clues about questions, 7. Asking and encouraging EFL learners for the comments related to the group task performance, 8. Encouraging the EFL learners when they have problem related to task roles.

Table 4.16. (continued)

Type of the role	Roles of the Instructor
Managerial	1. Gathering EFL learners where the task instruction is given, 2. Managing the task procedure, 3. Monitoring EFL learners whether they follow the task procedure, 4. Informing EFL learners about how to share their knowledge in the environment, 5. Asking the researcher to help when using the TeachinGrid Tools, such as web tool, presentation tool, Zoom, if it's needed, 6. Warning EFL learners who do not obey the 3D VLE rules (such as giggling instead of following the task procedure or using L1 during breakout sessions instead of L2), 7. Warning the EFL learners when they have procedural problem related to the task.
Technical	1. Warning/Informing the EFL learners for the technical and communication problems (e.g., microphone), 2. Warning/Informing EFL learners who are not obeying the rules, which may affect the system performance (e.g., clicking on TV screen or voting tool many times), 3. Helping EFL learners on navigation in the environment, 4. Asking the EFL learners to upload their presentation to Moodle.

As previously mentioned (see section 3.5.2 for Information about the instructor), task sessions were given by the young (age:23), female research assistant working at the foundation university, Faculty of Education, Department of Foreign Languages, Program in ELT. She felt confident in speaking English during the task sessions in TeachinGrid and expressed her feelings as:

> *I was more comfortable because it was a virtual environment. For example, I was excited in the first lesson in a class I did not know. However, despite the first time I met students at TeachinGrid, I did not have such a problem. (The instructor-GEI). (Q28).*

Moreover, she had such positive changes/thoughts since she started to use TeachinGrid as stated below:

> *I must point out that there is a positive change for me rather than a negative one. This was my first experience in the virtual environment, and I had my first experience not as a student but as a teacher. I was always interested in educational technologies. In the courses I took at the undergraduate degree, we always thought what it would be like if we used Web tools like this. This time I learned by applying virtual environments for teaching and learning using English. So, I can say that there is a meaningful learning process for me (The instructor-GEI) (Q29).*

Although she had positive thoughts on 3D VLE experience, she had to dealt with some problems caused by EFL learners and the environment. One of the most important problems that the instructor dealt with was EFL learners' low motivation. She mentioned it in Task 1(in-class task session) by stating as:

> *Before the task, I asked the students about the common points of the shopping malls. However, I had a hard time telling the students what I mean. Although I asked the question in another way, the low participation caused me to have low motivation. ... (The instructor-RI-T1) (Q30).*

In addition to this problem, she experienced 3D VLE design problem in the same task and stated it as:

> *What did not go well for students was that the sound of the video we opened through the screen in the Social Area [web tool] was not heard when we were away from the screen. We asked the students to sit down first. However, they had to stand up again because they could not hear the sound. They experienced this in the warm-up* [pre-task] *phase before the task (The instructor-RI-T1) (Q31).*

In Task 2, she reported the problem related to the low motivation of EFL learners as:

> *The difficulty I faced in this activity occurred during the students' bottle scavenger hunt game in pre-task. Most groups did not continue bottle hunting after finding the same bottle. For this reason, not every group had the opportunity to speak during the discussion (The instructor-RI-T2) (Q32).*

And she added:

> *… Therefore, they had no chance to learn about different phobias and talk about them (The instructor-RI-T2) (Q33).*

In Task 3, she had experienced microphone problems caused by EFL learners and stated it as below:

> *I had problems hearing the students' voices during the task of this activity. This led me to repeat myself more than once (The instructor-RI-T3) (Q34).*

And she added:

> *… The students had to repeat themselves because their voices were not clear. This decreased both their and my motivation (The instructor-RI-T3) (Q35).*

In Task 4, she had problems about task rules that EFL learners had to follow. Some of the EFL learners did not follow the task instructions and violated the task rules. She stated it as:

> *In this activity, … students were not supposed to say that their news was fake or real while presenting their news at task* [performance]. *However, despite my warnings, students* [some] *stated that the news they prepared at the beginning of the presentation was real or false (The instructor-RI-T4) (Q36).*

In addition to these problems, she also added that she had environment-server problem and EFL learners' login issues (in general) and stated that as:

> *… While using various tools at the same time in the environment, the system crashed and threw us out of the environment. It took more time for students to enter the environment than expected. I encountered problems such as setting passwords, microphones (The instructor-GEI) (Q37).*

The instructor was summarized the general situation/view of EFL learners by stating:

> *Some of the students were reluctant to the lesson. We tried to motivate students to speak and talk through games played and activities. It was easy to motivate some students. However, we met students who finished their speech in a few sentences, in different tasks. As the students who were interested in the virtual environment were already motivated, the lesson attendance rates were higher and remained high throughout the application (The instructor-GEI) (Q38).*

To summarize, findings indicated that the instructor dealt with the problems listed below:

- Unmotivated EFL learners
- Low motivation of EFL learners

- 3D VLE design problem
- Communication Tool (Microphone) problems
- Technical problems
- Task rules

4.2.2.3.3 Designer and Technician (The researcher)

The researcher had the roles as a designer and technician as a part of the community to provide TP, SP, and CP of the EFL learners in 3D VLE. The roles of the researcher as a designer included designing reasoning speaking tasks, designing and developing 3D VLE, Moodle LMS, and preparing guidelines presented in Table 4.17. The researcher has experienced in designing 3D VLE. The roles of the researcher as a technician before starting the speaking tasks and during the speaking tasks are mentioned in Table 4.14.

Table 4.14 Roles of the Researcher as a Designer and a Technician

Community Members	Roles of Community Members
Researcher	
As a Designer	Task Design 1. Planning the activities to be realized in 3D virtual environment, 2. Selecting content (units and topic selection) which are the most suitable for real-life context as communicative tasks, 3. Analysing and ordering of the content, 4. Preparing tasks for EFL learners to perform in 3D virtual environment.

Table 4.17 (continued)

Community Members	Roles of Community Members
Researcher As a Designer	3D VLE Design 1. Renting a standard OpenSimulator Standalone Region (empty), 2. Designing TeachinGrid according to 3D VLE Design Principles, 3. Creating scenarios for 3D VLE design, 4. Creating areas that give information about the use of 3D VLE, 5. Creating teleportation areas to facilitate navigation in 3D VLE, 6. Creating orientation objects to facilitate navigation in 3D VLE, 7. Developing social activity areas in 3D VLE, 8. Adding SLOODLE tools to the environment. Moodle 1. Renting and configuration of a virtual server, 2. Creating Moodle page, 3. Integrating SLOODLE into TeachinGrid and Moodle. Managerial 1. Giving pseudonym and registering them to TeachinGrid and Moodle, 2. Preparing schedules for interview and speaking exam by using Doodle (doodle.com). Guidelines Preparation 1. Preparing guides that give information about the use of 3D virtual environment, 2. Informing / guiding EFL learners about the use of the environment - Task 0, 3. Informing EFL learners about the purpose of the environment, 4. Giving information to EFL learners about fields and objects in 3D VLE.

Table 4.17 (continued)

Community Members	Roles of Community Members
As a Technician	Before starting the speaking tasks 1. Checking the internet infrastructure before starting the speaking tasks, 2. Checking Moodle and TeachinGrid system working properly, 3. Checking the sound system (microphone, earphones). 4. Preparing screen-capture recording software for recording During the speaking tasks 1. Recording in-class and out-of-class task sessions via Camtasia screen recording software, 2. Following the flow of task procedure, 3. Informing/offering solutions to the instructor/EFL learners when they have procedural problem related to the task, 4. Dealing with technical problems faced by EFL learners, 5. Assisting the instructor/EFL learners if they need help against the problems, 6. Reminding the instructor/EFL learners for rules, 7. Warning EFL learners who are not obeying the rules, which may affect the system performance, 8. Managing the Presentation Tool and moves the slides when the instructor asks, 9. Assisting Breakout Room-session in Zoom during the in-group discussions, 10. Preparing an area to upload the EFL learners' presentation to Moodle.

4.2.2.3.4 Division of labour (Division of roles)

As mentioned before, the community elements of the activity system are the instructor (language expert), researcher (designer and technician), EFL learners, and group members composed of these EFL learners. When considering the 3D VLE, members of the community are responsible for the creation and the continuity of the CP. In order to provide CP, the division of labour was carried out between "instructor-researcher" and "EFL learners-group members" and summarized as below:

- Helping and assisting the group members by sharing information as much as possible and the roles equally during the speaking tasks by EFL learners
- Assigning tasks to EFL learners, presenting the content, and providing information exchange among them by Instructor
- Dealing with the technical problems and helping the instructor about the flow of tasks procedure by the Researcher.

The roles undertaken in the division of labour performed were presented in detail in the previous sections. In addition to them, there were specific roles that each group members need to take and specifically given below:

- In Task 1 and Task 2, the roles were shared among group members as:
    - In Task 1: store manager, customer, shop assistant, and reporter
    - In Task 2: reporter, person having the weird phobia, friend of the person with the phobia, relative of the person with the phobia.
- In Task 3 and Task 4, presentation sections were shared among group members as:
    - In Task 3: location, physical appearance, facilities, and summary sections
    - In Task 4: photo, topic, audience, and presentation (creating) sections (see more details in Appendix B – Speaking Tasks)

In group activities, sharing the roles of the task equally among group members and helping and assisting the group members by sharing information as much as possible were the rules that each EFL learners should obey.

Group members' unattendance influenced the division of labour. Unattendance were occurred in three types: unattendance to the task sessions, unattendance to in-group discussions, and unattendance to in-class activities. Unattended EFL learners or groups and their unattendance reasons to the task sessions were presented in Table 4.15.

Table 4.15 Unattended EFL learners or groups and their unattendance reasons to the task sessions

Types of Unattendance	Tasks							
	Task 1		Task 2		Task 3		Task 4	
	In-lass	Out-of-class	In-class	Out-of-class	In-class	Out-of-class	In-class	Out- of-class
Task sessions [a]						Thomas G5		Grace G6- Lucas G6
In-group discussions (being silent) [c]		G1[b]		G2[b]		G3 [b]		G6 [b]
The group activities and the role play [d]			G4 [b]					

Note.

[a] Lack of group member

[b] All group members

[c] No interaction within the group members and being silent for a long time.

[d] All groups were not willing to complete the game and roleplay to some extent

One of the EFL learner stated this problem as:

> *Of course, in some of the tasks we did in groups, there were problems that some of our friends did not attend. Because we had to divide, discuss, and put into effect 3 or 4 steps together in each task. But of course, if everyone was constantly attending, because we knew each other, we could interact and share our ideas more easily (Evelyn-INTWS) (Q39).*

In addition to the unattended EFL learners presented in Table 4.18, Lauren G4 (in out-of-class session of Task 2) and David G4 (in out-of-class session of Task 3) had difficulties to attend the task session since they did not understand the task instruction and the role requirements. One of the EFL learner stated this problem as:

> *We had some problems in the group. Because we are talking then there is a silence. Someone has to say something, and we are waiting. For example, there is 30 seconds of silence. I listened to our own recordings, there is the same. There is such a problem. This was not causing a problem on my speech in general but only on the group (Group Harmony) (Evelyn-INTWS) (Q40).*

4.2.3 Step 3 - Analyze Mediators

4.2.3.1 Tool mediators and mediation

Tools include materials and methods that enable EFL learners to learn about speaking tasks and gain experience in TeachinGrid. The tools in the context were categorized into ‘Registration Tools’, ‘Communication-Interaction Tools’, ‘Information Tools’, ‘Navigation Tools’, Presentation Tools’, ‘Reflection Tools’, ‘Assessment Tools’, ‘Motivation Tools’, ‘Technical infrastructure’, and ‘Speaking Tasks’. As a result of the analysis (by the analysis of screen recordings and EFL learners’ responses to the surveys and interview questions), the tools in this activity

system and the problems encountered in using these tools are presented in Table 4.16, divided into categories, and are explained in the following headings..

Table 4.16 Problems Encountered in Using Tools

Tools	Location/ Information	Identified/Reported by		Problems encountered
		EFL learner	Researcher & Experts	
Registration Tools				
Registration Enrollment Booth	Welcome Center			None
Communication-Interaction Tools				
Avatar	N/A	✓	✓	- Avatar controlling problem - Avatar render problem - Disturbing other avatars in the environment by using their avatars (e.g., pushing them during the task)
Voice Chat Software (Zoom)	N/A	✓	✓	40 min restriction of group meetings in Zoom (Free version)
Microphones & Headphones	N/A	✓	✓	Microphone configuration problems (Headphones with a microphone with a one jack)

Table 4.19 (continued)

Tools	Location/ Information	Identified/Reported by		Problems encountered
		EFL learner	Researcher & Experts	
Registration Tools				
Registration Enrollment Booth	Welcome Center			None
Communication-Interaction Tools				
Avatar	N/A	✓	✓	- Avatar controlling problem - Avatar render problem - Disturbing other avatars in the environment by using their avatars (e.g., pushing them during the task)
Voice Chat Software (Zoom)	N/A	✓	✓	40 min restriction of group meetings in Zoom (Free version)
Microphones & Headphones	N/A	✓	✓	Microphone configuration problems (Headphones with a microphone with a one jack)

Table 4.19 (continued)

Tools	Location/ Information	Identified/Reported by		Problems encountered
		EFL learner	Researcher & Experts	
Information Tools				
Information Boards	Various areas	✓	✓	- Long text and small font size - Not clear instruction - Lack of information board
Notecards	Various areas			None
Navigation Tools				
Direction Sign	Various areas	✓	✓	Not able to find the location of shops, areas, and information boards
TeachinGrid Map	Various areas		✓	Clicking on the wrong areas on the TeachinGrid Map (Losing the way)
Mini-Map	N/A			None

Table 4.19 (continued)

Tools	Location/ Information	Identified/Reported by		Problems encountered
		EFL learner	Researcher & Experts	
Presentation Tool	Free Materials Area [a]		✓	Never used by the EFL learners
	Various Areas			None
	Conference Area			None
	Concert Area			None
	Relaxing Area			None
	Presentation Area			None
SLOODLE Presenter	Travel Agency - Shop			None
Regulation Tools				
Countdown Timer	Various Areas			None
Reflection Tools				
Evaluation Box	Welcome Center			None
Assessment Tools				
SLOODLE Quiz Chair	Exam Room			None
SLOODLE Scoreboard	Exam Room			None
SLOODLE Choice Tool	Social Area			None
SLOODLE Tracker	Various areas			None

Table 4.19 (continued)

Tools	Location/ Information	Identified/Reported by		Problems encountered
		EFL learner	Researcher & Experts	
Motivation Tools				
Vehicles	At various areas		✓	- Disturbing other avatars in the environment by using vehicles (e.g., cars, motorbikes, the helicopter) - Leaving used vehicles inappropriate locations.
Amusement Park	Near Social Area			None
Concert Area	Near Presentation Area			None
Relaxing Areas	Various areas			None
Non player characters (NPCs)	Near Food Area			None
	Concert Area			None
Rewards	N/A			None
Feedback	N/A	✓	✓	Feedback from other group members were limited in number and quality.

Table 4.19 (continued)

Tools	Location/ Information	Identified/Reported by		Problems encountered
		EFL learner	Researcher & Experts	
Technical infrastructure				
OpenSimulator Platform	N/A	✓	✓	- Moving slowly in the environment. - Stopped working/ Not responded Firestorm Viewer. - Removing the avatars from the environment. - Takes long time to connect to the environment during login step due to the tec - Not available PPT presentation template in the environment and lack of toc presentation - Sitting on chair improperly (Script problem) - Looking like sitting position (avatar-stuck, script problem) - Difficult to find objects in wide area.
Moodle	N/A			None
Internet Connection	N/A		✓	Automatically expired the Internet connection session
Computer	N/A			None
Speaking Tasks				
Context of the task	N/A	✓	✓	- Lack of interesting features - Lack of enough sources

4.2.3.1.1 Registration Tools

SLOODLE Registration Enrollment Booth was the registration tool in TeachinGrid (Figure 4.1). In Task 0-Training, participants connected to TeachinGrid and test their avatars in the environment. They were required to click on SLOODLE Registration Enrollment Booth to connect their avatars with the course in Moodle at first login.

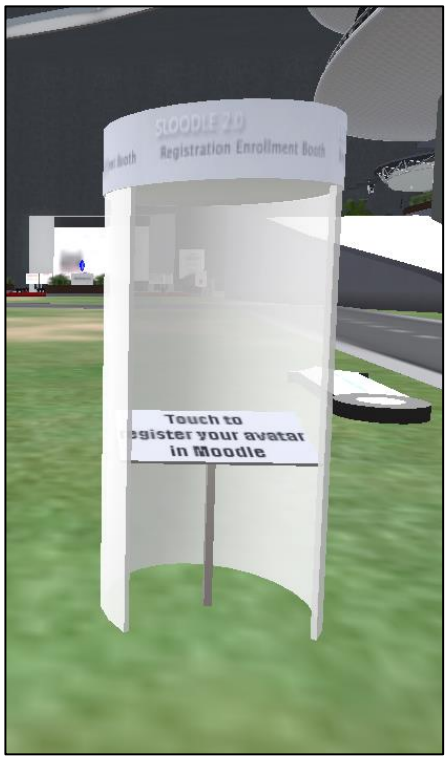


Figure 4.1 SLOODLE Registration Enrollment Booth

4.2.3.1.2 Communication-Interaction Tools

Voice Chat Software (Zoom), Microphone, Earphones, and Avatars were the Communication-Interaction Tools in TeachinGrid. Zoom was used for the communication tool instead of OpenSimulator's Voice Chat Software since it provided breakout rooms for the in-group discussions and the voice quality was

influenced by the number of EFL learners in 3D VLE (in Training). EFL learners, the instructor, and the researcher logged in both TeachinGrid and Zoom before the beginning of the task sessions. They communicated with each other in the 3D VLE by using headphones(earphones) and microphones.

Zoom provided EFL learners a private room where the group members could share their ideas and discuss with each other to reach the consensus for the task to be performed. There was a 40-minute restriction of group meetings in Zoom since the free version was used. After 40 minutes, the meeting session was finished, and all participants had to connect again. In addition to this, some of the EFL learners (*Lily G2, Michelle G5, Samantha G3, and William G1* in Task 1-2) and the instructor (in Task 3) reported that they experienced microphone problems.

In addition to these statements regarding the microphone problem, by the analysis of task sessions' screen capture recordings, it was found that microphone problem was also occurred among other EFL learners in all in-class task-sessions. The EFL learners sometimes could not make their voices heard during the task. They asked for help from the group members, researcher, or troubleshoot by themselves. They had to repeat themselves until their voices were clear. It was waste of time and decrease the motivation of both the EFL learners and instructor.

By the analysis of the researcher notes, it was found that some of them brought wired headphones with microphone which had a jack both the microphone and the speakers for the task sessions in 3D VLE. Since computers available at the computer labs of the Faculty of Education had in-built microphone and speaker, it was needed to make some adjustments before the beginning of the task sessions if the EFL learners had used the headphones with microphone with one jack. In order to not to have waste of time problems, it was suggested to use wired headphones with microphone with two jacks: one for connecting the mic and the other for connecting the speakers.

Avatars contributed to the EFL learners' acquiring knowledge related to the task topic by allowing them to navigate, use objects and perform various activities in

tasks (such as role-play & presentation) collaborated with the other EFL learners in TeachinGrid (avatars used as a communication and an interaction tool). One of the EFL learners reported that she experienced an avatar-controlling problem (in Task 1) and stated that:

> *It was difficult to move. (...) (Lauren G4-RS-T1) (Q41).*

This problem was also found by the analysis of task sessions' screen capture recordings. She had difficulties while moving the avatar in the out-of-class task session of Task 1 (Out-of-class task session-T1-EX- Lauren G4). In addition, another EFL learner could not control the avatar because the camera was zoomed out that she had just seen the gray wall (Out-of-class task session-T1-EX-Jessica G1-ESC-Camera Control) in the same task.

Additionally, EFL learners' having an avatar render problem was observed by the analysis of the task sessions' screen capture recordings. The researcher observed that the appearance of EFL learners' avatars seemed as black in Task 1 (In-class-task session).

4.2.3.1.3 **Information Tools**

Information Boards and notecards were used as Information Tools. Information Boards were assisted the EFL learners in TeachinGrid by giving information about tasks (e.g., instructions, types of roles, evaluation criteria) and how to use of objects They were located near Social Area and Presentation Area (for task instruction). There are also information boards available (e.g., how to wear clothes) at the shops and Training Area in TeachinGrid. Information Tools were given in Figure 4.2 (Information Board) and Figure 4.3 (Notecard inside the bottle).

Figure 4.2 Information Board

Figure 4.3 Notecard in TeachinGrid 3D VLE

Three EFL learners experienced problems related to reading the instructions on Information boards in Task 1. Moreover, they reported that these included unclear instructions for tasks. Moreover, the analysis of task sessions' screen capture recordings showed that EFL learners had an issue in the information board. They experienced them in out-of-class task sessions of Task 1, Task 3, and Task 4.

- In Task 1, EFL learners had difficulties about the lack of information board near the Free Materials Area. They asked questions about what to do there (e.g., information about the poster selection in Task 1). Two of EFL learner experienced this problem (Jessica G1-Lack of information board near Free Materials Area and Jack G2-Need information board for selecting posters).
- In Task 1, Task 3 and Task 4, three EFL learners mentioned that they need more and clear details about the task instructions (Need improvement) (T1-Lily G2-Need information board for what kind of question she would ask to the store manager; T3-Isabella G1-There is no details about the location – Instruction lack (Task info); T4-Isabella G1-Not clear instruction how to use the template).

In addition to information boards, notecards were used as information tools. They were assisted the EFL learners in TeachinGrid by giving information in the scavenger hunt game about phobias in Task 2. They were located into 5 bottles at various areas in TeachinGrid. They did not experience any problems about them.

4.2.3.1.4 Navigation Tools

Direction Signs (in Figure 4.4), TeachinGrid Map (in Figure 4.5), and Mini-map were used as Navigation Tools. EFL learners had used them to go around and to go somewhere faster in the 3D VLE. The Mini-map which gave EFL learner an overview of the TeachinGrid region; avatars and objects in it.

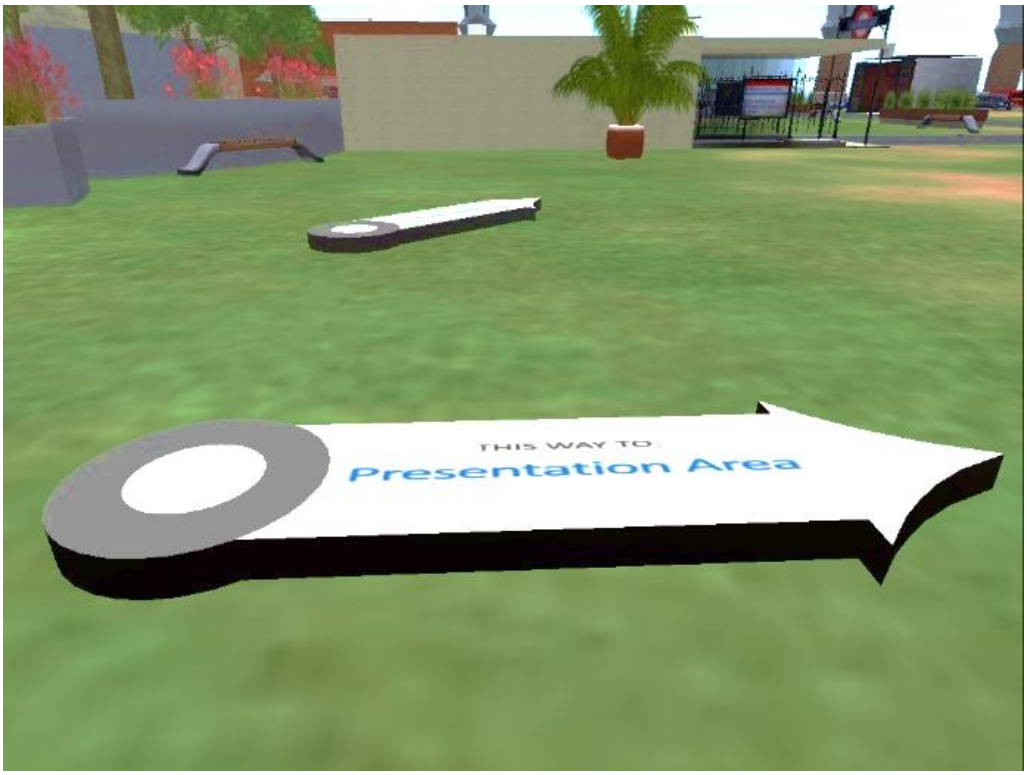


Figure 4.4 Direction Signs

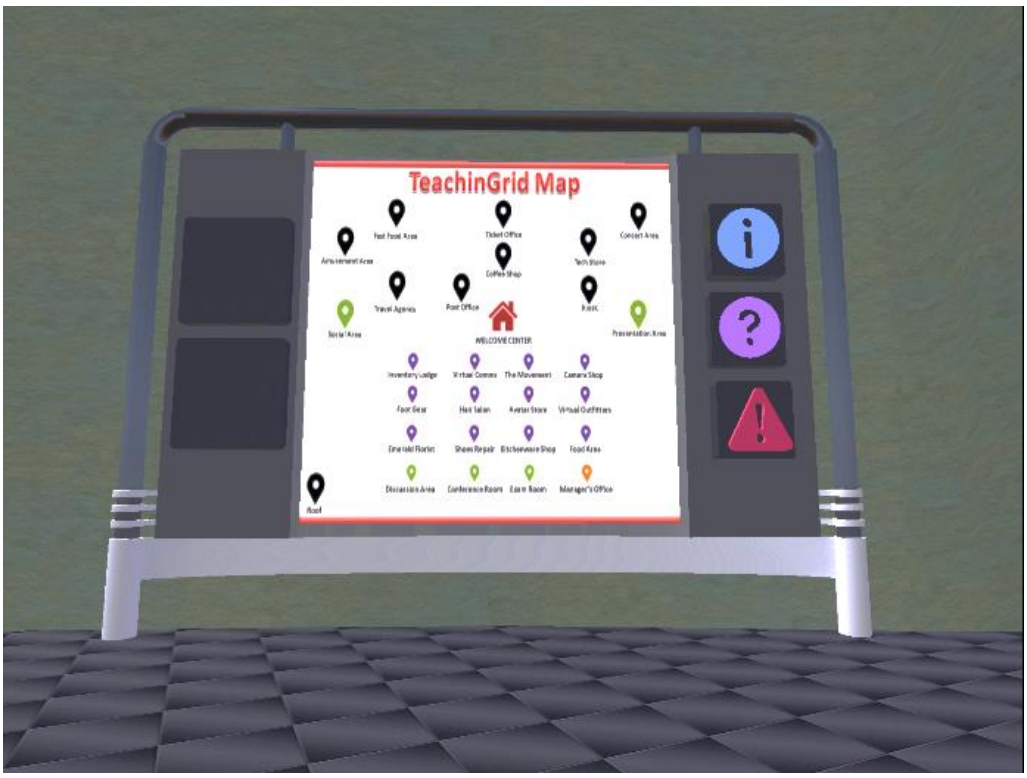


Figure 4.5 TeachinGrid Map

However, some of the EFL learners experienced problems in finding the location of shops, areas, and information boards in Task 1. In addition, another EFL learners reported having difficulties in how to use the Mini-map and TeachinGrid Map (in Task 1).

Moreover, EFL learners' having navigation tools problems were observed by the analysis of screen recordings. They experienced them in Task 1(Out-of-class task session) and Task 2 (In-class task session).

- In Task 1, EFL learners had difficulties about the location of the shops. One of them did not know how to get one of the areas in TeachinGrid (T1-EX-Jessica G1- Do not know the location of Free Materials Area.).
- In Task 1, EFL learners clicked on the wrong areas on the TeachinGrid Map (T1-Jack G2 –Navigation Problem – Wrong place – went coffee shop instead of Free Materials Area) (T1-EX-Lauren G4-TeachinGrid map clicking wrongly)
- In Task 2, other one did not know where the mini map was, when his avatar was stuck in the environment because of being out of the border line of the land and asking for help and the place of mini map (T2-Thomas).
- In Task 1 and Task 2, two EFL learners lost their way (T1-Jack G2-Click on map) (T2-Lauren G4- Use mini map to come back to Social Area.)

4.2.3.1.5 Presentation Tools

The web tool (as a TV screen shown in Figure 4.6) and presentation tool (shown in Figure 4.7) were the presentation tools in TeachinGrid.

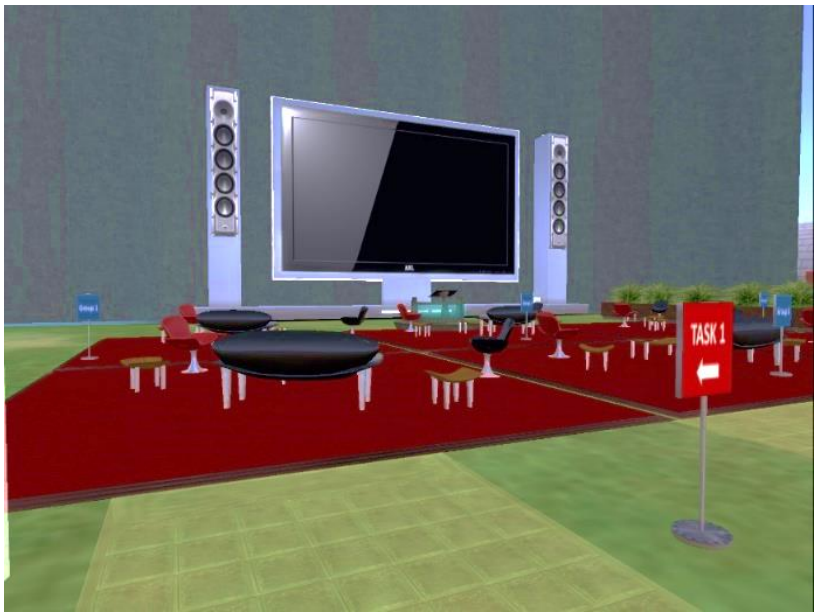


Figure 4.6 Web Tool (TV Screen)

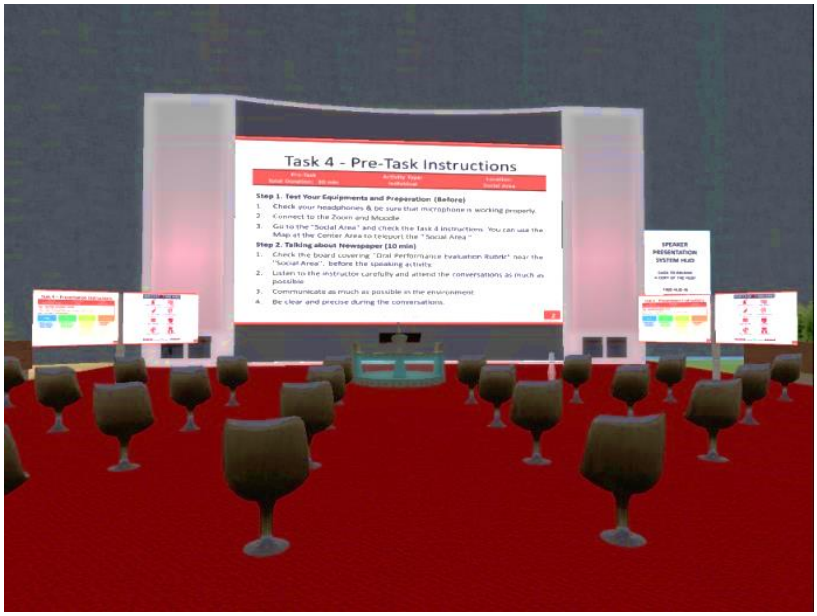


Figure 4.7 Presentation Tool

The instructor used the web tool to connect websites and show content (e.g., famous shopping centers, examples of a phobia news) related to the task topics (Task 1 and Task 2). Web tools were located various places in TeachinGrid. The instructor used the web tool located at Social Area connect to the websites and show videos related to task topics to the EFL learners. Another web tool was also

available at Free Materials Area. EFL learners could move and use it freely to be able to connect to websites for searching on the sources.

In addition to the web tools, the instructor used the presentation tool located at Presentation Area to show task instructions (in Task 3-4) with the help of the technician (in this case, the researcher). Moreover, the researcher used it to show TeachinGrid rules (Code of Conduct in Task 0). On the other hand, the EFL learners used it to play a game (in Task 4) on a website and show their groups' presentations (in Task 4). All their actions in this situation were also made with the help of the technician (the researcher). Although, EFL learners did not experience any problems related to Presentation Tool, only one of them reported problems related to web tool in Task 1. The EFL learner stated that:

> *... We did not encounter any problems other than our external web browser research. (William G1-IS-T1-EX) (Q42).*

In addition to this statement, by the analysis of task sessions' screen capture recordings, it was found that this problem was also occurred with other EFL learners; while EFL learners were making a search related to the task, they preferred using a web browser to connect to the Internet instead of using web tool within TeachinGrid.

4.2.3.1.6 Regulation Tools

The countdown timer was the regulation tool in TeachinGrid. It worked as a visible timer for groups during their task performances. The researcher used the tool and set the duration in each task. The tool shows the remaining time.

4.2.3.1.7 Reflection Tools

Evaluation Box was the reflection tool in TeachinGrid. EFL learners can share their opinions about the tasks, task performances, environment, etc. at any time by using

the Evaluation Box (mailbox) near the Welcome Area. When each group performance was complete, other participants review and comment on the performance in Social Area, Presentation Area, or the location where the task performed. Then, the instructor commented on the performance. EFL learners voted the learner who performed the best at the end of each task.

4.2.3.1.8 Assessment Tools

Among the SLOODLE Tools, Quiz Chair, Scoreboard, Choice Tool, and Tracker were the assessment tools in TeachinGrid. In Task 0-Training, they visited each training areas and click on SLOODLE trackers after they read and fulfilled the instruction on the information boards at the training area. SLOODLE trackers were used to keep track of their progress on the completion of training. At the end of the training, participants sat on SLOODLE Quiz Chair to take the training quiz at the Exam Room.

In addition, EFL learners went to the Social Area to vote for the groups' performance, after all groups' role plays and presentation. They evaluated the task performance by utilizing SLOODLE Choice Tool. They clicked on the tool and did not allowed to vote their own group.

4.2.3.1.9 Motivation Tools

Several motivational tools were provided to motivate EFL learners in the 3D VLE such as vehicles that they could drive (e.g., cars, motorbikes) (in Figure 4.8), amusement park that they could try rides (in Figure 4.9), Concert Area that they could dance and listen to music (in Figure 4.10), and NPCs and relaxing areas. EFL learners were able to use them in their free times in the environment.

Figure 4.8 Vehicles in TeachinGrid 3D VLE

Figure 4.9 Amusement Park in TeachinGrid 3D VLE

Figure 4.10 Concert Area in TeachinGrid 3D VLE

Announcing that rewards would be given those who complete the tasks well, and positive feedback given to EFL learners by the instructor in TeachinGrid influenced the CP. The EFL learners were motivated to perform the tasks and did not waste unnecessary time in the environment.

However, by the analysis of task sessions' screen capture recordings, it was found that few of the EFL learners were driving motorbikes and cars during another group performance in Task 2. The analyses of these screen captures showed some level of distractions among students while they were carrying on the task performance. In addition to this, some of them also were using the vehicles and left them in inappropriate locations in TeachinGrid.

4.2.3.1.10 Technical infrastructure

Technical infrastructure included the OpenSimulator Platform, Moodle, and other technical tools (The Internet Connection, Computer). TeachinGrid was designed based on the 3DVLE Design Principles Model and developed in OpenSimulator Platform by the researcher. It included pre-made shops and vehicles. The Internet connection and the features of the computers in the computer lab met the OpenSimulator platform requirements. However, they experienced the problems related to technical infrastructure including not having enough server memory for TeachinGrid, design of TeachinGrid and Technical Complexity of TeachinGrid (difficulty in the preparation for the task sessions in Task 1, Task 3, and Task 4. EFL learners' statements are listed below:

By the analysis of the researcher notes, it was found that when majority of the EFL learners interacted with the objects, especially scripted objects, it caused some problems as; the avatars moved slowly in the environment, Firestorm Viewer was stopped/crashed and removed the avatars from the environment. In addition to these problems, some of the EFL learners reported the problem related to design of TeachinGrid 3D VLE in Task 2 (in scavenger hunt). They tried to find the bottles including notecards in wide area and some of them could not find.

Moreover, some of the EFL learners reported the problem related to Technical complexity of TeachinGrid in various processes. The preparation for the sessions took long time since some of them had login problems, microphone, and Zoom connection problems. In addition to this, some of the EFL learners complained on the lack of tool in TeachinGrid since they needed to download the PowerPoint template from Moodle page.

Moreover, EFL learners' having technical infrastructure problems were found by the analysis of task sessions' screen capture recordings. They experienced them in Task 1 (In-class-task session) and Task 4(Out-of-class task session). In Task 1, one EFL learner had problems while trying to sit down on a chair (Jack G2) and in

Task 4 another EFL learner's avatar was looking like sitting position during the task presentation (Oliver G3).

In addition to these technical problems, the Internet connection problem was occurred during the task sessions. At the university campus, EFL learners connected to the Internet by using their student email addresses and passwords. After some time, the Internet connection session had been expired automatically due to security reasons. It caused that EFL learners had to connect to the region and Zoom again.

4.2.3.1.11 Speaking Tasks

Speaking tasks could be also considered as a tool in TeachinGrid and had the features of reasoning gap (see Section 3.3.2.1. Speaking Tasks). Some of the EFL learners also experienced the problems related to speaking tasks. They had experience problems about the context of the speaking task in Task 1, Task 3, and Task 4. Some of the EFL learners reported the difficulty of the task, lack of interesting features, and lack of adequate sources related to the task topic.

4.2.3.2 Rules

Wang and Chen (2008) identified problems that hinder student learning in online discussions such as non-participation, postings that did not reflect critical thinking skills, limited interactions among participants, and topic digression to unfocused talks. These problems severely encumbered CP in online discussions. CP is actualized by active participation of the students since it has positive association with learning outcomes in online activities (Wang & Chen, 2008).

Rules support the object of an activity. They were designed to promote CP while avoiding the pitfalls that encumbered EFL learners' learning in online discussions of 3D VLE. In the study, the rules to be followed in 3D VLE (by EFL learners)

were determined by the researcher (as a designer and technician) and the instructor, in accordance with the limitations of the OpenSimulator platform. Rules were given in Figure 4.11.

Code of Conduct

- Rules about General Behaviors, Avatar guidelines, privacy policy, photography & videography policy, etc. (See Appendix E)

General Rules

- Connect to TeachinGrid on time
- Use your pseudonym for Zoom
- Speak only English in TeachinGrid
- Try to speak as much English as possible
- Talk as fluently as possible and be clear and spontaneous
- Relax, be confident and enjoy using your English
- Develop your answers
- Ask for clarification if necessary
- Express your opinions
- Listen carefully when the instructor or researcher is giving instructions
- Do not make a background noise
- Only use voice chat software to contact with the others

•Task Rules

- Read the task instruction carefully
- Do the task in order and take it seriously
- Follow the task instruction and rules

Figure 4.11 Rules

The rule of "Speak only English in TeachinGrid" was useful for the purpose of developing EFL learners' speaking skills. One of the EFL learners stated that:

> *I couldn't speak Turkish. Of course there was an English speaking rule. As I said, it was very useful for developing the practice because I had to talk here, because it was my duty (Evelyn-INTWS) (Q43).*

However, some of the EFL learners reported that they broke this rule and spoke in Turkish with their group members in group discussion part before the task performance. In-class task sessions, when the instructor left the private breakout rooms, some of them used Turkish (L1) to share their ideas instead of using English. More specifically, when there was no instructor control in the breakout room, they used Turkish. However, in out-of-class session, since they're the only group in the 3D VLE, they obeyed the rule and had to speak in English. One of the EFL learner stated that:

> *When they leave 3 people in one group, they don't always speak English. Every student comes together in Turkish. For example, since we knew that we were alone, there was not always an English conversation among the students, so we could speak English because, but I think it is more effective when someone is listening to us. Our mistake…* [Using Turkish] *is not allowed. The rules were broken, I tried not to break. It was happening in the discussion part among us.* [In-class task session] *in-class task recording …* [In out of class task sessions] *English* [we talked] *Of course. (Evelyn) (Q44).*

After the data analysis, any tension occurred related to the mentioned rules of Code of Conduct. However, it was noticed that tensions occurred were related to General rules and Task rules. In the process of identification of the tensions, the data derived from the Tensions in 3D VLE Form by the analysis of the screen recordings were the main data source. Tensions occurred related to General Rules by the order of speaking tasks were listed as follows:

- Touching the web tool at Social Area during the task, being in a noisy environment, using written chat environment were the tensions occurred in in-class-task session of Task 1. Speaking in Turkish (mother tongue) and being in a noisy environment were occurred in out-of-class task session of Task 1.

- Touching the web tool at Social Area during the task and Speaking in Turkish were the tensions occurred in in-class task session of Task 2. On the other hand, no tension was occurred in out-of-class task session of Task 2.
- Playing with the microphone, not using the pseudonym in Zoom and Speaking in Turkish were the tensions occurred in in-class task session of Task 3. On the other hand, no tensions were occurred in out-of-class task session of Task 3.
- No tensions were occurred in in-class task session of Task 4. On the other hand, Speaking in Turkish and being in a noisy environment were the tensions occurred in in-class task session of Task 4.

Tensions occurred related to Task Rules by the order of speaking tasks were listed as follows:

- Going around during the instruction, flying instead of sitting, sitting instead of reading the information board, spending time above the allocated discussion time, and giggling were the tensions occurred in in-class task session of Task 1. Not behaving seriously was occurred in out-of-class task session of Task 1.
- Going around during the instruction, waiting instead of reading the information board, using motorbike during another group performance, and giggling were the tensions occurred in in-class task session of Task 2. Lack of knowledge about the task procedure, not behaving seriously, not concentrated on the task and being late to the Presentation Area occurred in out-of-class task session of Task 2.
- No tensions were occurred in in-class task session of Task 3. On the other hand, avatars not behaving seriously was observed in out-of-class task session of Task 3.

- No tensions were occurred in in-class task session of Task 4. On the other hand, lack of knowledge about the task procedure and lack of group members were the tensions occurred in out-of-class task session of Task 4.

Tensions occurred related to General rules and Task rules of each task session were given in Table 4.17.

Table 4.17 Tensions occurred related to General rules and Task rules of each task session

Task Name / Task Session	Problems encountered / Tension occurred	
	General rules	Task Rules
Task 1		
In-class	- Touching the web tool at Social Area during the task (*Olivia G1*) - Background Noise (*Unidentified avatar*) - Using written chat environment (*Oliver G3*) - Using written chat environment in Turkish (*Oliver G3 and Lucas G6*)	- Going around during the instruction (*Unidentified avatar*) - Flying instead of sitting (*Thomas G5*) - Sitting instead of reading information board (*Oliver G1*) - Zoom management problem – time out (*Unidentified avatar*) - Giggling (*Oliver G1*)
Out-of-class	- Speaking in Turkish (*Oliver G3 and Grace G4*) - Background noises *(Unidentified avatar G5)*	Not behaving seriously (*Unidentified avatar G2*)

Table 4.20 (continued)

Task Name / Task Session	Problems encountered / Tension occurred	
	General rules	Task Rules
Task 2		
In-class	- Touching the web tool at Social Area during the task (*William G1, Grace G4, and Unidentified avatar*) - Speaking in Turkish (*Thomas G5, Isabella G1, Unidentified avatar1, Unidentified avatar2, and Unidentified avatar3*)	- Going around during the instruction (*Mila G5*) - Waiting instead of reading the information board *(Lauren G4, Thomas G5, and Anna G6)* - Using motorbike during another group performance *(Thomas G5)* - Giggling *(Unidentified avatar)*
Out-of-class	- None	- Do not know the task procedure *(Lily G2, Lauren G4, and Unidentified avatar G5)* - Not behaving seriously *(Margaret G2)* - Not concentrated on the task *(Jack G2)* Late coming to the presentation area *(Grace G4 and Lauren G4)*

Table 4.20 (continued)

Task Name / Task Session	Problems encountered / Tension occurred	
	General rules	Task Rules
Task 3		
In-class	- Playing with the microphone *(Jack G2, and Unidentified avatar)* - Not using the pseudonym in Zoom *(Unidentified avatar)* - Speaking in Turkish *(Oliver G3)*	None
Out-of-class	- None	Not behaving seriously *(Margaret G2)*
Task 4		
In-class	None	None
Out-of-class	- Speaking in Turkish (*Isabella G1*) - Background noises *(Unidentified avatar G1)*	- Do not know the procedure (*Isabella G1*) - Another group member did not attend (*Anna G6*)

4.2.4 Step 4 - Analysis of the Activity Structure (Activity, Actions, Operations)

4.2.4.1 Activity System on Cognitive Presence

After the six components of the activity system have been introduced, the fuller explanation of the nature of activity in the AT framework is possible. The activity system on CP has been established in this study and given in Figure 4.12.

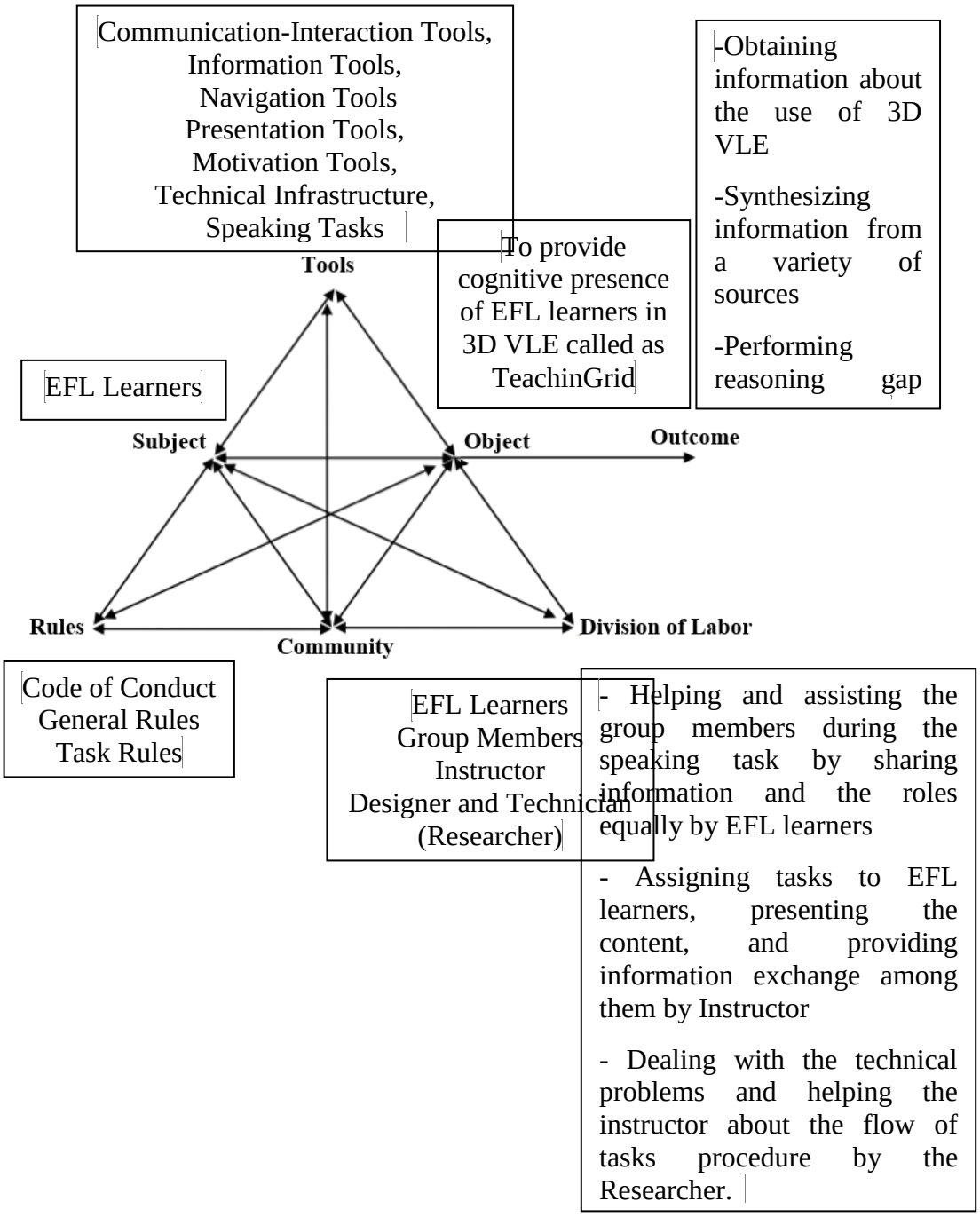


Figure 4.12 Activity System on Cognitive Presence for this Research Study

4.2.4.2 Action and Operations of the Activity System (Analysis Actions and Operations to Reach Object)

This step involves decomposing each activity into actions and operations. An important key process in analysis is to analyze the activity structure that defines the purpose of the activity system. The activity structure was described by the hierarchy consisted of activity, actions, and operations.

The analysis of the activity structure of CP in 3D VLE should begin with the identification of the goals of concrete actions then move to top-level actions and activities, followed by lower-level actions and operations. The whole activity was to provide CP of EFL learners in 3D VLE.

As mentioned before, CP consists of four components (TE, EX, IN and RE) and many operations in each component. In this process, EFL learners are expected to learn about the use of 3D VLE, synthesize information from different sources, and perform tasks in 3D VLE. The TE was the reasoning gap speaking tasks to practice and improve English speaking skill in real life contexts in broader aspect.

In this step, the analysis of the activity structure including all the activities that engage the subject in 3D VLE were conducted. Detailed information about the actions and operations related to each CP components is presented below.

The actions and operations of CP are presented in Table 4.18.

Table 4.18 Action and Operations of the Activity System on CP

Actions	Operations
Triggering Event	- Learning to use the 3D VLE - Asking the researcher / instructor / group members for the use of 3D VLE
	- Gathering at the Welcome Area - Reading tasks' instructions from information boards - Reading the notecards - Using scripted objects (e.g., "Assign a shop" in Task 1) - Asking help for the tasks from the instructor / group members
	- Navigating areas - Utilizing navigation tools (direction sign, mini map, and TeachinGrid Map) in the 3D VLE - Teleporting to the areas specified in tasks (e.g., Social Area, Presentation Area, assigned shop)
	- Doing the activities in the pre-task cycle of each task (e.g., feature ranking, and playing a news game)
Exploration	- Reading the information boards in the Social Area - Reading the information utilized by the web tool in the Social Area - Watching videos utilized by the web tool in the Social Area - Reading the information boards in the Presentation Area - Reading the information presented on the Presentation Tool screen in the Presentation Area
	- Utilizing navigation tools (direction sign, mini map, and TeachinGrid Map) in the 3D VLE

Table 4.18. (continued)

Actions	Operations
Exploration	- Listening information provided by the instructor about the task (e.g., group visits in breakout room session)
	- Information exchange among group members - Sharing pre-determined roles for the task - Discussing with the group members on task
	- Using different kind of sources (instructor, 3D VLE, group members, web sources) - Asking questions to the instructor/group members about the tasks - Asking questions to the researcher/instructor/group members about the use of the tools in 3D VLE
Integration	- Decisions are made about integration of ideas. - Solving problems with information from different sources (instructor, 3D VLE, group members, web sources) - Answering questions with the help of information acquired in the 3D environment - Trials before the performing tasks (presentation, roleplays)
	- Solving problems with the help of personal experiences.
	- Downloading the presentation template from Moodle (i.e., Task 4) - Creating a presentation - Uploading the presentation to Moodle.

Table 4.18 (continued)

Actions	Operations
Resolution	- Applying new ideas - Performing tasks - Making a presentation - Performing tasks - Making a role-play - Having a virtual experience related to task.
	- Critiquing the task performance (e.g., strengths and weaknesses) - Evaluating the task performance by utilizing SLOODLE Choice Tool (e.g., going to the Social Area to vote for the groups' performance, after all groups' presentation)
	- Think about applying in real life what is learned in 3D VLE.

In addition to Table 4.18, the actions and operations of CP are presented in detail by each in-class-task session (Task 1-2-3-4) below. The screen recordings of task sessions were analyzed in terms of the operations that subjects performed in each task. Operations combined into each concerning action (e.g., TE phase) of CP by the order of occurrence. In addition to this, operations of the instructor and researcher for each action (e.g., TE) of CP were presented throughout the process of ensuring and sustaining CP. Actions and operations for Task 1 were presented in Table 4.19, for Task 2 in Table 4.20, for Task 3 in Table 4.21, and for Task 4 in Table 4.22.

Table 4.19 Actions and Operations for Task 1

Actions	Operations		
	EFL learners	Instructor	Researcher
Triggering Event	1. Go to the Social Area. 2. Sit on the chair at Social Area. 3. Answer the instructor questions. 4. Watch the video utilizing web tool 5. Read the information board near Social Area to get information about the task.	1. Gathers EFL learners at the Social Area 2. Introduces topic. 3. Asks some questions related to the topic. 4. Asks questions related to the video. 5. Introduces the task. 6. Asks EFL learners to click on the box (“Assign a shop” box) near TV screen at Social Area to assign them to the shops. 7. Announces time limit and location where they can make the roleplays 8. Helps EFL learners about navigational problems (e.g., location of information board)	1. Goes to the Social Area 2. Writes the link to the web tool to show a video to the audience.

Table 4.19 (continued)

Actions	Operations		
	EFL learners	Instructor	Researcher
Exploration	6. Go to the assigned shops. 7. Use navigation tools. 8. Answer the instructor's questions. 9. Share roles among group members 10. Discuss with the group members. 11. Use different kind of sources (instructor. 3D VLE. group members)	9. Asks the researcher to assign them to the breakout rooms in Zoom for in-group discussions. 10. Visits each group at least one time to answer their questions related to the task. 11. Summarizes the task to each group (clarification) 12. Negotiates on the roles 13. Asks about what they are going to do in the role-play. 14. Informs the researcher to be assigned another breakout room when the group visit has finished.	3. Assigns EFL learners to the breakout rooms in Zoom for in-group discussions. 4. Assigns the instructor to the breakout rooms in Zoom for group visits. 5. Follows the instructor during breakout rooms' sessions.

Table 4.19 (continued)

Actions	Operations		
	EFL learners	Instructor	Researcher
Integration	12. Make decisions about integration of ideas. 13. Solve problems with information from different sources (instructor. environment. friends) 14. Answer questions with the help of information acquired in 3D environment. 15. Solve problems with the help of personal experiences.	15. Informs EFL learners how much time left for the closing of breakout room session.	6. Informs the instructor how much time left for the closing of breakout room session.
Resolution	16. Perform the task - Role-play 17. Have a virtual experience related to task. 18. Think that they can apply what is learned in real life.	16. Asks the EFL learners begin for the role-play. 17. Warns the EFL learners for the technical problems (microphone). 18. Asks EFL learners for the comments related to the group task performance. 19. Encourages EFL learners for the comments related to the group task performance. 20. Asks EFL learners to move another shop for the other group task performance. 21. Asks them to go to the Social Area to vote for the groups' performance after all groups' presentation. 22. Warns EFL learners for clicking once time for the voting tool. 23. Announces EFL learners for the winner group among groups.	7. Warns the instructor/EFL learners for the communication problems (microphone) 8. Assists the instructor/ EFL learners for the navigation problems. 9. Goes to the Social Area to observe them during voting process after all groups' presentation

Table 4.20 Actions and Operations for Task 2

Actions	Operations		
	EFL learners	Instructor	Researcher
Triggering Event	1. Go to the Social Area. 2. Search around to find the bottles in the scavenger hunt game. 3. Read the notecards related to phobia. 4. Present the phobia to the audience.	1. Gathers EFL learners at the Social Area 2. Introduces topic. 3. Asks some questions related to the topic. 4. Introduces the scavenger hunt game. 5. Asks questions about the phobias mentioned in notecards. 6. Warns EFL learners who are not obeying the rules, which may affect the system performance (e.g., clicking on TV screen many times) 7. Asks questions related to the news. 8. Introduces the task 9. Announces time limit and location where they can make the roleplays 10. Helps EFL learners about navigational problems (e.g., location of information board) 11. Warns EFL learners who are not following the instructions.	1. Goes to the Social Area. 2. Informs the instructor about EFL learners who are not obeying the rules, which may affect the system performance (e.g., clicking on TV screen many times) 3. Assists them if they need assistance (e.g., “If you stack somewhere. click on the mini map.”, “You cannot take. You just need to click on this. Just click once time, not many times.”, “Use the mini map to come to Social Area” 4. Informs the instructor about EFL learners who have microphone problems. 5. Writes the link to the web tool to show a news to the audience.

Table 4.20 (continued)

Actions	Operations		
	EFL learners	Instructor	Researcher
Exploration	5. Go to the assigned shops. 6. Use navigation tools. 7. Answer the instructor questions. 8. Share roles. 9. Discuss with the group members. 10. Use different kind of sources (instructor, group members, web sources)	12. Asks the researcher to assign them to the breakout rooms in Zoom for in-group discussions. 13. Visits each group at least one time to answer their questions related to the task. 14. Summarizes the task to each group (clarification) 15. Negotiates on the roles 16. Asks about what they are going to do in the role-play. 17. Informs the researcher to be assigned another breakout room when the group visit has finished.	6. Assigns EFL learners to the breakout rooms in Zoom for in-group discussions. 7. Assigns the instructor to the breakout rooms in Zoom for group visits. 8. Follows the instructor during breakout rooms' sessions. 9. Warns the EFL learners not to use L1 during breakout sessions. 10. Helps EFL learners about navigational problems (e.g., location of information board) 11. Informs the EFL learners/ instructor about the microphone problems (Communication problems)

Table 4.20 (continued)

Actions	Operations		
	EFL learners	Instructor	Researcher
Integration	11. Make decisions about integration of ideas. 12. Solve problems with information from different sources (instructor, 3D VLE, group members, web sources) 13. Answer questions with the help of information acquired in 3D environment. 14. Solve problems with the help of personal experiences.	18. Informs the EFL learners how much time left for the closing of breakout room session.	12. Informs the instructor how much time left for the closing of breakout room session.
Resolution	15. Perform the task (Role-play) 16. Have a virtual experience related to task. 17. Think that they can apply what is learned in real life.	19. Gathers EFL learners at the Social Area 20. Asks EFL learners begin for the role-play. 21. Asks EFL learners for the comments related to the group task performance. 22. Encourages EFL learners for the comments related to the group task performance. 23. Warns the EFL learners when they have procedural problem related to the task. (Instruction - roles) 24. Warns the EFL learners when they're giggling. 25. Encourages the EFL learners when they have problem related to task roles. 26. Asks them to go to the Social Area to vote for the groups' performance after all groups' presentation. 27. Warns EFL learners for clicking once time for the voting tool. 28. Announces EFL learners for the winner group among groups.	13. Warns the instructor/EFL learners for the communication problems (microphone) 14. Informs the instructor when EFL leaners have procedural problem related to the task. (Confusion in roles) 15. Goes to the Social Area to observe them during voting process after all groups' presentation

Table 4.21 Actions and Operations for Task 3

Actions	Operations		
	EFL learners	Instructor	Researcher
Triggering Event	1. Gather at the Welcome Area. 2. Go to the Presentation Area. 3. Sit on the chair at Presentation Area. 4. Answer the instructor questions 5. Do the activity (feature ranking) 6. Read the instruction from the Presentation Screen to get information about the task. 7. Read the information board near the Presentation Area to get information about the task.	1. Goes to the Presentation Area. 2. Gathers students to the Presentation Area. 3. Introduces topic. 4. Asks some questions related to the topic. 5. Encourages EFL learners to answer the questions. (What do you think?) 6. Asks them to do the activity (feature ranking) 7. Warns the EFL learners not to play with their microphones. 8. Introduces the task. 9. Announces time limit and location where they can make the roleplays.	1. Visits the Welcome Area if necessary for help. 2. Reminds EFL learners using TeachinGrid Map to teleport to Presentation Area. 3. Goes to the Presentation Area. 4. Manages the Presentation Tool and moves the slides when the instructor asks.
Exploration	8. Answer the instructor questions. 9. Share roles. 10. Discuss with the group members. 11. Use different kind of sources (instructor, group members, web sources)	10. Asks the researcher to assign them to the breakout rooms in Zoom for in-group discussions. 11. Visits each group at least one time to answer their questions related to the task. 12. Summarizes the task to each group (clarification) 13. Negotiates on the roles. 14. Asks about what they are going to do in the role-play. 15. Informs the researcher to be assigned another breakout room when the group visit has finished.	5. Assigns EFL learners to the breakout rooms in Zoom for in-group discussions. 6. Assigns the instructor to the breakout rooms in Zoom for group visits. 7. Follows the instructor during breakout rooms' sessions. 8. Warns the EFL Warns EFL learners to connect zoom with their usernames and group name (e.g., Oliver as "user" instead of Oliver G3)

Table 4.22 (continued)

Actions	Operations		
	EFL learners	**Instructor**	**Researcher**
Integration	12. Make decisions about integration of ideas. 13. Solve problems with information from different sources (instructor, 3D VLE, group members, web sources) 14. Answer questions with the help of information acquired in 3D environment. 15. Solve problems with the help of personal experiences.	16. Informs the EFL learners how much time left for the closing of breakout room session.	9. Informs the instructor how much time left for the closing of breakout room session.
Resolution	17. Perform the task – Make a presentation 18. Have a virtual experience related to task. 19. Think that they can apply what is learned in real life. 20. After all groups' presentation. go to the Social Area to vote for the groups' performance.	21. Gathers students at the Presentation Area. 22. Ask the EFL learners to begin for the presentation 23. Warns the EFL learners for the communication problems (microphone) 24. Asks EFL learners for the comments related to the group task performance. 25. Encourages EFL learners for the comments related to the group task performance. 26. Asks them to go to the Social Area to vote for the groups' performance after all groups' presentation. 27. Warns EFL learners for clicking once time for the voting tool. 28. Announces EFL learners for the winner group among groups.	10. Warns the instructor/EFL learners for rules. (e.g., Please turn to the audience while performing the presentation) 11. Warns the instructor/EFL learners for the communication problems (microphone) 12. Mutes other groups' members During the presentation to avoid the background noises and to improve the voice quality. 13. Unmutes the other groups after each group presentation. 14. Goes to the Social Area to observe them during voting process after all groups' presentation 15. Warns EFL learners for clicking once time for the voting tool.

Table 4.22 Actions and Operations for Task 4

Actions	Operations		
	EFL learners	Instructor	Researcher
Triggering Event	1. Go to the Presentation Area. 2. Sit on the chair at Presentation Area. 3. Answer the instructor questions. 4. Do the activity (playing a game individually). 5. Read the instruction from the Presentation Screen to get information about the task. 6. Read the information board near the Presentation Area to get information about the task.	1. Goes to the Presentation Area. 2. Gathers students at the Presentation Area. 3. Introduces topic. 4. Asks some questions related to the topic. 5. Encourages EFL learners to answer the questions. 6. Introduces the game (Fake or real news) 7. Asks them to do the activity (playing a game individually). 8. Warns the EFL learners not to play with their microphones. 9. Introduces the task. 10. Announces time limit and location where they can make the roleplays.	1. Reminds EFL learners using TeachinGrid Map to teleport to Presentation Area. 2. Goes to the Presentation Area. 3. Manages the Presentation Tool and changing the slides when the instructor asks. 4. Writes the link to the web tool to open a web page for playing a game about the spotting fake or real news.)
Exploration	7. Answer the instructor questions. 8. Share roles. (duties - which part they will talk) 9. Discuss with the group members. 10. Use different kind of sources (instructor, 3D VLE, group members, web sources)	11. Asks the researcher to assign them to the breakout rooms in Zoom for in-group discussions. 12. Visits each group at least one time to answer their questions related to the task. 13. Summarizes the task to each group (clarification) 14. Negotiates on the roles. 15. Asks about what they are going to do in the role-play. 16. Informs the researcher to be assigned another breakout room when the group visit has finished. 17. Warns the EFL learners not to use L1 during breakout sessions.	5. Assigns EFL learners to the breakout rooms in Zoom for in-group discussions. 6. Assigns the instructor to the breakout rooms in Zoom for group visits. 7. Follows the instructor during breakout rooms' sessions.

Table 4.23 (continued)

Actions	Operations		
	EFL learners	Instructor	Researcher
Integration	11. Make decisions about integration of ideas. 12. Solve problems with information from different sources (instructor, 3D VLE, group members, web sources) 13. Answer questions with the help of information acquired in 3D environment. 14. Solve problems with the help of personal experiences. 15. Upload their presentation to Moodle.	18. Informs the EFL learners how much time left for the closing of breakout room session. 19. Asks the EFL learners to upload their presentation to Moodle.	8. Informs the instructor how much time left for the closing of breakout room session. 9. Prepares an area to upload the EFL learners' presentation to Moodle.
Resolution	16. Perform the task – Make a presentation 17. Have a virtual experience related to task. 18. Think that they can apply what is learned in real life. 19. Answer questions related to the news created by the groups. (Is it a real or fake news?)	20. Asks the EFL learners begin for the presentation 21. Warns the EFL learners for the communication problems (microphone) 22. Asks questions to EFL learners related to the news created by the groups. (Is it a real or fake news?) 23. Asks EFL learners for the comments related to the group task performance. 24. Encourages EFL learners for the comments related to the group task performance.	10. Mutes other groups' members during the presentation to avoid the background noises and to improve the voice quality. 11. Unmutes the other groups after each group presentation. 12. Goes to the Social Area to observe them during voting process after all groups' presentation 13. Warns EFL learners for clicking once time for the voting tool.

4.2.5 Step 5 - Analysis of the Activity System's Dynamics

The final step of ASA is the evaluation of the interaction and relationship between/among AT elements. Each element's impact on the other is analysed to reveal the system dynamics. The outcome of this step is the linking of the elements. The different parts need to be interconnected and the system functionality should be tested to determine if other resources are needed.

Once the elements, actions and processes of the activity system are identified, the interactions between the elements need to be revealed. As a result of the analyzes conducted in this direction, the interactions between the subject and other elements in CP activity system are presented in Table 4.24.

Table 4.23 Interactions Between / Among the Elements of the Activity System

Interactions	
Subject	As an individual - Being interested in the 3D VLE - High motivation (i.e., helping to develop foreign language skills, providing enjoyable environment to speak in English, and the purpose of using such environment in the future careers) - Lack of enough vocabulary knowledge - Lack of technical knowledge - Being afraid of using the 3D VLE - Low motivation (e.g., lack of interest in technology and computers) - Lack of motivation (Unmotivated EFL learners)

Interactions	
	As a group member - Having good communication - Lack of adequate communication - Having a group harmony - Lack of Group harmony - Absence of group members
Subject – Tool	Environment - Learning about the 3D VLE Navigation - Looking around in 3D VLE - Gathering at the specific areas (e.g., Welcome Area, Social Area, Presentation Area) - Navigating areas - Utilizing navigation tools in 3D VLE (Using the mini map and using the TeachinGrid map located at Welcome Center and other locations) - Moving to the areas specified in tasks Information Tools (Information boards) - Reading tasks' instructions from information boards (near Social Area and Presentation Area) - Read the instruction from the Presentation Tool Screen to get information about the task. - Not understanding the instructions related to speaking tasks Information Tools (Notecards) - Reading the notecards (related to phobias)

Interactions	
	- Answering questions with the help of information acquired in 3D VLE (Phobia) Presentation Tools (Web tool) - Watching videos in the Social Area - Using the web tool in the Presentation Area to play a game Presentation Tools (Presentation tool) - Reading the instruction from the Presentation Tool Screen to get information about the task Objects in the environment (Material Shop) - Using the materials in the 3D VLE (e.g., in Task 1) Motivation Tools - Using the vehicles for fun - Causing distraction during other group's performance or leaving used vehicles inappropriate locations) Speaking Tasks - Completing the speaking tasks - Having a virtual experience related to task (Roleplays and presentations) - Thinking that they can apply what is learned in real life. Assessment Tool - Going to the Social Area to vote for the groups' performance, after all groups' presentation (i.e., SLOODLE Choice Tool).

Interactions	
Community – Division of labour	- Completing the task sessions with the group members by EFL learners - Assigning tasks to EFL learners, presenting the content, and providing information exchange among them by Instructor - Dealing with the technical problems and helping the instructor about the flow of tasks procedure by the Researcher as the designer and technician.
Subject – Tool – Community	- Asking questions to the instructor / group members about the tasks - Asking questions to the researcher/ instructor / group members about the technical problems (e.g., microphone problems,) - Asking for help about the use of 3D virtual environment from researcher/ instructor / group members
Community	- EFL learners - Group Members - Instructor - Designer & technician (Researcher)
Community – Tool	- Pre-task activities in Social Area and Presentation Area - Playing Scavenger hunt game
Community – Rules	- Obeying the rules mentioned in “Code of Conduct” - Obeying the rules mentioned in “General Rules” - Obeying the rules mentioned in “Task Rules” - Not obeying the rules

4.2.6 Factors Influencing Cognitive Presence

In this study, after determining the elements of cognitive presence activity system and the interactions between/among these elements, the factors influencing this activity system were determined. Based on the interactions between the elements of the activity system, the factors that affect cognitive presence can be summarized as in Table 4.27. Detailed explanations of the factors identified are presented below as sub-headings.

Table 4.24 Factors Influencing Cognitive Presence

Category	Influencing Factors
Triggering Event	Communication-interaction tools
	Information tools
	Navigation tools
	Presentation tools
	Motivation tools
	Technical infrastructure
	Technical skills
	Technician & Designer (Researcher) / instructor
	Design of 3D VLE
	Speaking Tasks
Exploration	Communication-interaction tools
	Information tools
	Navigation tools
	Presentation tools
	Motivation tools
	Technical infrastructure
	Technical skills
	Technician & Designer (Researcher) / instructor
	Design of 3D VLE

	Speaking Tasks
Integration	Communication-interaction tools Information tools Motivation tools Technical infrastructure Technician & Designer (Researcher) / instructor Design of 3D VLE Speaking Tasks
Resolution	Communication-interaction tools Technical infrastructure Technician & Designer (Researcher) / instructor Design of 3D VLE Speaking Tasks

4.2.6.1 Communication-Interaction Tools

EFL learners were able to ask questions to the instructor and group members about the tasks, and to the technician about technical issues and to ask for help from them via the voice chat (Zoom). Zoom also provided EFL learners private rooms (breakout rooms) where the group members could share their ideas and discuss with each other to reach the consensus for the task to be performed without any distraction of the other groups in a period of time (15 min). They made it easier for EFL learners to help each other and ensured that the voice chat was made in a healthy way. One of the EFL learners stated that:

> *Apart from the classroom environment, I think it was a very nice detail that we could talk to my friends in my group* [Zoom-Breakout rooms] *in a special way to complete this task … Because if the whole class tried to do something at the same time, nobody could understand anyone. I think it is more understandable because each group has its own debate (Bella G6 -*

INTWS) (Q45).

Consequently, the interaction among the subject, tool, and the community had been increased and CP of EFL learners had been promoted. On the other hand, limited time of group meetings in free version of Zoom (40 min) influenced the interaction of subject-tool-community negatively. One of the EFL learners stated on this problem as:

> *Zoom has a cut-off event* [after 40 minutes]. *For example, okay, you caught fluency in that moment while talking. It's going on right now. Trust in yourself has been fulfilled It can be something like where I was left when the Zoom suddenly cut-off. That's all. But it's not such a big deal (Oliver G3 - INTWS) (Q46).*

In addition to this, another problem was occurred due to the some of the EFL learners' lack of knowledge in configuration of their microphones in all in-class task-sessions. Some of the EFL learners could not make their voices heard clearly and had to repeat themselves till they troubleshoot by themselves or asked group members and the technician (the researcher) for help on how to fix the problem. It was led both the EFL learners and the instructor to take time and reduce their motivation. One of the EFL learners referred to the voice chat problems as follows:

> *The only thing I encountered in the phobia activity that I thought affected my learning negatively was the microphone problem in the environment. Sometimes I had trouble picking up the voice of the teacher and other users and something I missed. (Michelle G5-RS-T2) (Q47).*

The instructor remarked that EFL learners had a problem with voice chat as follows:

> *The difficulty they faced in this activity was that students could not make their voices heard during the task. The students had to repeat themselves because their voice was not clear. This decreased both their and my motivation. (The Instructor-RI-T3) (Q48).*

The interaction of community-tool-rule was also influenced by this form of issue and it led the breaking the rule of using only voice chat in 3D VLE (except in emergency situations for asking for help). One of the groups was used the text chat and one of the group members stated that:

> *Although we had a microphone problems in some parts, we used the chat part as a group and this made it even more efficient (Evelyn-INTWS) (Q49).*

EFL learners, through avatars that enable subject-tool interaction, were going around in the 3D VLE, interacting with the artefacts/tools of the 3D VLE, performed the tasks with the collaboration of group members. They stated that they were adopting a new identity by having an avatar with their pseudonym. In addition, they added that they carried out the activities with their group members without any prejudice due to the reasons that their real identity was unknown.

They stated that they did not hesitate to express their opinions and speak English on the task topic with other group members. Moreover, they stated they were more relaxed, so they made less error while speaking in English. Some of the EFL learners stated as below:

> *But since we all have a different character and name in the environment, we were sharing our thoughts more easily with our friends or in terms of general task. I think I can speak more comfortably in the environment compared to the normal speaking skill. It had an impact, it contributed. (Evelyn-INTWS) (Q50).*

> *I am a very passive person in face-to-face English conversations. Now when we are there and we do not show ourselves, because there is another avatar, the human says something, as if the vehicle is as if you were voicing a character in the cartoon, the person talks more comfortably, the less wrong it is because he speaks comfortably (Tracy-INTWS) (Q51).*

In addition, EFL learners had fun experience using avatars in the 3D VLE through various games and activities. It led a facilitating effect on EFL learners' knowledge

of the task topic. They did not only play games but also discovered the environment which helped them to learn the tools in the environment.

On the other hand, some of the EFL learners were not able to control their avatar movements, disturbed other avatars by pushing them, or using vehicles during the task session. It caused distraction in their attention during the instructors' giving information about the task topic. In addition, some of them waited a while blocking the view of the information board from other avatars to see. This led wasting time in reaching information and completing the tasks.

4.2.6.2 Information Tools

The instructions and the requirements of the task in the information boards were set in an ordered fashion. If the task instructions provided by the instructor was forgotten, EFL learners had been used the information board as a reminder tool. Some of the EFL learners stated that:

> *After the lecture started, we were informed about what to do by the lecturer in the environment, and what we would do in the board were given respectively, and yes it was effective in terms of seeing what we would do. (Tracy-INTWS) (Q52).*
>
> *The boards made us remember the information we forgot. (Evelyn-INTWS) (Q53).*

While the information provided by the information boards appeared descriptive, however, it was not fully understood since it contained long texts with a small font. The interaction among the group members was affected negatively. Therefore, the EFL learners were unable to get information correctly about the tasks and to execute them properly on time. In this situation, the subject-tool interaction influenced EFL learners' CP negatively. Some of the EFL learners' statements on this issue can be found below:

The idea of the board was good at first, but it is long and these small letters. in my opinion What it was explained was not fully explained and consisted of long texts. I think this is an issue that prevent the person who wants to learn. I think clear words could be chosen. This could help (David-INTWS) (Q54).

It took me a while to understand it at first. I asked the teacher several times what we will do, but I finally got it. ... Yes [the lecturer gave the information] *I think that board would be insufficient if she hadn't given it (David-INTWS) (Q55).*

EFL learners mentioned that they need more and clear details about the task instructions (roles, lack of location information, lack of instruction how to use the template or posters).

In these information boards, there were explanations on how to do our task and how to improve our cafeteria. The need to use tools was mentioned. But everyone started to question where the tools were, where we could get them to get the campaign boards. (Evelyn-INTWS) (Q56).

Lastly, notecards as information tools assisted EFL learners by providing information about to task topic while playing a scavenger hunt game.

4.2.6.3 Navigation Tools

EFL learners used Navigation Tools; direction signs, TeachinGrid Map, and Mini-map to go around and to go somewhere faster. They allowed them to discover the areas without losing time and without purposeless wandering in the 3D VLE. EFL learners' interaction with Navigations tools influenced their CP positively. On the other hand, some of the EFL learners had problems in finding shops, areas, and information boards. Two of the EFL learners had difficulties about the lack of

direction signs showing the location of Social Area and information boards and stated as:

> *Only in the first week we had a little trouble about how to go to the area; the Social Area, then I had no problems (Tracy G3-INTWS-T1-TE) (Q57).*

> *I couldn't find the boards. We use it for the first time after all. I had a hard time locating the boards* [At Social Area] *and had a difficulty there. Except that one, I had no problems. (Evelyn G4-INTWS-T1-EX) (Q58).*

Another EFL learners reported that he had difficulties in how to use the mini-map (in T1) and stated that:

> *Since this task was a first for me in the virtual world event, I had a hard time finding where to go until I figured out how to use the teleport screen* [mini-map]. *So, it was pretty bad when I couldn't get anywhere fast enough and missed the incident there (Lucas G6-RS-T1) (Q59).*

In addition to these problems, three of them were stated that they had difficulties about TeachinGrid Map. One of the EFL learners stated as below:

> *A difficulty I faced is to go to the area where we took the poster and find the shop back in the same way… (Mila G5-RS-T1) (Q60).*

The problems related to Navigation Tools included time consumption, not to follow the task procedure, and not attend to communications (e.g., discussions) in the TeachinGrid environment. In this situation, the subject-tool interaction influenced CP negatively.

4.2.6.4 Presentation Tools

The instructor used the web tool to connect websites and show content related to the task topics to the EFL learners. In addition to the web tools, the instructor used the presentation tool located at Presentation Area to show task instruction with the help of the technician. Moreover, the researcher used it to show TeachinGrid rules.

On the other hand, the EFL learners used it to play a game on the website and show their groups' presentations. All their actions in this situation were also made with the help of the technician (the researcher).

Presentation of the information with videos by utilizing web tool contributed to the EFL learners' learning on the task topic and helpful for completing the task. One of the EFL learner was stated that:

> *The videos we watched on the TV board [web tool] have improved our ideas both culturally and on the topic. (Evelyn-INTWS) (Q61).*

While EFL learners were making a search related to the task, they preferred using a web browser to connect to the Internet instead of using web tool available in TeachinGrid. One of the EFL learner stated the problem related to web tool as:

> *... We did not encounter any problems other than our external web browser research. (William G1-IS-T1-EX) (Q42).*

The problems related to web tool (Presentation Tools) caused distraction in the flow of preparation of task performance. The EFL learners had difficulty in explanation of what they found in the web sources to their group members since they could not share them visually or show them on their screen in the 3D VLE. The rest of the group members needed to wait. Therefore, the subject-tool interaction influenced CP negatively and it caused not only waste of time in the preparation of group's task performance but also decreased the motivation of the group members.

4.2.6.5 Motivation Tools

The motivations of EFL learners in the 3D VLE were tried to be supported by some vehicles (e.g., cars, motorbikes), amusement park, NPCs, relaxing areas, and Concert Area. EFL learners could use or be benefited from them during their free times in the 3D VLE. Majority of the EFL learners were motivated to perform and

complete the tasks and did not waste unnecessary time in the 3D VLE with the help of mentioned motivational tools. One of the EFL learners stated that:

> *... We were motivated to play their characters* [avatar] *of the virtual environment. In other words, even getting into the car was such an enjoyable thing in that virtual environment ... So, it had a very nice environment. Really. ... You are not bored. When you are not bored, this time you are actively listening. That is why those tools were useful (Lily G2-INTWS) (Q62).*

In addition, announcing that rewards would be given those who complete the tasks well, and feedback given to EFL learners by the instructor at the end of each task performance influenced EFL learners' CP in TeachinGrid positively. However, some of the EFL learner reported that feedback from the other group members did not help as much as the instructor's feedback, since they were limited in frequency and quality. One of them stated that:

> *I think we got very little* [feedback from other groups] *because generally there was not very active speaking environment after our event* [task performance]. *... Maybe if it was given exactly, we could see the deficiencies in ourselves better, we could try to improve it but it did not help much since we could not get too many comments (Evelyn-INTWS) (Q63).*

In addition, driving vehicles during another group performance or the instructor's giving information on the task topic led distractions from tasks and impacted on EFL learners' concentration negatively. Moreover, leaving them to inappropriate locations led the confusion in EFL learners' mind and increase cognitive load. Moreover, the instructor shared her opinions on the EFL learners' use of motivational tools as stated below:

> *Particularly, students' behaviors like leaving the motivation tools at different points despite the warnings made in the environment shows that the students need a more intense orientation before the application. In this environment, the gamification element caused the student to deviate from*

his purpose from time to time and this caused decrease in their motivation towards the tasks (The instructor - Member check) (Q64).

4.2.6.6 Technical Infrastructure

Although, the Internet connection and the features of the computers in the computer lab met the OpenSimulator platform requirements, unexpected interruption on the Internet connection occurred during the task sessions. At the university campus, EFL learners connected to the Internet by using their student email addresses and passwords. After a while, the Internet connection session had been expired automatically due to security reasons. It caused that EFL learners had to connect to the region and Zoom again.

Other problems that they experienced related to technical infrastructure including not having enough server memory for TeachinGrid, design of TeachinGrid and Technical Complexity of TeachinGrid. One of the EFL learners reported the problem related to TeachinGrid's not having enough server memory as below:

Hardware troubles and lack of speed were the reasons that affected the role and were annoying (David G4-RS-T1) (Q65).

By the analysis of the researcher notes, it was found that when majority of the EFL learners interacted with the objects, especially scripted objects, it caused some problems as; the avatars moved slowly in the environment, the region was stopped/crashed and removed the avatars from the environment. In addition to these problems, some of the EFL learners reported the problem related to TeachinGrid Design (Scavenger Hunt) as below:

I had difficulty in finding placed boxes [bottles] *about phobias in the task. Although it was placed according to the types, it was difficult to find because the environment has a large area. I tried to find it with the help of my friends and teacher (Anna G6-IS-T2) (Q66).*

I could not find all the phobias required in the environment, but I still think I did the role-play part well. I could not find out [not finding] *all of them negatively affected me (Mila G5-IS-T2) (Q67).*

Moreover, some of the EFL learners (*n*=3) reported the problem related to Technical complexity of TeachinGrid in various processes including preparation for the sessions (login problems, microphone, Zoom connection). One of them stated as below:

One of the downsides was the long time of collective entry into the environment. In other words, the time from all everyone entering the environment until the beginning of the lesson was longer than it should have been (Jack G2-RS-T3) (Q68).

In addition to this, some of the EFL learners (*n*=3) complained on the lack of tool in TeachinGrid. One of them stated as below:

What did not go well was that we had to enter Moodle and find the .pptx file and write this news in a certain pattern. As I said, the fact that everything is strict and should be conformed to the rules is sometimes an event that undermines the speaking learning environment (David G4-RS-T4) (Q69).

Problems while trying to sit down on a chair and looking like sitting position during the task presentation were another technical problem distracted their attention in the performance.

4.2.6.6.1 Technician / The instructor

The division of labor was listed below:

- Helping and assisting the group members by sharing information as much as possible and the roles equally during the speaking tasks by EFL learners
- Assigning tasks to EFL learners, presenting the content, and providing information exchange among them by Instructor

- Dealing with the technical problems and helping the instructor about the flow of tasks procedure by the Researcher.

As mentioned before, complexities in various processes for the class sessions led substantially time consumption due to the nature of the EFL learners' technical skill background. In this context, the researcher as a technician helped EFL learners and the instructor for the technical problems.

4.2.6.7 Design of 3D Virtual Learning Environment

Designing the environment in a realistic way in accordance with the speaking tasks increased EFL learners' motivation to learn the topics and speak English, their desire to perform the tasks, and to realize that they can use what they learned with the help of speaking tasks in 3D VLE in daily life. One of the EFL learners' thoughts related to realistic design of TeachinGrid was presented below:

> [Feature I like] *It reflects the reality. For example, those shops, having characters* [avatars], *then doing something there, communicating, it provides us be like the real environment, revive them. This was the first feature I liked. It's all about reality (Lily G2 - INTWS) (Q70).*

In addition, availability of the group meeting spaces for the discussion contributed to improve English speaking skill. One of the EFL learners stated as below:

> *Common gathering area. Interaction of the groups in the common gathering area with each other, whether there is a gathering area for everyone's task in the hall. I think I can say that it contributed (...) Presentation and Social Area as a gathering area, both of them contributed (Lucas G6 - INTWS) (Q71).*

Some of the EFL learners' thoughts related to TeachinGrid's being enjoyable were presented below:

> *It is very enjoyable when using the character because it gives a play*

feeling. Such environments can also make learning more active (Lily G2-RS-T0) (Q7).

As a first-time user of the TeachinGrid environment, it is a fun, enjoyable environment that allows speaking English (Samantha G3-RS-T0) (Q10).

The problems related to design of the 3D VLE caused waste of time and not to follow the task procedure and not attend to communications (e.g., discussions) in the TeachinGrid environment. In this situation, the subject-tool interaction influenced CP negatively.

Some of the EFL learners reported the problem related to design of TeachinGrid 3D VLE in Task 2 (in scavenger hunt). They tried to find the bottles including notecards in wide area and some of them could not find. The instructor reported the issue as below:

The difficulty I faced in this activity occurred during the students' bottle scavenger hunt game in pre-task. Most groups did not continue bottle hunting after finding the same bottle. For this reason, not every group had the opportunity to speak during the discussion (The instructor-RI-T2) (Q32).

4.2.6.8 Speaking Tasks

As mentioned before, the purposes of the reasoning gap speaking tasks were to engage EFL learners cognitively and support strong CP. By participating in the reasoning gap speaking tasks, EFL learners were expected to achieve better command of English language speaking in various real-life contexts created in 3D VLE.

Some of the EFL learners reported the contribution of the speaking tasks on their English-speaking skill as below:

When talking about phobias, I think this subject has an impact as it is an interpretative subject. If you give me another topic, maybe I will not be able to speak. Because I may not have an idea, or I may be surprised what to say, it can be a difficult topic. But I think this contributes since there are such open-ended and attractive topics (Evelyn-INTWS) (Q72).

Speaking tasks certainly contributed. Because the fact that speaking tasks were given from things that can be encountered in real life was the thing that contributed the most. Because we can use it in the future (Lily G2-INTWS) (Q73).

Definitely yes. It directly encourages General English. In my opinion, if you encounter such a situation, You are thinking about how to make a speech to the other person in your mind. (David) (Q74).

There were pauses in speech of EFL learners due to the contextual problems. Some of them stated that they did not know what to say, needed time to think. They faced difficulties in bringing ideas together. The difficulties arising from the contextual problems were overcome by the joint decisions of the group members. Moreover, lack of enough sources related to the task topic and ordinary task topic (lack of interesting topic) decreased their motivation to complete the task. Some of the EFL learners reported as:

… It was a little difficult to put ideas together. It was a bit of a problem what I talked and said. But, we also talked like this in the task as we talked in daily life (Megan G3-INTWS) (Q75).

It was difficult for me to talk at this activity. Because at that moment I didn't know what to say about this topic. I needed time to think (Samantha G3-RS-T3) (Q76).

The topic of the train station was very ordinary, and we couldn't do enough creative things, so I didn't like it very much (Lily G2-RS-T3) (Q77).

The instructor summarized the contextual problems about the Task 4 as:

> *The students were confused at first about how to prepare the news. However, they were able to overcome this thanks to the instructions. Another thing that did not go well for students was that their telling the news was false or true when they were presenting their news at the task performance. They should not have said that. Because we planned to ask other students who were listeners (The Instructor-RI-T4) (Q78).*

4.2.7 Summary of the findings related to the Qualitative Data Analysis

Table 4.25 shows factors influencing cognitive presence at a glance.

Table 4.25 Factors Influencing Cognitive Presence at a glance

Tools	Factors influencing CP	
	Positive	Negative
Communication-Interaction Tools		
Zoom	- Enabling to ask for help and questions via voice chat - Enabling group discussion session in breakout rooms	Limited features in the free version
Avatar	- Adopting a new identity by having an avatar - Fun experience by various games and activities	Lack of adequate experience in avatar controlling
Information Tools		
Information Board	As a reminder tool and source of information including the instructions and the requirements of the task set in an ordered fashion	Lack of clear information including long texts with a small font
Notecard	Providing information about to task topic while playing a scavenger hunt game	None

Table 5.1 (continued)

Tools	Factors effect on CP	
	Positive	Negative
Navigational Tools		
	- Enabling to discover the areas for searching the information. - Enabling teleport to the task area without losing time and purposeless wandering.	Lack of adequate direction signs
Presentation Tools		
	Enabling to present information and practice by connecting to the web sources	Using a web browser to connect to the Internet instead of using web tool
Motivation Tools		
	- Enabling to motivate to perform and complete the tasks and did not waste unnecessary time - Giving rewards to best group performance. - Giving feedback by the instructor and the other group members.	- Limited in number and quality of feedback from the EFL learners - Using the vehicles during the presentation and leaving them to inappropriate locations.

Table 5.1 (continued)

Tools	Factors effect on CP	
	Positive	Negative
Technical Infrastructure	- Support on technical problems by additional technical staff or instructor who had technical knowledge - Support on content problems by the instructor	Internet Connection problems - Unexpected interruption (sessions were expired) on the Internet connection occurred due to the institutional security problems Server Problems (Not having enough server memory) - Interaction with the scripted items by the many avatars Requirements of VLEs (Technical Complexity of VLEs) - Complexities in various processes (e.g., login to 3D VLE, Zoom and Moodle, microphone configuration before connecting into the environment) Configuration of the microphone - Lack of technical knowledge in configuration of the microphones

Table 5.1 (continued)

Tools	Factors effect on CP	
	Positive	Negative
Design of 3D VLE		
	- Designing the environment in a realistic way in accordance with the speaking tasks - Well-designed and game-like environment including enjoyable features/facilities	- Inappropriate design of the scavenger hunt game. - Script problems (e.g., while trying to sit down on a chair and looking like sitting position)
Speaking Tasks		
	Designing and developing speaking tasks based on Task Based Language Teaching approach and included reasoning gap activities	- Contextual problems - Lack of enough sources related to the task topic - Lack of interesting topic related to the task (Not commonly, but rarely mentioned)

CHAPTER 5

DISCUSSION AND CONCLUSION

This chapter presents the discussion and interpretation of the findings in the light of previous literature.

5.1 Major Findings and Discussion

This single case study employed the qualitative approach and mainly focused attention on the phenomenon of "EFL learners' cognitive presence in synchronous online English-speaking module within a 3D VLE". In consideration of the first research question, overall CoI, TP, SP and CP levels of the EFL Learners in the synchronous online English-speaking module in 3D VLE context were discovered via their responses to the quantitative data instrument, the CoI Survey. With students' self report, the CoI Survey provided a measure of EFL learners' level of TP, SP, and CP in the synchronous online English-speaking module conducted in 3D VLE. Although this study focused on CP, the results of other presences (TP and SP) were also presented to show overall EFL learners' levels of CoI. Moreover, to enrich the data derived from the CoI survey, the preparation part of out-of-class tasks sessions were analyzed by modified MUVEEET Form to provide examples of CP indicators. Quotations from the participants' responses to Inquiry Forms and the interview were also added.

In consideration of second research question, ASA was conducted to understand the dynamics of 3D VLE and to analyze what factors influenced EFL learners' CP in 3D VLE both positively and negatively. The CP activity system was examined in detail to reveal all the components and dynamics of it by following each step in the updated version of Jonassen and Rohrer-Murphy's (1999) checklist.

5.1.1 EFL Learners' Level of Cognitive Presence

First of all, EFL learners' CoI levels as a composite score which means overall CoI derived from the mean scores of TP, SP and CP were calculated (RQ1). Based on the CoI survey results of the data analysis, it was found that strong CoI was created in the 3D VLE and the EFL learners' levels of TP, SP and CP were high. The TP level (*M*=4.44, *SD*=.41) was higher than the SP (*M*=4.03, *SD*=.72) and CP level (*M*=4.11, *SD*=.74); whereas the level of CP was higher than the SP (see Table 4.1).

The findings of the CoI Survey in this study were consistent with numerous CoI studies in 3D VLE in terms of the mean order of CoI components and generally above-average scores (Arbaugh et al., 2008; Burgess et al., 2010; McKerlich et al., 2011; Reisoğlu, 2014; Claman, 2015). Arbaugh et al. (2008) validated the CoI Survey Instrument and TP items yielded the highest mean score of 3.34 (*SD* = 0.61). CP items yielded a mean score of 3.31 (*SD*= 0.60) and SP items collectively yielded a mean score of 3.18 (*SD*= 0.65) (*n*=287). In Burgess et al.'s (2010) study, the overall mean score was higher for each element: TP items yielded a mean score of 4.41, CP items yielded a mean score of 4.35, and SP items yielded a mean score of 4.31(*n*=10, graduate students). In McKerlich's (2011) study, TP items yielded the highest mean score of 3.90 (*SD* = 0.07). CP items yielded a mean score of 3.77 (*SD*= 0.10) and SP items collectively yielded a mean score of 3.66 (*SD*= 0.11) (*N*=26 - adult students who were taking a higher education course that was completely held in a virtual world). In Reisoğlu's (2014) dissertation, the overall mean score was higher for each element: TP items yielded a mean score of 2.67 (*SD*=0.38) , CP yielded a mean score of 2.54 (*SD*=0.47) and SP yielded a mean score of 2.40 (*SD*=0.45) (*n*=103-secondary school students Grade of 5th,6th and 7th). These similar results show that the research results of this study are not unlike the original validated study (Arbaugh et al., 2008) in that the overall ranking was the same: TP, CP, and SP.

However, in Pellas and Kazanidis's (2014) study, CP items yielded the highest mean score of 4.36 (*SD* = 0.73). SP items yielded a mean score of 4.21 (*SD*= 0.77) and TP items collectively yielded a mean score of 4.11 (*SD*= 0.74) (*N*=135 - 119 graduate and 16 postgraduate students). In addition, in Claman's (2015) study, the overall mean score was higher for each element: SP yielded a mean score of 3.59, CP yielded a mean score of 3.49 and TP items yielded a mean score of 3.42 (*n*=21) and in Pellas and Boumpa's (2017) study, CP items yielded the highest mean score of 4.59 (*SD* = 0.77). TP items yielded a mean score of 4.28 (*SD*= 0.48) and SP items collectively yielded a mean score of 3.54 (*SD*= 0.24) (*N*=35 - preservice foreign language teachers). However, considering the contexts of previous studies and this study, comparing the mean scores of TP, CP, and SP might not be so feasible. As seen from the context of the studies, participants, designs, and/or treatment applied in the studies were different from each other. In order to have a more feasible comparison, detailed qualitative findings should be obtained (Kilis, 2016).

Based on the results, it can be concluded that participants did experience a CoI in TeachinGrid 3D VLE in which the 'Speaking Tasks in a 3D Virtual Learning Environment' Module was held. Indicators for all three presences were all reported by the EFL learners at high level. In the following parts, results of CP and each phase of CP will be discussed:

As mentioned before, EFL learners received a satisfactory level of CP (*M* = 4.11, *SD* = 0.74). Considering phases of CP, Resolution had the highest mean score (*M*=4.17, *SD*=.80), while the Exploration had the lowest mean score (*M*=4.02, *SD*=.84). The mean score of Integration was almost the same with Resolution (*M*=4.16, *SD*=.82) whereas the mean score of TE (*M*=4.08, *SD*=.84) was slightly higher than Exploration (see Table 4.4). The findings imply that the EFL learners have reported a high level of the cognitive presence in all four categories.

As mentioned before, EFL learners' CP level (*M*=4.11, *SD*=.74) was high in 3D VLE. As for CP of the CoI Survey, the highest mean score belonged to the item 23

(Item 23 – "*Problems posed increased my interest in course issues*", *M*=4.29, *SD*=.96). On the other hand, the lowest mean score in the CoI Survey was item 26 (Item 26 – "*I utilized a variety of information sources to explore problems posed in this course.*", *M*=3.86, *SD*=1.11). It is noteworthy that the number of EFL learners making assessments at the level of "strongly disagree" is very low; one EFL learner on item 24 (Item 24 – "*Course activities piqued my curiosity*", *M*=3.90, *SD*=1.14) and only item 32 (Item 32 – "*I can describe ways to test and apply the knowledge created in this course*", *M*= 4.19, *SD*=.87) has no "strongly disagree" or "disagree" rating, but it was rated the highest "neutral" (*n*=6). Each phase of CP was discussed below:

5.1.1.1 In terms of Triggering Event

The mean score of TE (*M*=4.08, *SD*=.84) was at satisfactory level and slightly higher than the Exploration phase which had the lowest mean score (*M*=4.02, *SD*=.84) in the CoI Survey. The highest mean score belonged to the item 23 (TE – Item 23 – *"Problems posed increased my interest in course issues"*, *M*=4.29, *SD*=.96) whereas the lowest mean score was item 24 – (TE – Item 24 – *"Course activities piqued my curiosity"*, *M*=3.90, *SD*=1.14). The mean score of item 25 was 4.05 (TE – Item 25 – *"I felt motivated to explore content related questions"*, *M*=4.05, *SD*=.92). Moreover, the results of descriptive analysis of the TE items in the CoI Survey were showed that:

- Majority of the EFL learners (76.19%, *N*=16) thought that "problems posed increased their interest in course issues" while some others (23.81%, *N*=5) were undecided.
- Similarly, majority of them (76.19%, *N*=16) thought that "course activities piqued their curiosity "while some of them (14.29%, *N*=3) not, and they (71.43%, *N*=15) felt motivated to explore content related questions, while some others (23.81%, *N*=5) was undecided.

By the analysis of screen capture task recordings, it was found that the instructor provided well-planned triggering events that serves as a catalyst for further discussions on the reasoning gap speaking tasks by posing probing questions which could invite curiosity, elicit interest, and encourage different perspectives (Bender, 2003). She also used evaluative questions (e.g., Task 3. Features of Railway Stations-Put into order-feature ranking). Using questions that support EFL learners making comparisons, highlighting contrasts, or making predications could serve to invite them into more meaningful dialogues. Another strategy for engaging EFL learners in online discussions initially used by the instructor was to create a scenario for role-plays and ill-structured problem as a triggering event for which EFL learners need to find viable solutions. By providing an intriguing problem, dilemma, or situation, she tried to pique EFL learners' curiosity.

The CoI survey results revealed that the mean score of Triggering Event (M=4.08, SD=.84) was at satisfactory level. However, making improvements of the English-speaking module in 3D VLE can be considered in terms of Triggering Event items, especially to the item 24 which had the lowest mean score of Triggering Event phase (curiosity). Considering the item, recommendations on sustaining Triggering Event were given below. They were emerged from the analysis of findings and suggestions of the EFL learners and the instructor.

Recommendations on sustaining Triggering Event for the EFL learners

In order to increase the curiosity of the EFL learners, new tasks that can ignite conversation and discussion should be presented in the 3D VLE or other course events that encourage their attention and excitement should be developed. In addition, task activities having the fun features (e.g., games) could be prepared to attract their attention and foster their motivation. Moreover, a variety of materials (e.g., audio files, presentations, videos) could be added to the environment to engage EFL learners with learning material. To help EFL learners understand the expectations from the task, as stated and recommended by some of the EFL learners, sample performance videos can be added.

5.1.1.2 In terms of Exploration

The mean score of Exploration (*M*=4.02, *SD*=.84) was at satisfactory level and had the lowest mean score in the CoI Survey. The highest mean score belonged to the item 27 (EX – Item 27 – *"Brainstorming and finding relevant information helped me resolve content related questions"*, *M*=4.29, *SD*=.81) whereas the lowest mean score was item 26 – (EX – Item 26 – *"I utilized a variety of information sources to explore problems posed in this course"*, *M*=3.86, *SD*=1.11). The mean score of item 28 was 4.00 (EX – Item 28 – *"Online discussions were valuable in helping me appreciate different perspectives."*, *M*=4.00, *SD*=1.22). Moreover, the results of descriptive analysis of the Exploration items in the CoI Survey were showed that:

- More than a half of the EFL learners (61.9%, *N*=13) thought that they utilized a "variety of information sources to explore problems posed in the course "while some others (23.81%, *N*=5) were undecided.
- Majority of them (85.71%, *N*=18) thought that "brainstorming and finding relevant information helped them resolve content related questions" while some others (9.52%, *N*=2) were undecided.
- In addition, more than a half of the EFL learners (66.67%, *N*=14) thought "online discussions were valuable in helping them appreciate different perspectives" while some others (23.81%, *N*=4) not.

The CoI survey results revealed that the mean score of Exploration (*M*=4.02, *SD*=.84) was at satisfactory level. However, making improvements of the English-speaking module in 3D VLE can be considered in terms of Exploration items, especially to the item 26 and item 28 which had the lowest mean score of Exploration phase. Considering the item, recommendations on sustaining Exploration were given below. They were emerged from the analysis of findings and suggestions of the EFL learners and the instructor.

Recommendations on sustaining Exploration for the EFL learners

The results indicated that EFL learners did not appear to be able to develop and increase their abilities and awareness on the task topic. Variety of learning sources for them needed to be provided and to be emphasized in 3D VLE. For example, EFL learners could explore the information by working with text-based (e.g., presented by the notecards, information board, etc.) or audio-visual materials (e.g., presented by the web tool) either alone or with group members. Recommended web sites related to the task topic (or even landmarks including other regions if it's allowed to be teleported) can be provided for the EFL learners to reach out some additional educational resources that could enhance their understanding of the topic being discussed. They can explore the resources and gather information from these sources. The instructor can ask each group members to share their findings and discuss on them with their group members. By this way, they can broaden their knowledge and skills on the related task topic.

5.1.1.3 In terms of Integration

The mean score of Integration(*M*=4.16, *SD*=.82) was at satisfactory level and slightly lower than the Resolution phase which had the highest mean score (*M*=4.17, *SD*=.80) in the CoI Survey. The highest mean score belonged to the item 30 (IN – Item 30 – *"Learning activities helped me construct explanations/solutions"*, *M*=4.24, *SD*=.83) whereas the lowest mean score was item 31 – (IN – Item 31 – *"Reflection on course content and discussions helped me understand fundamental concepts in this class"*, *M*=4.10, *SD*=1.14). The mean score of item 29 was 4.14 (IN – Item 29 – *"Combining new information helped me answer questions raised in course activities"*, *M*=4.14, *SD*=.91). Moreover, the results of descriptive analysis of the Resolution items in the CoI Survey were showed that:

- Majority of them (76.19%, *N*=16) thought that "combining new information helped them answer questions raised in course activities" while some others (19.05%, *N*=4) was undecided.
- Similarly, majority of them (85.71%, *N*=18) thought that "learning activities helped them construct explanations and solutions" while some others (9.52%, *N*=2) was undecided.
- In addition, majority of them (71.43%, *N*=15) thought that "reflection on course content and discussions helped to understand fundamental concepts in this class" while some others (14.29%, *N*=3) not.

The CoI survey results revealed that the mean score of Integration (*M*=4.16, *SD*=.82) was at satisfactory level and slightly lower than the Resolution phase which had the highest mean score (*M*=4.17, *SD*=.80). However, making improvements of the English-speaking module in 3D VLE can be considered in terms of Integration items, especially to the item 31 which had the lowest mean score among the Integration items and was rated "disagree" by 3 EFL learners and "neutral" by other 3 EFL learners (IN – Item 31 – *"Reflection on course content and discussions helped me understand fundamental concepts in this class"*, *M*=4.10, *SD*=1.14). Considering these items, recommendations on sustaining Integration were given below. They were emerged from the analysis of findings and suggestions of the EFL learners and the instructor.

Recommendations on sustaining Integration for the EFL learners

Rarely the EFL learners mentioned the need of any tool that may help them to find connections and relationships in the shared information during in-group discussion of the task sessions. Although they were trying to complete the tasks related to the speaking skill, they preferred to take notes during the combining the ideas shared by group members. It is highly recommended to use tools (e.g., mind maps, wiki, and Google Docs by utilizing web tool) for integration in the environment. They can reflect and link their ideas with other group members' different viewpoints and ideas on the task topic to solve to problem.

5.1.1.4 In terms of Resolution

The mean score of Resolution (*M*=4.17, *SD*=.80) was at satisfactory level and had the highest mean score in the CoI Survey. The highest mean score belonged to the item 33 (RE – Item 33 – *"I have developed solutions to course problems that can be applied in practice."*, *M*=4.24, *SD*=.89) whereas the lowest mean score was item 34 – (RE – Item 34 – *"I can apply the knowledge created in this course to my work or other non-class related activities"*, *M*=4.10, *SD*=1.10). The mean score of item 32 was 4.19 (RE – Item 32 – *"I can describe ways to test and apply the knowledge created in this course."*, *M*=4.19, *SD*=.87).

Moreover, the results of descriptive analysis of the Resolution items in the CoI Survey were showed that:

- Majority of them (71.43%, *N*=15) thought that they can "describe ways to test and apply the knowledge created in this course" while some others (28.57%, *N*=6) was undecided.
- Majority of them (80.95%, *N*=17) thought that they "have developed solutions to course problems that can be applied in practice" while some others (14.29%, *N*=3) was undecided.
- And majority of them (76.19%; *N*=16) also thought that they can "apply the knowledge created in this course to their work or other non-class related activities" while some others (14.29%, *N*=3) not.

The CoI survey results revealed that the highest mean score of Resolution (*M*=4.17, *SD*=.80) was at satisfactory level. There were several reasons for Resolution being highly rated such as they had chance to apply their knowledge into speaking performance in 3D VLE in-class task sessions and performed out-of-class task sessions with group members. Considering these items, recommendations on sustaining Resolution were given below. They were emerged from the analysis of findings and suggestions of the EFL learners and the instructor.

Recommendations on sustaining Resolution for the EFL learners

Speaking tasks can be designed according to the real-life problems. Liu and Yang (2014) suggested that the online discussions should be included real-life experiences in order to enhance cognitive presence. Outcomes of the tasks to the real-life can be discussed. In addition, competitions among the groups can be arranged to find solutions to the real-life problems. They can record their performance about the solution of the problem (e.g., as an assignment) and share them to the other groups by using web tool. They can watch the recorded videos and reflect on the applicability of the solution. Moreover, they can perform the task solution to other groups in real time. Then, they can evaluate and discuss on the application of their solutions. Giving rewards to the best performance can be helpful to motivate the EFL learners.

5.1.2 Factors Influencing Cognitive Presence

In the following section, each factor effect on EFL learners' CP positively or negatively was summarized in Table 5.1. In addition, suggestions were presented in the respect of each factor.

5.1.2.1 Communication - Interaction Tools

EFL learners' asking questions to the instructor and group members about the tasks, and to the technician about technical issues and to asking for help from them via the voice chat (Zoom) were influenced CP positively. Moreover, Zoom's private rooms (breakout rooms) provided EFL learners to help each other easily and ensured that the voice chat was made in a healthy way. At Zoom's private rooms, the group

members shared their ideas and discussed with each other to reach the consensus for the task to be performed without any distraction of the other groups in a period of time. It was also influenced CP positively. Furthermore, this finding was supported with their responses during interviews (See #Q45 for one of EFL learners' response). Similar to EFL learners, the instructor also noted this benefit of Zoom (General Evaluation Form). However, limited time of group meetings in free version of Zoom (40 min) influenced the interaction of subject-tool-community negatively. Moreover, the results of the analysis of task screen-recordings by the observation tool (Emerged Tensions in 3D VLE) were also confirmed this.

It is noteworthy that, voice chat feature of OpenSimulator was disabled in TeachinGrid 3D VLE. Zoom was used instead of in-world voice chat in OpenSimulator to promote verbal communication in real time. It was used as previous studies used or recommended to be used (Cudworth, 2018; Olteanu, Bîzoi, Gorghiu, & Suduc, 2014; Rufer-Bach, 2009, Toth-Cohen & Smith, 2019) as an alternative platform to the in-world voice chat in VWs. In case of limited features of the server, another platform for communication (e.g., Zoom, Skype, etc.) could be used alternatively as in this study.

5.1.2.1.1 Avatar

Avatars enabled subject-tool interaction, going around in the 3D VLE, interacting with the artefacts and tools of the 3D VLE, and performed the tasks with the collaboration of group members. The use of 3D representational capabilities of VWs and interaction by the avatars allow people establish a sense of identity in the 3D VLE (Dalgarno & Lee, 2010).

Participants adopted a new identity by having an avatar with pseudonym, thus grant a certain degree of anonymity (Melchor-Couto, 2018). They expressed that it led carrying out the activities without any prejudices and hesitation opinions on speaking English with other group members related to the task topic. Gül (2016)

found that anonymity was advantageous since it reduces anxiety, helps them feel more comfortable and removes possible prejudices. In addition, EFL learners expressed they more relaxed, so they made less error while speaking in English. A possible explanation of this is argued by Melchor-Couto (2018) stating that a strong relationship between self-efficacy beliefs and the anonymity effect was when foreign language oral interactions are conducted via 3D VLEs. Moreover, EFL learners reported that had fun experience by various games and activities in the 3D VLE through avatars. It led a facilitating effect on EFL learners' obtaining information on the task topic. They not only played games, but also discovered the environment and recognized the tools that helped them learn. In addition, four participants and the instructor agreed on its positive influence on CP.

On the other hand, EFL learners' not able to control avatar movements and disturbance of other avatars by pushing each other or using vehicles during the task session caused distraction in attention during the instructor's giving information about the task topic. Moreover, gathering in front of the information boards in a position of not letting to see the instructions led time consumption in reaching information and completing the tasks. Besides, the three participants and the instructor agreed on its negative influence on CP.

The results showed that the communication-interaction tools influencing on EFL learners' cognitive presence. The study conducted by Reisoğlu (2014) concluded with a similar result stating the tools used for communication-interaction effect on students' cognitive presence. On the other hand, the study by Ozbek et al., (2017) and Omale et al. (2009) put the emphasis on avatars as a factor influencing on social presence.

Considering these factors' effect on CP, responses of the participants to the data collection tools, data analysis of the screen recordings recommendations on sustaining CP were given below:

Since the some of the participants had avatar controlling problems, training of avatar controls can be allocated for a longer period of time (in this case 2 sessions).

The analysis of screen recordings showed this issue. In addition, the one of the EFL learner was reported this by the Inquiry Form (See #Q41 for one of EFL learners' response). In the study of Gül (2016) claimed that any users may find the controlling of avatar movement incredibly overwhelming.

In addition, the organization of numerous enjoyable activities in the first task or the training session can promote awareness and understanding of the tools, vehicles, and areas. Guided tours and/or scavenger hunts can be helpful to discover the environment and tools in 3D VLE (Kapp & O'Driscoll, 2010). Moreover, information boards including the rules for 3D VLE can be added to various areas.

5.1.2.2 Information tools

Using the information board, where the instructions and the requirements of the task were set in an ordered fashion, as a reminder tool ensured positive influence on EFL learners' CP.

Moreover, all participants (5 EFL learners and the instructor) who gave responses to the member check form related to preliminary results of the study also agreed on its mentioned positive influence on CP.

Since the information board contains long texts with a small font and lack of clear information, it influenced the interaction among the group members negatively, unable to get information correctly about the tasks and to execute them properly on time. In this situation, the subject-tool interaction influenced EFL learners' CP negatively. Among 5 EFL learners who gave responses to the member check form related to preliminary results of the study, 3 EFL (David G4, Olivia G1, Lauren G4) learners and the instructor (Eva-The Instructor) agreed on its mentioned negative influences on CP, one of them was undecided (Megan G3 – Member Check), and one of them is disagreed (Margaret G2 – Member Check).

The results showed that the information tools were one of the factors influencing EFL learners' cognitive presence. The study conducted by Reisoğlu (2014)

concluded with a similar result stating the tools used for informing effect on secondary school students' cognitive presence.

Considering these factors' effect on CP and responses of the participants to the data collection tools, recommendations on sustaining CP were given below:

The instruction or information on Information boards must be simply descriptive, with the readable font size and unnecessary specific details omitted. Information boards for the task instructions should be located at each area related to the task or the instructions for each task can be located to each avatar's inventory in a notecard.

5.1.2.3 Navigation Tools

EFL learners' using of Navigation Tools allowed them to discover the areas without losing time and purposeless wandering in the 3D VLE. EFL learners' interaction with Navigations tools influenced their CP positively. In addition, four participants and the instructor agreed on its positive influence on CP. One of the EFL learners shared her opinions on the navigation tools as stated below:

> *This part was also very enjoyable because when we opened the map-option, we could see where it was and when we clicked where we wanted to go, we could go there instantly, which did not waste our time, we were able to complete the tasks quickly. (Megan G3 – Member Check) (Q83).*

Since problems on finding shops, areas, and information boards and difficulties about the lack of direction signs showing the areas caused waste of time and EFL learners' not able to follow the task procedure and not attend to communications (e.g., discussions) in the TeachinGrid environment. In this situation, the subject-tool interaction influenced CP negatively. In addition, five participants and the instructor agreed on its negative influence on CP.Another EFL learner shared her opinions on the navigation tools by the member check form related to preliminary results of the study as stated below:

Yes, there were times when we did not know what to say and we could not find the destination in the task since we had some technical problems or didn't have information on the subject, but none of these caused a deficiency in our motivation. On the contrary, I think it pushes us to help, think, and strive for what we can do (*Margaret G2 – Member Check) (Q84).*

The results showed that the navigation tools were one of the factors influencing EFL learners' cognitive presence. 3D VLEs may be affected by navigation and wayfinding for the efficacy and efficiency of the tasks carried out (Gregory, Lee, & Dalgarno, 2016; Minocha & Hardy, 2016). EFL learners experienced these navigational problems mostly in Tasks 1 and 2 before getting familiar to the 3D VLE. The loss from the course flow caused by time spent during the experience in navigational problems decreased their enthusiasm for engaging in the in-group discussions of the task. Adequate number of navigation tools should be in the environment to guide the avatars.

5.1.2.4 Presentation Tools

Presentation of the information with videos and playing games, by reaching web sources from the environment, contributed to the learning of EFL learners, had positive impact on their engagement on the tasks, increased their curiosity and was helpful for completing the task by providing information and practice in 3D VLE. They influenced EFL learners' CP positively. In addition, five participants and the instructor agreed on its positive influence on CP. One of the EFL learners shared her opinions on the presentation tools by the member check form related to preliminary results of the study as stated below:

I agree with this section because it was fun for me to try to understand by reading, making effort, and trying to perceive information in the virtual environment instead of the teacher's telling (Megan G3 - Member Check) (Q85).

However, EFL learners' preference using a web browser to connect to the Internet instead of using web tool available in 3D VLE while making a search related to the task caused distraction in the flow of preparation of their task performance. It caused not only waste of time in the preparation of group's task performance but also decreased the motivation of the group members. Therefore, EFL learners' CP influenced negatively. In addition, three participants and the instructor agreed on its negative influence on CP.

The results showed that the presentation tools were one of the factors influencing EFL learners' cognitive presence. The study conducted by Omale (2010) concluded with a similar result stating the participants' utilizing the presentation screen in 3D VLE effect on cognitive presence. In the study, 11 undergraduate students used the presentation screen to discuss and express their action plans with other groups. Omale (2010) stated that "This supported cognitive presence in the form of applying new ideas, testing, and defending solutions." (p. 104).

Considering these factors' effect on CP and responses of the participants to the data collection tools, recommendations on sustaining CP were given below:

Presentation tools (e.g., web tool) that avatars can use should be introduced and explained how to use them in detail in training session. In each task session, the instructor could guide the EFL learners on the possible tools that they can be use in the 3D VLE. They could be highlighted or announced to EFL learners by the researcher or the instructor at the beginning of the session. Moreover, to bring different ideas together on the topic, or to take notes during the group discussions, various tools (e.g., web tool) could be used. In addition, the technician monitored and controlled the use of the presentation tool in the 3D VLE in order to prevent problems. It can be ensured that the instructor and EFL learners have experience with them. Sufficient time should be allocated for training about the use of these tools with the help of the technician.

5.1.2.5 Motivation Tools

Majority of the EFL learners were motivated to perform and complete the tasks and did not waste unnecessary time in the 3D VLE with the help of mentioned motivational tools. In addition, rewards given those who complete the tasks well, and feedback given to EFL learners by the instructor at the end of each task performance influenced EFL learners' CP positively. In addition, three participants and the instructor agreed on its positive influence on CP.

However, feedback from the EFL learners did not help, as much as the instructor's feedback did, since they were limited in number and quality. In addition, driving vehicles during another group performance or the instructor's giving information on the task topic led distraction and impact on EFL learners' concentration negatively. Moreover, leaving them to inappropriate locations led the confusion in EFL learners' mind and increase cognitive load. In addition, three participants and the instructor agreed on its negative influence on CP.

The results showed that the motivation tools were one of the factors influencing EFL learners' cognitive presence. The study conducted by Reisoğlu (2014) concluded with a similar result stating the tools used for motivation tools effect on students' cognitive presence. In addition, the study by Kilis (2016) put the emphasis on "motivation" as a factor influencing on cognitive presence, particularly triggering event phase.

Considering these factors' effect on CP and responses of the participants to the data collection tools, recommendations on sustaining CP were given below:

A certain period of time should be allocated at the end of each task performance in order to defend EFL learners' suggestions against other groups and the instructor and to evaluate themselves effectively. Alternatively, or additionally, due to the limited time in synchronous course in 3D VLE and having large number of groups, giving effective and meaningful feedback for each EFL learner could be provided via SLOODLE tools, Moodle or any tool that would be helpful. As in the study,

immediate feedback provided to the groups after each group performance by the instructor and EFL learners, and after that they provided feedback for other groups by writing comments on each group performance in Moodle so that they could evaluate their performance. Moreover, the scripts could be used for the vehicles used by the EFL learners and left inappropriate places, so that they could be returned to their starting locations. This had been tested for a vehicle in the 3D VLE throughout the study and the vehicle went back to its original location without any problems.

5.1.2.6 Technical Infrastructure

Internet Connection problems

Although the Internet connection and the features of the computers in the computer lab met the OpenSimulator platform requirements, unexpected interruption (sessions were expired) on the Internet connection occurred due to the institutional security problems during the task sessions led interruption in the group discussions, waste of time and decrease motivation on task completion. In addition, three participants and the instructor agreed on its negative influence on CP.

Problems caused by the Internet connection and computer hardware were reported in many studies related to 3D VLEs. Kruk (2015) reported that computer hardware and slow, unstable internet connectivity problems could lead to frustration, irritation, or boredom. Moreover, it may affect the quality of 3D VLE experience interaction and sometimes make the environment unusable (Dalgarno et al. 2011, Zhang, 2013). Considering these factors' effect on CP and responses of the participants to the data collection tools, recommendations on sustaining CP were given below:

The Internet infrastructure and the computer to be used must meet OpenSimulator requirements and stable internet connection and computers with high GPU and RAM specifications should be required for an effective 3D virtual experience.

Institutional web security problems in terms of the Internet connection and firewall settings before the implementation of OpenSimulator should be taken into consideration.

Server Problems (Not having enough server memory for TeachinGrid)

When many EFL learners interacted with the scripted items in the environment, it led the avatars move slowly in the environment, stopped the region, and removed the avatars from the environment. This affected them in the process of role playing in task performance negatively also decreased their motivation. In a 3D VLE with a large number of users, the server should have high speed and memory capacity when interactive objects are required to be used.

5.1.2.6.1 EFL learners' Lack of Technical Knowledge

Requirements of VLEs (Technical Complexity of VLEs - TeachinGrid)

Complexities in various processes for the class sessions (e.g., login to 3D VLE, Zoom and Moodle, microphone configuration before connecting into the VW environment) led substantially waste of time due to the nature of the EFL learners' technical skill background and delay on the start time of the task session. Any problems that EFL learners needed to login back led to frustration and decreased their motivation to complete the task. These requirements could be taken into consideration for the 3D VLE sessions.

Configuration of microphones

EFL learners' lack of technical knowledge in configuration of their microphones in all in-class task-sessions caused problems in making their voices heard clearly and led both the EFL learners and the instructor to take time to fix the problem and reduce their motivation. In addition, this led EFL learners' breaking the rule of using only voice chat in 3D VLE (They could use the text chat only in emergency situations for asking for help). Moreover, as in Chen (2016), these difficulties have

created issues with the education process and the collection of data while recording EFL students' oral performances. Although the EFL learners were trained in the configuration of microphones, the microphone problem took place in all in-class task sessions, with most EFL learners. Providing adequate resources for the configuration of microphone (e.g., on information board at Welcome Center) could be helpful to reduce problems. Additional technical staff may be beneficial in 3D VLE, else the course flow could be interrupted.

5.1.2.6.2 Support on Technical Difficulties and Content

As mentioned before, complexities in various processes for the class sessions led substantially waste of time due to the nature of the EFL learners' technical skill background. To perform the tasks in 3D VLE effectively and to achieve the desired learning outcomes, it is important to follow the division of the labor and obey the rules in 3D VLE. These should be taken into consideration seriously by each member of the community. In this context, the researcher as a technician helped EFL learners and the instructor for the technical problems. In addition, the instructor answered the questions related to the content asked by EFL learners and guided for them to complete their task performance successfully. Consistent with Reisoğlu (2016), support on technological support and content assistance had been effective in establishing and sustaining CP. As mentioned before, additional technical staff or instructor who had technical knowledge would be beneficial in 3D VLE, else unsolved technical problems lead to interruption in the course flow and their CP would be influenced negatively.

The results showed that the technical infrastructure, EFL learners' technical knowledge, and support on the technical difficulties and content were one of the factors influencing EFL learners' cognitive presence.

5.1.2.7 Design of 3D Virtual Learning Environment

Designing the environment in a realistic way in accordance with the speaking tasks increased EFL learners' motivation to learn the topics and speak English, their desire to perform the tasks, and to realize that they can use what they learned with the help of speaking tasks in 3D VLE in daily life. In addition, well-designed and game-like environment including enjoyable features and facilities were helpful to reach the outcomes of the course; 'to improve the speaking'. In addition, four participants and the instructor agreed on its positive influence on CP.

However, inappropriate design of the scavenger hunt game including information related to the task topic (in Task 2) for the target EFL learners caused spending long time for searching, frustration, and decrease in motivation to complete the task. As a result, they could not obtain information about it. Moreover, problems while trying to sit down on a chair and looking like sitting position during the task presentation were another technical problem distracted their attention in the performance.In addition, four participants and the instructor agreed on its negative influence on CP.

The results showed that the design of the 3D VLE was one of the factors effects on EFL learners' cognitive presence. The study conducted by Omale et al. (2009) concluded with a similar result stating that "The 3-D space attribute" supported cognitive presence by providing "learning venues, such as small and large-group meeting spaces". Besides, Reisoğlu (2014) claimed that properties of the Second Life platform and realistic environment design affect CP (Reisoğlu, 2014).

5.1.2.8 Speaking Tasks

As previously mentioned, the purposes of the reasoning gap speaking tasks were to engage EFL learners cognitively and support strong CP. By participating in the reasoning gap speaking tasks, EFL learners were expected to achieve better command of English language speaking in various real-life contexts created in 3D

VLE. As suggested by Tolu (2013), speaking tasks based on task-based approach facilitated brainstorming among group members and led collaborative and meaningful learning. In addition, consistent with Reisoğlu (2016), the tasks in 3D VLE positively influenced the CP by increasing their engagement. In addition, four participants and the instructor agreed on its positive influence on CP. One of the EFL learner stated that:

> *I do not agree with this section because trying to speak English both by using the microphone and in the virtual environment was really challenging and stressful. (Megan G3 – Member Check) (Q86)*

However, there were pauses in speech of EFL learners due to the contextual problems. Some of them stated that they did not know what to say, needed time to think. They faced difficulties in bringing ideas together. Moreover, lack of enough sources related to the task topic and ordinary task topic (lack of interesting topic) decreased their motivation to complete the task. In addition, four participants and the instructor agreed on its negative influence on CP.

The results showed that the speaking tasks were one of the factors influencing EFL learners' cognitive presence. The study conducted by Traphagan et al., (2014) concluded with a similar result stating the task (including sub-factors of "task familiarity, nature of task) affect TP, SP and CP.

5.2 Recommendations

5.2.1 Recommendations for Instructional Designers of 3D VLEs

Recommendations on what instructional designers of 3D VLEs should be aware of in 3DLE design were listed below:

- 3DLE Design Principles Model proposed by Kapp & O'Driscoll (2010) was helpful to create constructivist language learning enviornment. The model components could be taken into consideration during the design of such 3D

VLEs. Well-designed and game-like environment including enjoyable features/facilities could be helpful to reach the intended outcomes of the course module.

- The 3D VLE should be designed in a realistic way in accordance with the speaking tasks. By this way, it may increase participants' motivation to learn the topics and speak English, their desire to perform the tasks, and to realize that they can use what they learned with the help of speaking tasks in 3D VLE in daily life.
- Speaking tasks and materials to be used in 3D VLE must be designed carefully to promote critical and reflective thinking. Reasoning gap speaking tasks based on Task-based approach can engage students cognitively and support strong CP. It may lead to achieve better command of English language speaking in various real-life contexts created in 3D VLE. Speaking tasks based on task-based approach, especially reasoning gap speaking tasks can facilitate brainstorming among group members and lead collaborative and meaningful learning
- If the server of the 3D VLE (OpenSimulator) has limited sources and causes communication problems, another platform (e.g., Zoom, Skype, etc.) for verbal communication in real time could be used instead of in-world voice chat.
- The Internet infrastructure and the computer to be used must meet the requirements of the 3D VLEs (e.g., OpenSimulator) and stable internet connection and computers with high GPU and RAM specifications should be required for an effective 3D virtual experience. Before the implementation of 3D VLEs, Institutional web security problems in terms of the Internet connection and firewall settings, should be taken into consideration (Gül, 2016). In addition, in a 3D VLE with a large number of users, the server should have high speed and memory capacity when interactive objects are required to be used.

- In order to avoid major concerns about privacy, misconduct, inappropriate content, or other risks come from the outside the world, which may affect the course or discussion flow, a standalone server can be used for the development of 3D VLE, or access to the discussion areas can be restricted for other avatars.
- Training sessions should cover all important aspects of the environment such as how to control avatars, how to use or benefit from tools in 3D VLE (e.g., communication tools, navigation tools). Training of avatar controls should be allocated for a period of time until the participants have sufficient knowledge.
- Adequate number of navigation tools should be available in the 3D VLE to guide the avatars.
- The organization of numerous enjoyable activities in the training session or first task can promote participants' awareness and understanding of the tools, vehicles, and areas. Guided tours and/or scavenger hunts can be helpful to discover them.
- Schedule for the activities to be conducted can be shown in information boards. This may be helpful for their self-regulation.
- Information boards including the rules for the environment can be added to various areas to remind the rules to students.
- The instruction or information on Information boards must be simply descriptive, with the readable font size and unnecessary specific details omitted. Information boards for the task instructions should be located at each area related to the task or the instructions for each task can be located to each avatar's inventory in a notecard.
- Gestures and animation opportunities that can be used in the tasks should be provided for better sense of being.
- Adequate tools that providing participants sources (multimedia materials, web tools, notecards including additional information, etc.) related to the task topic should be enabled in the environment.

- Various tools (e.g., web tool) that may be helpful to bring different ideas together on the topic, take notes during the group discussions, or sharing sources can be enabled or developed for the environment.
- In the environment, there should be free time for social activities that participants contact with others, speak only in English and spend time together should be scheduled (for social presence). In addition, this may also allow them to alleviate their fear or anxiety about speaking English, if they have.
- A certain period of time should be allocated at the end of each task performance in order to defend participants' suggestions against other groups and the instructor and to evaluate themselves effectively.
- SLOODLE tools or Moodle could be helpful to students' and instructor's giving effective and meaningful feedback for each student in limited time of synchronous course with a large number of groups. As in the study, immediate feedback provided to the groups after each group performance by the instructor and EFL learners, and after that they provided feedback for other groups by writing comments on each group performance in Moodle so that they could evaluate their performance.
- Other assessment types/activities/tools (e.g., quizzes, contests) can be integrated into the environment. Additionally, SLOODLE provides Quiz Chair tool for exams.
- Scripted vehicles can be enabled in 3D VLE instead of the vehicles used and left inappropriate places, so that they could be went back to its original location without any problems.

5.2.2 Recommendations for Language Instructor of 3D VLEs

Recommendations on what the practitioners or language instructors of 3D VLEs should be aware of in 3D VLE for planning a language skill course were listed below:

- Collaboration with the instructional designer and technician is essential and highly recommended to create and sustain effective educational process in 3D VLE.
- ‘Code of Conduct Form’ should be established to govern all participants behavior in the 3D VLE including information about the island, General Behavior, Avatar Guidelines, Privacy Policy, Photography & Videography Policy. In addition, the rules in 3D VLE and responsibilities of participants should be announced in a clear way at the beginning of the course. These can be effective in continuing the task cycle (educational process or discussions among participants on the task topic) in a balanced manner.
- In each task session, the instructor can guide the students on the possible tools that they can be use in the 3D VLE. They can be highlighted or announced to them at the beginning of the session.
- A certain period of time should be allocated at the end of each task performance in order to defend participants’ suggestions against other groups and the instructor and to evaluate themselves effectively. Alternatively, or additionally, due to the limited time in synchronous course in 3D VLE and having large number of groups, giving effective and meaningful feedback for each participant could be provided via SLOODLE tools, Moodle or any tool that would be helpful. As in the study, immediate feedback provided to the groups after each group performance by the instructor and EFL learners, and after that they provided feedback for other groups by writing comments on each group performance in Moodle so that they could evaluate their performance.
- Lack of enough sources related to the task topic and ordinary task topic (lack of interesting topic) decreased their motivation to complete the task.

5.3 Suggestions for Further Research

In this research study, factors influencing CP of EFL learners when they engage in reasoning-gap activities in a synchronous online English-speaking module built in OpenSimulator with SLOODLE within the framework of Activity Theory were explored. Further research can be conducted for the exploration of factors influencing other presences (TP, SP). Moreover, the current research study was adopted a holistic single case design. Embedded single case or multiple case research can provide new insights to the phenomenon studied. In addition, in the 3D VLE, EFL learners engaged in activities with synchronous online discussions. Asynchronous online discussions can be developed for 3D VLE. Influencing factors can be explored from the data derived from them.

"Emerged Tensions in 3D VLE"- Form was useful tool to observe the tensions, contradictions, and problems in which phases of CP occurred during the TeachinGrid sessions. It could be helpful for the researchers for such research studies.

The English-speaking module included many opportunities for EFL learners' interaction with the environment (tools), however, these were limited for the group task performance of EFL learners. In this study, although reflection tools and assessment tools were included in the 3D VLE, they did not use widely and adequately for the educational purposes. They can be another potential factor that may affect CP. Studies in which learners using the types of tools may result in discovering another factors.

The CoI Survey results showed that CP and SP scores had higher standard deviation. It implies that other factors might affect these outcomes. Since the participants who enrolled in the module consisted of freshman, sophomores and juniors, the year of study may significantly impact on the standard deviation of the cognitive presence. This kind of participant selection type, Criterion based selection, may emergent impact on the findings. The groups were formed by

randomly consisted of 3-4 EFL learners. They were randomly assigned to each group. The year of study should be considered in the process of organization of the groups.

A course on various language skills (receptive/productive skills) to be taught in 3D VLEs can be designed by using CoI framework as an instructional design framework and learning experience can be evaluated by the CoI Survey, CoI coding schemes and/or MUVEEET Form. In addition, the effect of various methods and approaches (e.g., Content Based Instruction, etc.) of ELT can be also evaluated. Moreover, different pedagogical models (e.g., flipped classroom) can be applied to the course.

Various communicative activities/tasks can be applied in a 3D VLE synchronously and/or asynchronously and the result can be evaluated.

The course materials can be designed and developed by applying different language teaching techniques and then examined differences by using the CoI Survey, CoI coding schemes or both.

Relationship between each element of CoI and various variables, such as anxiety, willingness to communicate, online EFL achievement, etc. and can be examined.

To conclude that, as stated by Burgess et al. (2010), the need to measure learning in design and development of effective and engaging 3D VLEs by using CoI framework will continue to increase as they become more widely used in language education to deliver instruction.

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APPENDICES

A. Checklist for Evaluating Tasks

*"Checklist for Evaluating Tasks" modified from Nunan (2004)'s "Checklist for evaluating communicative tasks"

Checklist for Evaluating Tasks

Task Number: _____

Gender : ☐ Female ☐ Male

Age : _____

Last Degree Earned in English Language Teaching:

☐ Bachelor's Degree ☐ Master's Degree ☐ PhD Degree ☐ Other _____

Years of Teaching Experience: _____

GOALS AND RATIONALE

1. "To what extent is the goal or goals of the task obvious a) to you b) to your students?"
2. "Is the task appropriate to the learners' proficiency level?"
3. "To what extent does the task reflect a real-world or pedagogic rationale? Is this appropriate? "
4. "Does the task encourage learners to apply classroom learning to the real world?"
5. "What beliefs about the nature of language and learning are inherent in the task?"
6. "Is the task likely to be interesting and motivating to the students?"

INPUT

1. "What form does the input take?"

2. “Is it authentic? If not, is it appropriate to the goal of the task?”

PROCEDURES

1. “Are the procedures appropriate to the communicative goals of the task? If not, can they be modified to make them more appropriate? “
2. “Is the task designed to stimulate students to use bottom-up or top-down processing skills?”
3. “Is there an information gap or problem which might prompt a negotiation of meaning?”
4. “Are the procedures appropriate to the input data?”
5. “Are the procedures designed in a way which will allow learners to communicate and cooperate in groups?”
6. “Is there a learning strategies dimension, and is this made explicit to the learners?”
7. “Is there a focus on form aspect and, if so, how is this realized?”

ROLES AND SETTINGS

1. “What learner and teacher roles are inherent in the task? Are they appropriate?”
2. “What levels of complexity are there in the classroom organization implicit in the task?”
3. “Is the setting confined to the classroom?”

IMPLEMENTATION

1. “Does the task actually engage the learners’ interests?”
2. “Do the procedures prompt genuine communicative interaction among students?”
3. “To what extent are learners encouraged to negotiate meaning? “
4. “Does anything unexpected occur as the task is being carried out? “
5. “What type of language is actually stimulated by the tasks?”
6. “Is this different from what might have been predicted?”

GRADING AND INTEGRATION

1. "Is the task at the appropriate level of difficulty for the students? If not, is there any way in which the task might be modified in order to make it either easier or more challenging?"
2. "Is the task so structured that it can be undertaken at different levels of difficulty?"
3. "What are the principles upon which the tasks are sequenced?"
4. "Do tasks exhibit the 'task continuity' principle?"
5. "Are a range of macroskills integrated into the sequence of tasks? If not, can you think of ways in which they might be integrated?"
6. "At the level of the unit or lesson, are communicative tasks integrated with other activities and exercises designed to provide learners with mastery of the linguistic system? If not, are there ways in which such activities might be introduced?"
7. "Do the tasks incorporate exercises in learning-how-to-learn? If not, are there ways in which such exercises might be introduced?"

ASSESSMENT AND EVALUATION

1. "What means exist for the teacher to determine how successfully the learners have performed?"
2. "Does the task have built into it some means whereby learners might judge how well they have performed?"
3. "Is the task realistic in terms of the resources and teacher expertise it demands?"

Note: Adapted from (Nunan,2004, pp.174-175)

B. Speaking Tasks – Guidelines for EFL learners

TASK 1 – DEPARTMENT STORES	
General Information	**Instructions**
PRE-TASK	Follow the instructions listed below:
Duration:	**Step 1. Test Your Equipment and Preparation**
30 min	**1.** Check your headphones & be sure that microphone is working properly.
	2. Connect to the Zoom and TeachinGrid.
Activity Type:	**3.** Go to the "Social Area" and take a sit & please wait for the instructor's instruction.
Individual	*If you have problems about technology, ask for help from the researcher.
	Step 2. Department Stores
Location:	**1.** Check the board covering "Oral Performance Evaluation Rubric" near the "Social Area", before the speaking activity.
Social Area	**2.** Listen to the instructor carefully and attend the conversations as much as possible.
	3. Communicate as much as possible in the environment.
	Be clear and precise during the conversations.

TASK CYCLE	Follow the instructions listed below:
Duration:	Step 1. Information (Role-Play)
60 min	1. Listen to the instructor carefully. You will create role-play conversations in the departments of the shopping center (Min. 3 min, Max. 5 min conversation).
Activity Type:	You can also get the role play information by the information board ("Task 1 Role Play Instruction") near the
Group	Social Area.
	i. Store Manager:
Location:	- There are many challenges facing many shopping malls. There is a decline in-your store sale.
Various Areas	- Think about "What should you do to make your store more attractive as a store manager?"
	- Add some materials to your store. You can get them from the Material Store. Make effective changes in your store.
	ii. Customer:
	-Think about what you want to buy. Ask the details such as Size-in stock-delivery-gift wrap-material-how long is it guaranteed? -how to pay? cost etc.
	iii. Shop Assistant:
	-Help the customer to decide and/or answer his/her questions.

	iv. Reporter: -After changes made by the store manager, there is an increase in the store sales, and it gets the attention of the media. -As a reporter, ask the details (cost, etc.) what the store manager changed at the store to make the store more attractive. Record the role play session by a screen capturing software called Camtasia. -You first record the store manager conversation then the shopping conversation. 2. Check "Oral Performance Evaluation Rubric" before the roleplay. 3. You will vote other groups at the end of the role plays. The best performed group who is voted by the students will get extra 5 points.
	Step 2. Role Play-Planning 1. You will work in groups of 3-4. 2. Groups will be assigned into shops randomly by clicking the object called as "Assign a Shop" around the television. Choose one of your group members and wait for the instructor's invitation to use the object. 3. You can decide which the role you will assign. The roles: Store manager, Reporter, Shop Assistant, Customer. 4. You should focus on signs at stores and use various store signs in the conversations.

	5. You will have 15 minutes for planning, discussion & practice.
	Step 3. Role Play 1. Perform the role play (Min. 3 min, Max. 5 min for each conversation) in front of other groups. 2. Offer comments and give suggestion to other groups at the end of each role play.
POST-TASK **Duration:** 10 min **Activity Type:** Individual **Location:** Social Area	Step 1. Evaluation 1. After role play, go to the "Social Area" to vote for the best performed group. 2. Click on SLOODLE Choice near the "Social Area" (Named as Group 1-Group 2- Group 3-Group 4-Group 5-Group 6). You are not allowed to vote your own group. * The best performed group who is voted by the students will get extra 5 points.

TASK 2 – PHOBIAS	
General Information	**Instructions**
PRE-TASK	Follow the instructions listed below:
Duration:	**Step 1. Test Your Equipment and Preparation**
30 min	**1.** Check your headphones & be sure that microphone is working properly.
	2. Connect to the Zoom and TeachinGrid.
Activity Type:	**3.** Go to the "Social Area" and take a sit & please wait for the instructor's instruction.
Individual	*If you have problems about technology, ask for help from the researcher.
	Step 2. Warm-up
Location:	**1.** Listen to the instructor carefully and attend the conversations as much as possible.
Social Area	**2.** Communicate as much as possible in the environment.
	3. Be clear and precise during the conversations.
	Step 3. Scavenger Hunt
	1. Listen to the instructor carefully. You will work in groups of 3-4 (same groups as before)
	You can also get the scavenger hunt information by the information board ("Task 2 Scavenger Hunt").
	2. You will talk about the phobias mentioned on the notecards.

TASK 2 – PHOBIAS	
General Information	**Instructions**
TASK CYCLE	Follow the instructions listed below:
Duration:	**Step 1. Information (Role-Play)**
60 min	**1.** You will watch a weird phobia news on the "Social Area". Watch it carefully.
	2. Listen to the instructor carefully. You will create a weird phobia news (Min. 3 min, Max. 5 min conversation).
Activity Type:	You can also get the role play information by the information board ("Task 2 Role Play Information").
Group	**3.** Check "Oral Performance Evaluation Rubric" before the roleplay.
	4. You will vote other groups at the end of the role plays. The best performed group who is voted by the students
Location:	will get extra 5 points.
Various Areas	**Step 2. Role Play-Planning**
	1. You will work in groups of 3-4 (same groups as before)
	2. You can decide which the role you will assign.
	You will create a weird phobia news (Min. 3 min, Max. 5 min conversation) and play the roles of;
	i. Reporter: Ask what the person having the weird phobia suffer from?
	ii. Person having the weird phobia: Explain the difficulties you faced
	iii. Friend of the person with the phobia: Explain the difficulties you faced while you are with the person

TASK 2 – PHOBIAS	
General Information	**Instructions**
	having the weird phobia **iv. Relative of the person with the phobia:** Explain the difficulties you faced while you are with the person having the weird phobia **3.** You will have 15 minutes for planning, discussion & practice.
	Step 3. Role Play **1.** Perform the role play (Min. 3 min, Max. 5 min for each conversation) in front of other groups. **2.** Offer comments and give suggestion to other groups at the end of each role play.
POST-TASK **Duration:** 10 min **Activity Type:** Individual **Location:** Social Area	**Step 1. Evaluation** **1.** After role play, go to the "Social Area" to vote for the best performed group. **2.** Click on SLOODLE Choice near the "Social Area" (Named as Group 1-Group 2- Group 3-Group 4-Group 5-Group 6). You are not allowed to vote your own group. * The best performed group who is voted by the students will get extra 5 points.

TASK 3 – RAILWAY STATION OF FUTURE	
General Information	**Instructions**
PRE-TASK	Follow the instructions listed below:
Duration:	**Step 1. Test Your Equipment and Preparation**
30 min	**1.** Check your headphones & be sure that microphone is working properly.
	2. Connect to the Zoom and TeachinGrid.
Activity Type:	**3.** Go to the "Presentation Area" and take a sit & please wait for the instructor's instruction.
Individual	*If you have problems about technology, ask for help from the researcher.
	Step 2. Railway Stations
Location:	**1.** Check the board covering "Oral Performance Evaluation Rubric" near the "Social Area", before the speaking activity.
Presentation Area	
	2. Listen to the instructor carefully and attend the conversations as much as possible.
	3. Communicate as much as possible in the environment.
	4. Be clear and precise during the conversations.
	Step 3. Features of Railway Stations-Put into order
	1. Listen to the instructor carefully.
	2. You will work in groups of 3-4 (same groups as before)

TASK 3 – RAILWAY STATION OF FUTURE	
General Information	**Instructions**
	3. What do you want from a railway station? Put these features in order, for your group. (1=most important). You have 5 minutes to complete. **i.** A beautiful building **ii.** A convenient situation near the city center **iii.** Good shops and restaurants **iv.** Modern and efficient service **v.** A wide variety of destinations **b.** Compare your answers with the class.
TASK CYCLE **Duration:** 60 min **Activity Type:** Group	Follow the instructions listed below: **Step 1. Information (Presentation)** **1.** Listen to the instructor carefully. You will create an oral presentation about "Railway Station-2030" considering its location, physical appearance, facilities, etc. for the "Railway Station-2030 Competition". (Min. 3 min, Max. 5 min presentation). **2.** You can also get the presentation information by the information board ("Task 3 Presentation Information"). **3.** Check "Oral Performance Evaluation Rubric" before the roleplay.

TASK 3 – RAILWAY STATION OF FUTURE	
General Information	**Instructions**
Location: Presentation Area	**4.** You will vote other groups at the end of the presentations. The best performed group who is voted by the students will get extra 5 points.
	Step 2. Presentation-Planning **1.** You will work in groups of 3-4 (same groups as before) **2.** You can decide which part of the presentation you will talk. Each group member should talk equal time. **i. Location:** Getting to and from the station **ii. Physical Appearance:** Describe the physical appearance of the "Railway Station-2030" **iii. Facilities:** Ticket Buying and collection, shops, waiting rooms, mobility aids, etc. **iv. Summary:** Summary of your "Railway Station-2030". Convince your audience that your "Railway Station-2030" is the best. **3.** Prepare a well-planned presentation. **4.** You can prepare it with your group members wherever you want in the environment. **5.** You will have 15 minutes for planning, discussion & practice.
	Step 3. Presentation **1.** Make the presentation (Min. 3 min, Max. 5 min) in front of other groups at the presentation area.

TASK 3 – RAILWAY STATION OF FUTURE	
General Information	**Instructions**
	2. Offer comments and give suggestion to other groups at the end of each presentation.
POST-TASK	**Step 1. Evaluation**
Duration:	**1.** After presentation, go to the "Social Area" to vote for the best performed group.
10 min	**2.** Click on SLOODLE Choice near the "Social Area" (Named as Group 1-Group 2- Group 3-Group 4-Group 5-
Activity Type:	Group 6). You are not allowed to vote your own group.
Individual	* The best performed group who is voted by the students will get extra 5 points.
Location:	
Social Area	

TASK 4 – FAKE OR REAL NEWS	
General Information	**Instructions**
PRE-TASK	Follow the instructions listed below:
Duration:	**Step 1. Test Your Equipment and Preparation**
30 min	**1.** Check your headphones & be sure that microphone is working properly.
	2. Connect to the Zoom and TeachinGrid.
Activity Type:	**3.** Go to the "Presentation Area" and take a sit & please wait for the instructor's instruction.
Individual	*If you have problems about technology, ask for help from the researcher.
	Step 2. Newspaper
Location:	**1.** Check the board covering "Oral Performance Evaluation Rubric" near the "Social Area", before the speaking activity.
Presentation Area	
	2. Listen to the instructor carefully and attend the conversations as much as possible.
	3. Communicate as much as possible in the environment.
	4. Be clear and precise during the conversations.
	Step 3. How to spot fake news?
	1. Listen to the instructor carefully.
	2. You will work in groups of 3-4 (same groups as before)

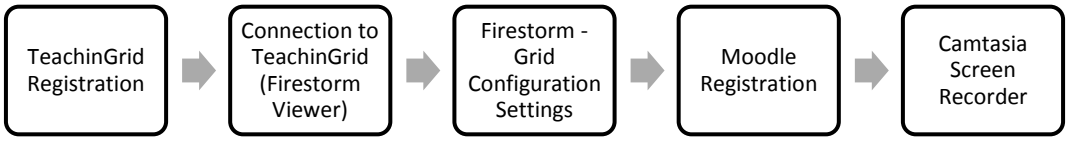
TASK 4 – FAKE OR REAL NEWS	
General Information	**Instructions**
	3. You will use the web tool at the "Presentation Area" to create a mind map together on how to spot fake news.
	Step 4. Play fake news game **1.** Play the fake or real news game: "Factitious" at the "Presentation Area". **2.** Choose College level at the game.
TASK-CYCLE	Follow the instructions listed below:
Duration: 60 min	**Step 1. Information (Presentation)** **1.** Listen to the instructor carefully. You will create an oral presentation about "fake or real news for the online newspaper with the headline" by using one of sample templates (Min. 3 min, Max. 5 min presentation).
Activity Type: Group	"Work in groups to create a fake or real news considering the infographic made by IFLA(International Federation of Library Associations and Institutions) given on the information board which includes eight simple steps (based on FactCheck.org's 2016 article How to Spot Fake News) to discover the verifiability of a given news. Be prepared to explain it to the other groups at the Presentation Area."
Location: Presentation Area	**2.** You can take notes on notecards or prepare the news by using PowerPoint and save it as a JPG format. If it is prepared as a JPG format, it should be sent to the researcher. teachingridofficial@gmail.com. **3.** You can prepare your fake or real news wherever you want in TeachinGrid, but far away from each group.

TASK 4 – FAKE OR REAL NEWS	
General Information	**Instructions**
	4. Each group member should contribute on the creation of the news equally. **5.** Each group introduces the news and presented by all the group members. **6.** You can also get the presentation information by the information board ("Task 4 Presentation Information"). **7.** Check "Oral Performance Evaluation Rubric" before the roleplay. **8.** You will vote other groups at the end of the presentations. The best performed group who is voted by the students will get extra 5 points.
	Step 2. Presentation-Planning **1.** You will work in groups of 3-4 (same groups as before) **2.** You can decide on which part of the presentation you will add your contribution and the type of the news and its being fake or real. Each group member should talk equal time. **i. Photo:** Photos can be funny, ridiculous, weird, strange. **ii. Topic:** Topics can be funny, ridiculous, weird, strange. **iii. Audience:** Whomever you want. **iv. Presentation:** Use one of the sample templates. **3.** Prepare a well-planned presentation.

TASK 4 – FAKE OR REAL NEWS	
General Information	**Instructions**
	4. You can prepare it with your group members wherever you want in the environment. **5.** You will have 15 minutes for planning, discussion & practice.
	Step 3. Presentation **1.** Make the presentation (Min. 3 min, Max. 5 min) in front of other groups at the presentation area. **2.** Offer comments and give suggestion to other groups at the end of each presentation.
POST-TASK **Duration:** 10 min **Activity Type:** Individual **Location:** Social Area	**Step 1. Evaluation** **1.** After presentation, go to the "Social Area" to vote for the best performed group. **2.** Click on SLOODLE Choice near the "Social Area" (Named as Group 1-Group 2- Group 3-Group 4-Group 5-Group 6). You are not allowed to vote your own group. * The best performed group who is voted by the students will get extra 5 points.

C. First Steps on TeachinGrid - A Guideline for the Participants of 3D VLE

Completion Time: 50 min

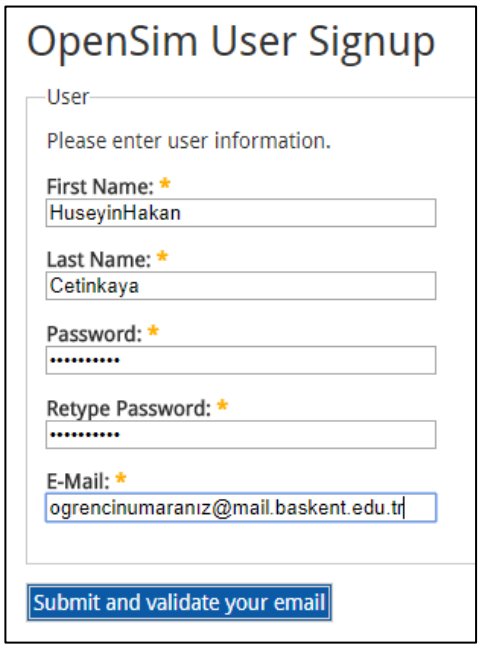


1) TeachinGrid Registration

- Click on the link below for TeachinGrid Registration. You can see the sample registration below.

http://www.dreamlandmetaverse.com/signup2/TeachinGrid

*****First Name & Last Name: Only alphabetic, numeric and underscore or dash characters are allowed.



*A request for confirmation will be sent to your e-mail address. Please wait a few minutes. Check your spam folder.

*If you receive a message as “You have just used a one-time email confirmation link. Your form submission has been processed.”, check your email account to confirm your email. Click the link or paste the link into the browser address bar and then you will get the message “Register new user succeeded.” (No need to fill the form again, just go to the next step)

- If you forget your password, click on the link below to reset your password http://www.dreamlandmetaverse.com/reset/TeachinGrid

2) Connection to TeachinGrid

- To connect to TeachinGrid, you must download the latest Firestorm viewer, that you can download from here:

  http://www.firestormviewer.org/downloads/
- Choose your operating system Windows-Mac or Linux.
  - Choose “For SL & Opensim 64bit" or "For SL & Opensim 32bit”
  - Click on the download button.

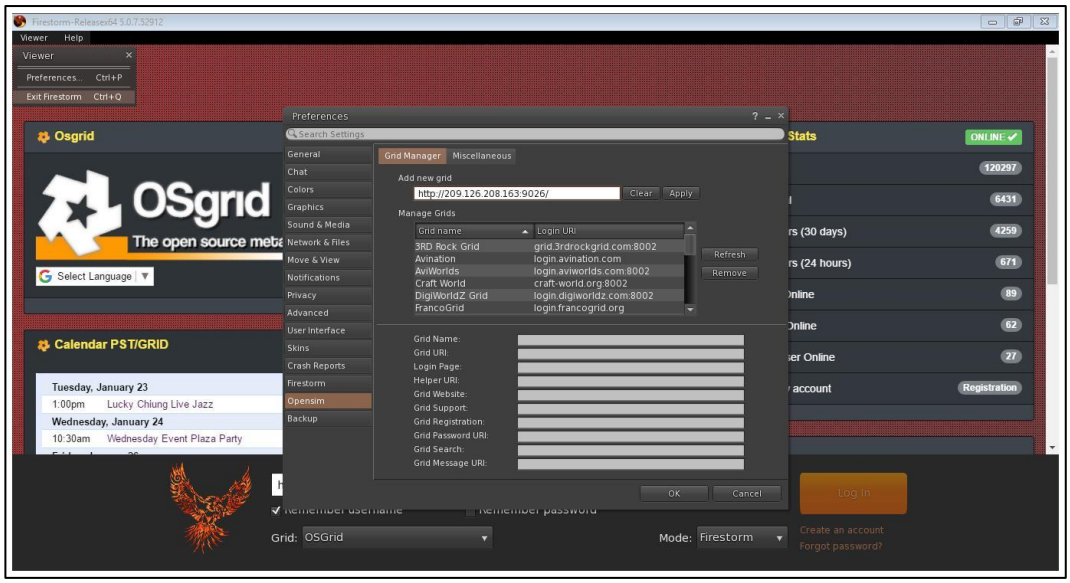
3) Firestorm – Grid Configuration Settings

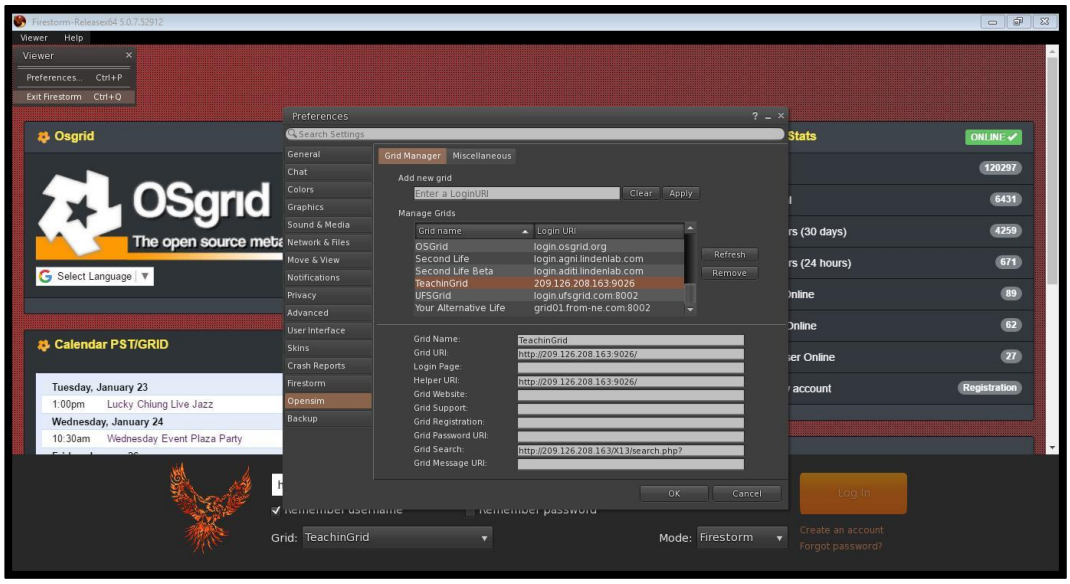
Follow the steps below to configure the Firestorm View to access to TeachinGrid.

Step 1. Click on **Viewer > Preferences** to open the preferences window.

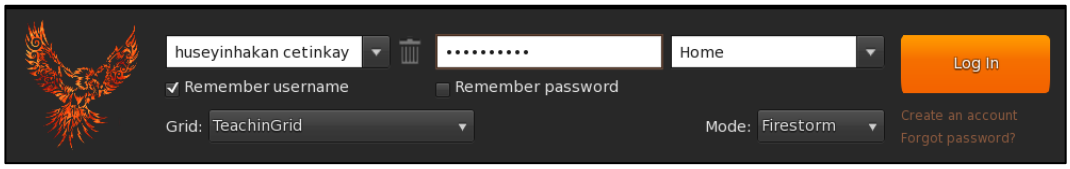
Step 2. Select the **Opensim** Tab in the **Preferences** Window. Add the TeachinGrid URI (given below) in the Add New Grid field and press Apply. Close the preferences window.

The TeachinGrid URI is Login URI: http://209.126.208.163:9026/

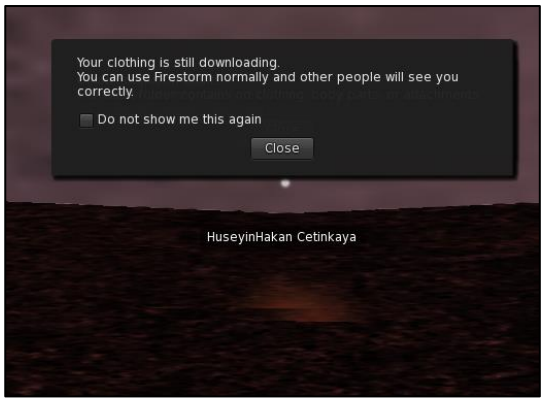




Step 3. Ensure you have TeachinGrid selected in the Grid Manager Menu. Insert your username and password and login.

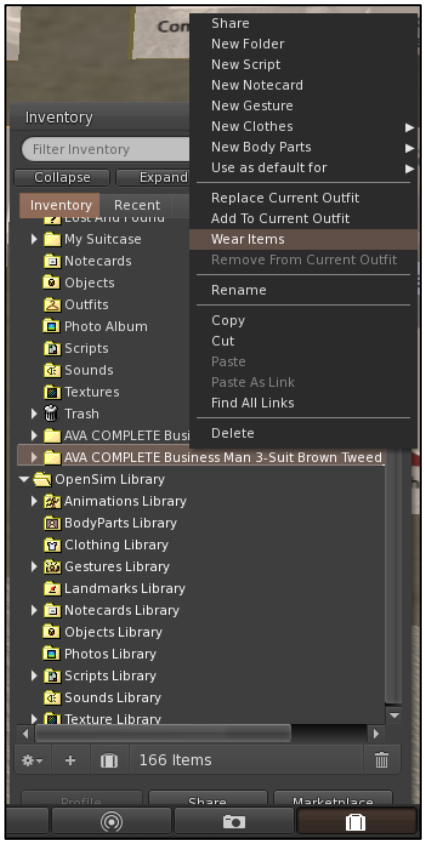


Step 4. When you login into TeachinGrid, your clothing will be still downloading. Just click on Close.



Step 5. You can walk around – use the arrow keys on your keyboard to walk. UP ARROW to walk forward. DOWN ARROW to walk backward. RIGHT and LEFT ARROWS to turn. Go to the Welcome Area / Center Point and then click on the avatar which you want to look like. You will buy for free. Click on Buy button.

Step 6. New clothes and body parts will be downloaded into your inventory (suitcase icon). You can see your inventory on the menu (right down). Find the folder named as “AVA COMPLETE ...” then right click on the folder and choose “Wear Items”.



Step 7. If you look like the avatar you choose, it is ok.

4) Moodle Registration

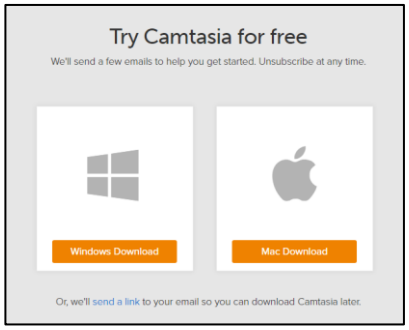
To register in Moodle, touch to “SLOODLE 2.0 Registration Enrollment Booth” tool near Welcome Area or click on the link (37.148.210.90/moodle). Use your “Başkent University student e-mail address” to register. Choose the course named as “Speaking Tasks in a 3D Virtual Learning Environment” and the Course Enrolment Key is “teachb2”.

5) Camtasia Screen Recorder

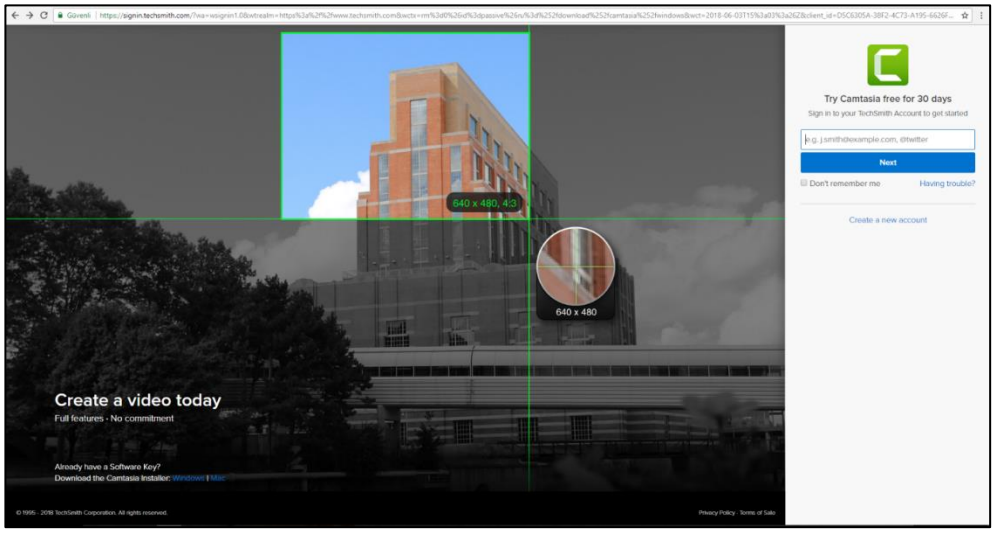
While you are doing the tasks, screen capture is required. Download the free trial version of screen recorder software:

https://www.techsmith.com/download/camtasia/

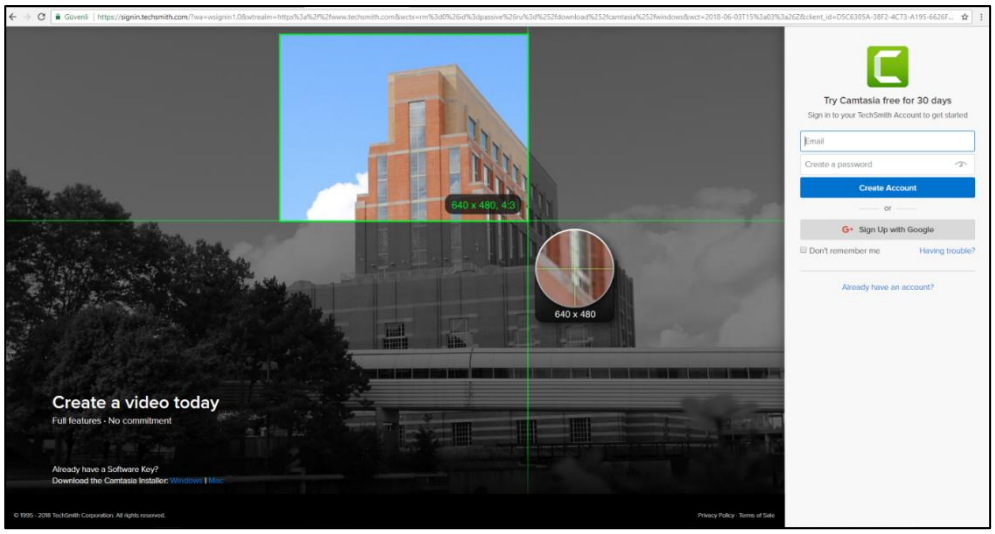
Choose your operating system Windows or Mac and download.



Click on “Create a new account”.



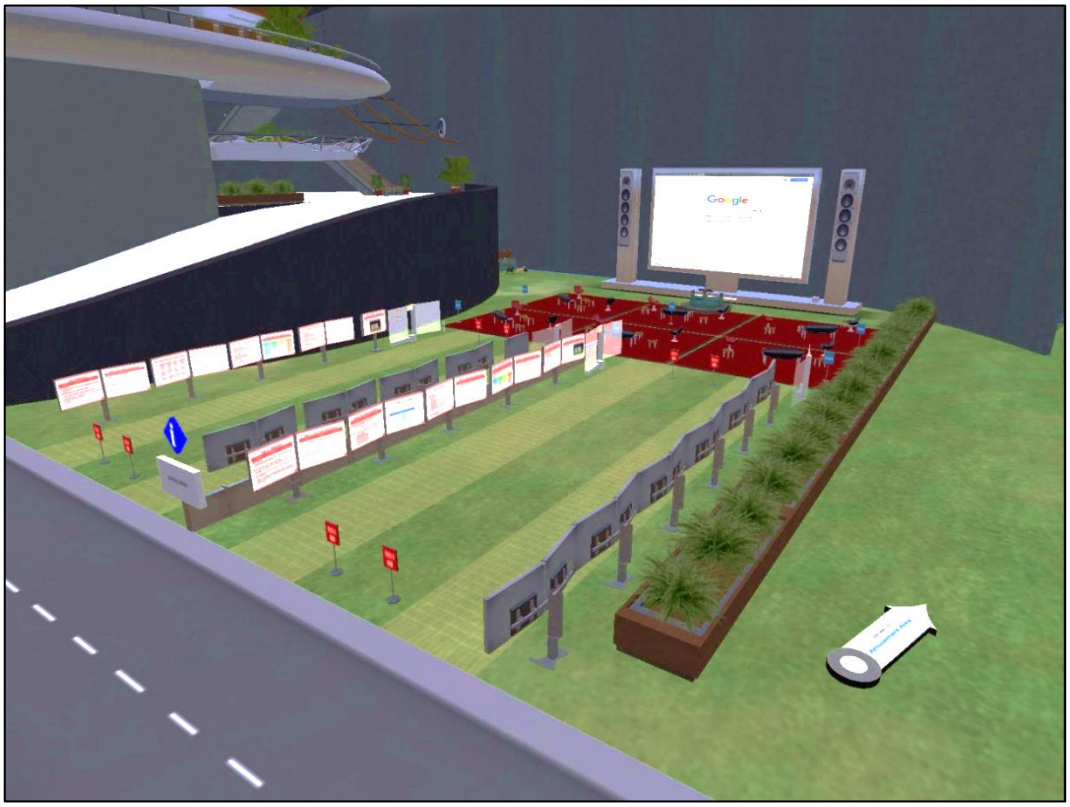
After creating the account, download the free trial version.

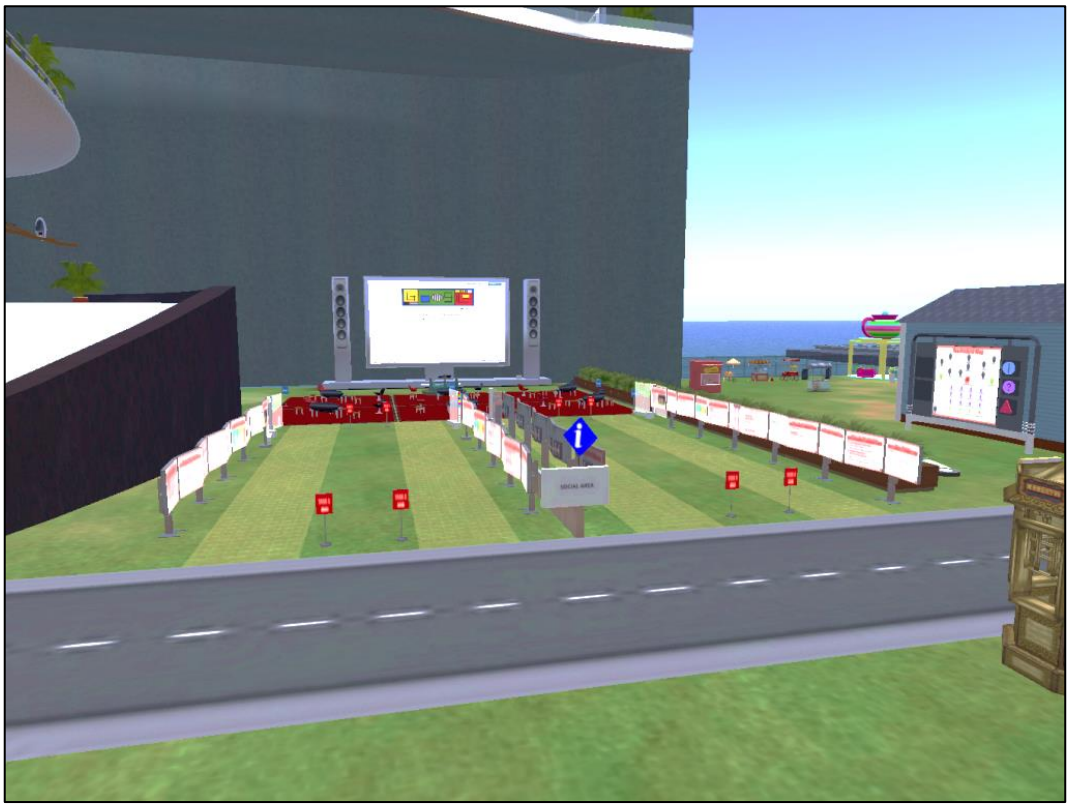

640 x 480, 4:3
640 x 480
Create a video today
Full features - No commitment
Already have a Software Key?
Download the Camtasia Installer: Windows | Mac
Try Camtasia free for 30 days
Sign in to your TechSmith Account to get started
Email
Create a password
Create Account
or
Sign Up with Google
Don't remember me
Having trouble?
Already have an account?
Privacy Policy · Terms of Sale

D. Views from TeachinGrid 3D VLE

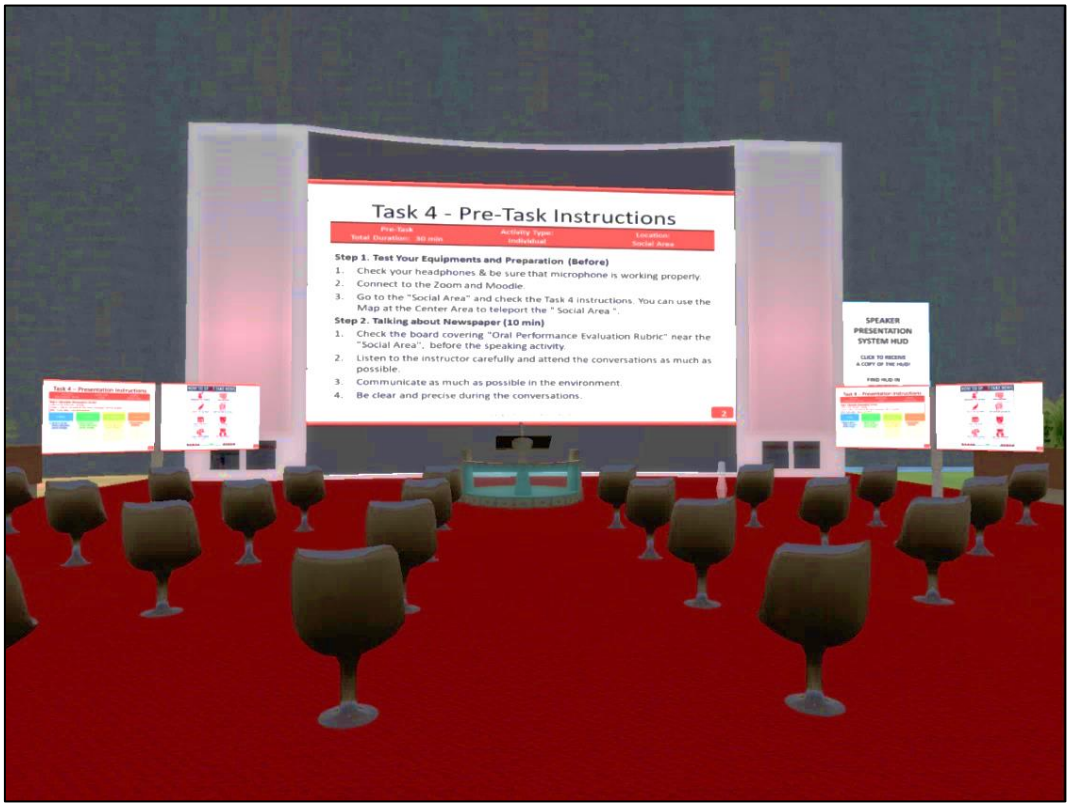
- **Welcome Area:**

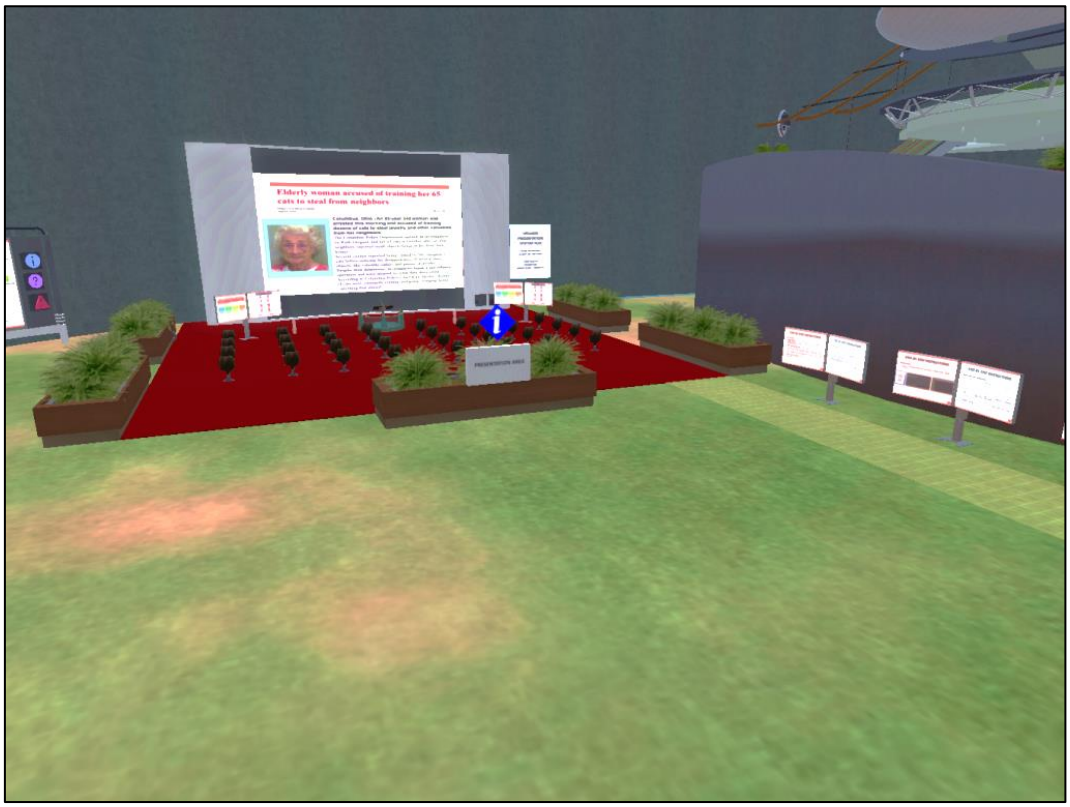
- **Social Area:**



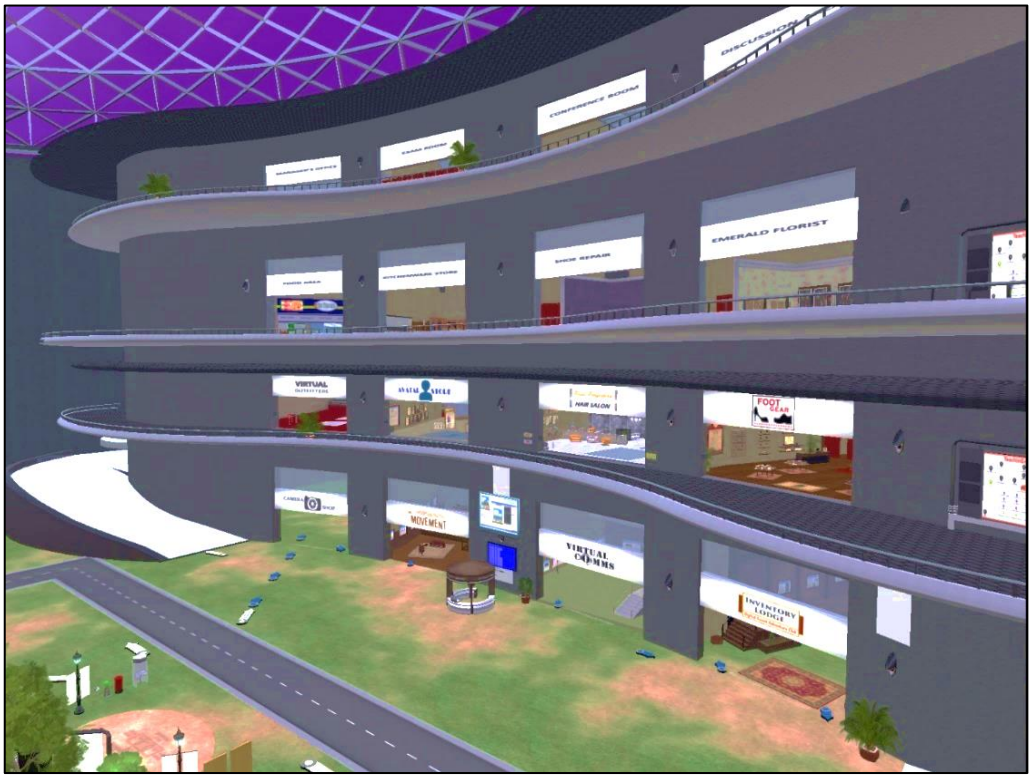


- **Presentation Area:**





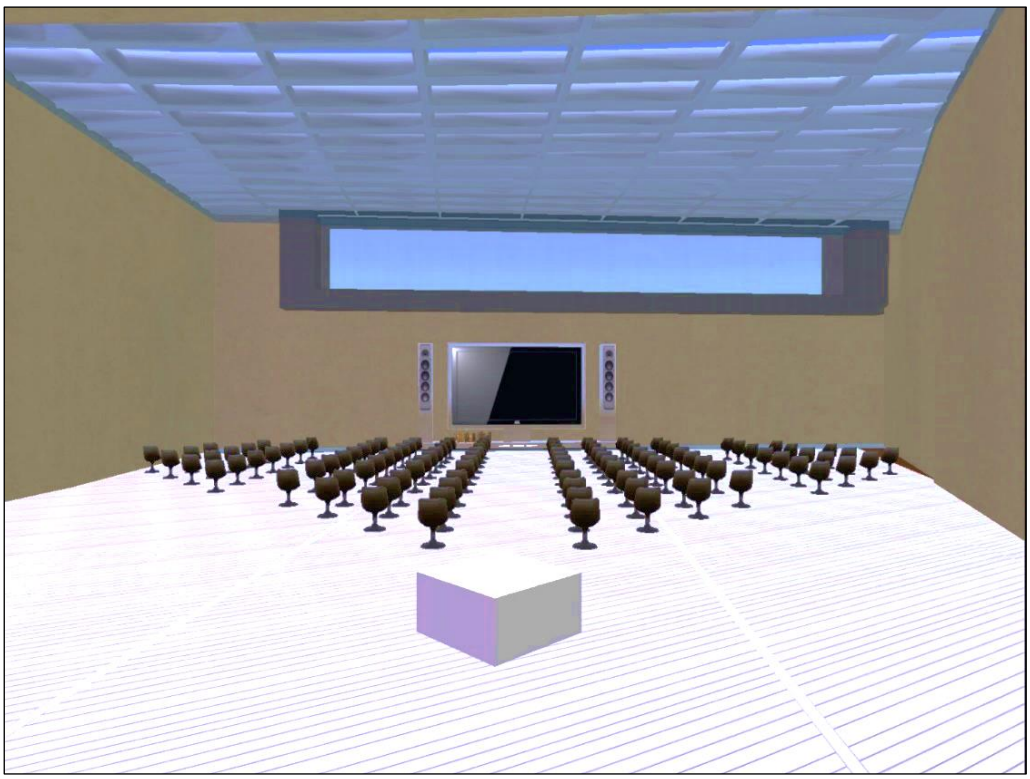
- **Shopping Center:**



- **Train Station:**

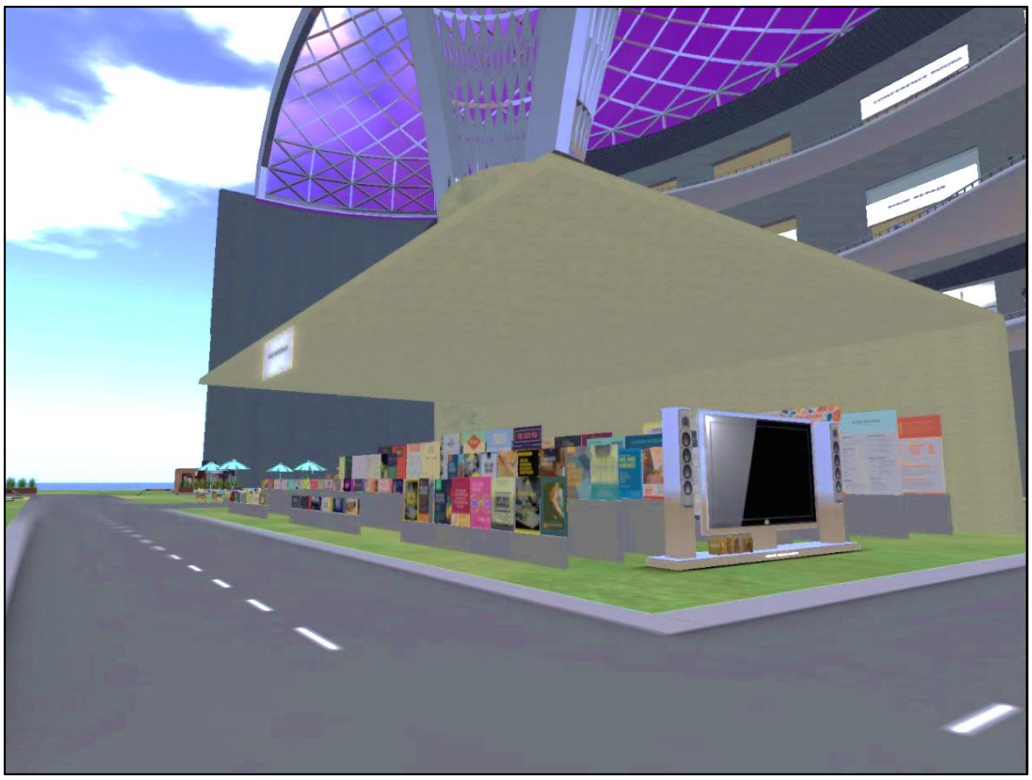
- **Exam Room:**

- **Conference Room:**

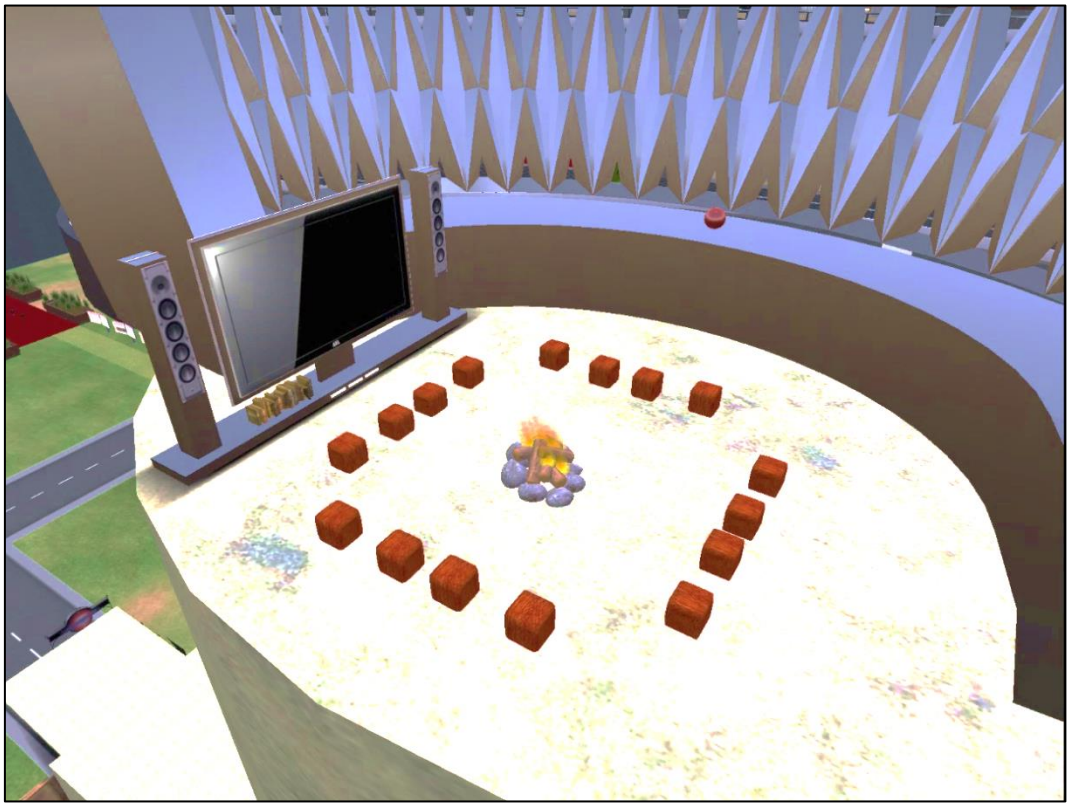


- **Discussion Area:**

- **Free Materials Area:**



- **Relaxing Areas:**



- **Amusement Area:**

E. Virtual World Design Principles - Expert Evaluation Form

CHECKLIST OF DESIGN PRINCIPLES APPLIED ON 3D VIRTUAL LEARNING ENVIRONMENT

TASK NO:_____	OBSERVED	EXAMPLE	COMMENTS/ SUGGESTIONS
➢ **Avatar Persona:** "Ability of people to act and observe themselves acting within the environment as an avatar. Acting and navigating within the virtual world as the avatar." (Kapp & O'Driscoll, 2010, p. 92).	☐		
➢ **Role Play:** "To assume a role in an alternative form (living or inanimate) with the objective of understanding aspects of action and interaction to learn how to perform that role or gain a better understanding of the person typically serving within that role." (Kapp & O'Driscoll, 2010, p. 95).	☐		
➢ **Scavenger Hunt:** "The interaction of individuals or groups in either freeform or prescribed environments with the intent of developing knowledge based on simple inanimate or pre - programmed interaction with the environment." (Kapp & O'Driscoll,	☐		

TASK NO:_____	OBSERVED	EXAMPLE	COMMENTS/ SUGGESTIONS
2010, p. 97).			
➢ **Guided Tour:** "A guided tour is a formalized, escorted situation based on constructs designed to facilitate interaction of individuals or groups with various environments. These tours take learners to areas of pertinent or general interest while the tour guide/device speaks with authority on the subject matter at hand." (Kapp & O'Driscoll, 2010, p. 99).	☐		
➢ **Operational Application:** "Interaction and manipulation of objects for the purpose of gaining proficiency in functionality and performance." (Kapp & O'Driscoll, 2010, p. 102).	☐		
➢ **Conceptual Orienteering:** "Activities or situations in which learners are presented with examples and non - examples of environmental or situational conditions for the purpose of discrimination and	☐		

TASK NO:_____	OBSERVED	EXAMPLE	COMMENTS/ SUGGESTIONS
creating an understanding of key concepts."(Kapp & O'Driscoll, 2010, p. 104).			
➢ **Critical Incident:** "Plan for, react to, or conduct activities that are unexpected, infrequent, or considered to be dangerous when practiced in the real world." (Kapp & O'Driscoll, 2010, p. 107).	☐		
➢ **Co – Creation:** "Social facilitation enabling two or more individuals to work together with a goal of contributing to the formation of something new." (Kapp & O'Driscoll, 2010, p. 111).	☐		
➢ **Small Group Work:** "The congregation (by design) of small numbers of participants into one cohesive group for the purpose of sharing, contributing to the body of knowledge, or presenting or soliciting information." (Kapp & O'Driscoll, 2010, p. 113).	☐		
➢ **Group Forums:** "The congregation (by design) of large numbers of participants into one cohesive group for the purpose of sharing,	☐		

TASK NO:_____	OBSERVED	EXAMPLE	COMMENTS/ SUGGESTIONS
contributing to the body of knowledge, or presenting or soliciting information." (Kapp & O'Driscoll, 2010, p. 114).			
➢ **Social Networking:** "Creation of time and space to allow participants within an environment to connect with one another on an informal basis for the purpose of sharing knowledge and information and creating new knowledge and information." (Kapp & O'Driscoll, 2010, p. 115).	☐		

*** Do you have any thoughts/suggestions on how to improve this task?**

_____

_____

Date: _____/_____/_____ ***Name & Surname:***_____

Signature :_____

F. Code of Conduct Form

CODE OF CONDUCT / DAVRANIŞ KURALLARI

CODE OF CONDUCT:
To help ensure the smooth running of the educational environment, the following Code of Conduct governs all attendees' behavior at the region.

General Behavior
The researcher expects region attendees to respect each other and behave in a generally civilized fashion. Members should respect common sense rules for public behavior, personal interaction, common courtesy, and respect for other users.
Disruptive behavior is not acceptable, and any actions disturbing to attendees, speakers and presenters, or to the performance of the TeachinGrid may result in the user being permanently disconnected from the TeachinGrid.
Abusive, harassing, or threatening behavior towards any other attendee or directed at any OpenSimulator user will not be tolerated. Please report any incidents in which a member of the TeachinGrid is abusive, insulting, intimidating, bothersome, or acting in an unsafe or illegal manner to the researcher immediately (hcetinkaya@baskent.edu.tr).

Avatar Guidelines
While we all want to look our best, region attendees should be mindful that prim-heavy attachments, scripted attachments, physical prims, and other avatar customizations can severely negatively impact server and viewer performance at the region. Please do not wear scripted attachments, HUDs, HUD based AOs, or other resource intensive attachments to the region.

Content Appropriate For All-Ages, General Audience
The TeachinGrid is an all-ages, general community educational environment, therefore, no user may upload or display content that would be inappropriate for children or a general audience. You must be in suitable attire for an all-ages audience (no nudity or explicitly violent depictions).

Privacy Policy
The researcher takes the privacy of region attendees seriously. Your personally identifiable information is kept secure. Only authorized lecturers(who have agreed to keep information secure and confidential) have access to this information. Under no circumstances will your contact information or email address be given to third parties for any purposes.
*The information such as name, surname, email address, mobile phone to be collected under this form will be kept confidential and will be used to match the data to be collected after the applications.
By attending the TeachinGrid region, you are agreeing to the release of your personally identifying information under the circumstances outlined above.

Photography & Videography Policy
There will be photographers and videographers present at the region; by attending the region virtually, you consent to having your avatar photographed or recorded.
Anyone wishing to take pictures or make audio or video recordings of any part of the region is free to do so. Please be courteous and don't take pictures or film people if they ask you not to do so!
In order to keep good records, promote and publicize future teaching activities, and to make archives available where possible, the researcher reserves the right to videotape, record and take photographs and screenshots of the TeachinGrid.

By attending TeachinGrid, each participant (including, but not limited to, each registrant, speaker) expressly consents to videotaping, photography, and other recording of the presentations by the researcher with the understanding that all products of such activity will be released to the community and the public under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 license.

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DAVRANIŞ KURALLARI:

Eğitim ortamının sorunsuz çalışmasını sağlamak için, aşağıdaki Davranış Kuralları bölgedeki tüm katılımcıların davranışlarını kontrol eder.

Genel davranış
Araştırmacı bölge katılımcılarının birbirlerine saygı duymasını ve genel olarak medeni bir şekilde davranmasını beklemektedir. Üyeler, genel davranış, kişisel etkileşim, ortak nezaket ve diğer kullanıcılara saygı için sağduyu kurallarına uymalıdır.
Düzeni bozan davranışlar kabul edilemez, ve katılımcılara, konuşmacılara ve sunum yapanlara veya TeachinGrid'in performansına rahatsız edici herhangi bir eylem yapan kullanıcının TeachinGrid'ten kalıcı olarak bağlantısının kesilmesine neden olabilir.

Herhangi bir diğer katılımcıya yönelik veya herhangi bir OpenSimulator kullanıcısına yönelik taciz edici, usandırıcı veya tehdit edici davranışlar tolere edilmeyecektir. Lütfen, TeachinGrid üyesinin, taciz edici, hakaret, göz korkutucu, rahatsız edici veya tehlikeli veya yasadışı bir şekilde harekete geçtiği herhangi bir olayı derhal araştırıcıya bildirin (hcetinkaya@baskent.edu.tr).

Avatar Kuralları
Hepimiz en iyi şekilde görünmek isterken, bölge katılımcıları, bölgedeki, prim-heavy eklerin, kod içeren eklerin, fiziksel primlerin ve diğer avatar özelleştirmelerinin, sunucu ve görüntüleyici performansını ciddi şekilde olumsuz etkileyebileceğine dikkat etmelidir. Lütfen kod içeren ekler, HUD'lar, HUD tabanlı AO'lar veya başka kaynak yoğun ekleri giymeyin.

Her Yaş için Uygun İçerik, Genel İzleyici
TeachinGrid, her yaştan genel topluma yönelik eğitim ortamıdır, bu nedenle, hiçbir kullanıcı, çocuklar için veya genel bir kitle için uygun olmayan içerik yükleyemez veya görüntüleyemez.
Her yaştan bir kitle için uygun kıyafetlerde olmalısınız (çıplaklık ya da açıkça şiddet içermeyen tasvirler içermeyen).

Gizlilik Politikası
Araştırmacı bölge katılımcılarının gizliliğini ciddiye alır. Kişisel olarak tanımlanabilir bilgileriniz güvende tutulur. Sadece yetkili öğretim üyeleri (bilgileri güvenli ve gizli tutmayı kabul etmiş olanlar) bu bilgilere erişebilir. Hiçbir koşulda, iletişim bilgileriniz veya e-posta adresiniz hiçbir şekilde üçüncü şahıslara verilmeyecektir.
*Bu form kapsamında toplanacak olan adı, soyadı, eposta adresi, cep telefonu gibi bilgiler gizli tutulacak ve uygulamaların devamında toplanacak verilerin eşleştirilmesinde kullanılacaktır.
TeachinGrid bölgesine katılarak, kişisel tanımlayıcı bilgilerinizin yukarıda belirtilen koşullar altında yayınlanmasını kabul ediyorsunuz.

Fotoğraf ve Videografi Politikası
Bölgede fotoğrafçılar ve kameranlar olacaktır; bölgeye sanal olarak katılarak, avatarınızı fotoğraflandığını veya kaydedildiğini kabul etmiş oluyorsunuz.
Fotoğraf çekmek veya bölgedeki herhangi bir parçanın ses veya video kaydını yapmak isteyen herkes bunu yapmakta özgürdür. Lütfen nazik olun ve eğer bunu yapmamanız istendiğinde fotoğraf çekmeyin veya film çekmeyin!
İyi kayıtlar tutmak, gelecekteki öğretim etkinliklerini geliştirmek ve tanıtmak ve mümkün olan yerlerde arşivleme yapmak için araştırmacı, TeachinGrid'in fotoğraflarını çekme ve ekran görüntülerini alma ve video kaydı yapma hakkını saklı tutar.

TeachinGrid'e katılarak, her katılımcı (her bir kayıtlı kullanıcı, konuşmacı dâhil, ancak bunlarla sınırlı olmamak), araştırmacı tarafından videokayıt, fotoğraf ve sunumların diğer kayıtlarının ve bu tür etkinliklerin tüm ürünlerinin topluma ve halka paylaşımın Creative Commons Attribution-NonCommercial-NoDerivs 3.0 lisansı altında yayınlanacağını açık bir şekilde kabul eder.

* Required

1. **Email address** *

2. **I read carefully and agree the code of conduct mentioned above. / Yukarıda bahsedilen davranış kurallarını dikkatli bir şekilde okudum ve kabul ediyorum.** *
   Mark only one oval.
   - Yes / Evet
   - No / Hayır

3. **Name & Surname / Adınız ve Soyadınız** *

4. **Student Number / Öğrenci Numaranız** *

2/4

5. **Faculty - Vocational School / Fakülte - Meslek Yüksekokulu** *

Mark only one oval.

- Faculty of Commercial Sciences / Ticari Bilimler Fakültesi
- Faculty of Communications / İletişim Fakültesi
- Faculty of Dentistry / Diş Hekimliği Fakültesi
- Faculty of Economics & Administrative Sciences / İktisadi ve Ticari Bilimler Fakültesi
- Faculty of Education / Eğitim Fakültesi
- Faculty of Enginneering / Mühendislik Fakültesi
- Faculty of Health Sciences / Sağlık Bilimleri Fakültesi
- Faculty of Law / Hukuk Fakültesi
- Faculty of Medicine / Tıp Fakültesi
- Faculty of Science and Letters / Fen Edebiyat Fakültesi
- Faculty of Fine Arts, Design and Architecture / Güzel Sanatlar Tasarım ve Mimarlık Fakültesi
- Vocational of Social Sciences / Sosyal Bilimler Meslek Yüksekokulu
- Vocational of Health Sciences / Sağlık Hizmetleri Meslek Yüksekokulu
- Vocational of Technology / Teknik Bilimler Meslek Yüksekokulu

6. **Department - Programme / Bölüm - Program** *

7. **Mobile Phone(For immediate contact during performing tasks)/Cep Telefonu (Görevleri yerine getirirken acil iletişim için)** *

8. **Grade / Sınıf** *

Mark only one oval.

- Prep School / Hazırlık
- Freshman / 1. Sınıf
- Sophomore / 2. Sınıf
- Junior / 3. Sınıf
- Senior / 4. Sınıf
- Other: _____

9. **Age / Yaşınız** *

10. **Gender / Cinsiyetiniz** *

Mark only one oval.

- Female / Kadın
- Male / Erkek

11. **Nationality / Uyruğunuz** *

3/4

12. **First Language / Anadiliniz** *

13. **On average, how much time do you spend at the computer per week? (Please estimate the time per week in hours) / Ortalama olarak, bilgisayarda haftada ne kadar zaman harcıyorsunuz? (Lütfen saat cinsinden hesaplayınız)** *

14. **How often do you use virtual worlds (like Secondlife, OpenSimulator, etc.) / Sanal dünyaları (Secondlife, Opensimulator, vb.) ne sıklıkla kullanıyorsunuz?** *
Mark only one oval.

- Everyday / Her Gün
- At least once a week / Haftada en az haftada bir kez
- At least once a month / Ayda en az bir kez
- I have used virtual worlds only once or few times / Sanal Dünyaları sadece bir veya birkaç kez kullandım
- I don't use virtual worlds / Sanal dünyaları kullanmadım

15. **How often do you play computer or video games? / Bilgisayar veya video oyunlarını ne sıklıkta oynuyorsunuz?** *
Mark only one oval.

- Everyday / Her Gün
- At least once a week / Haftada en az haftada bir kez
- At least once a month / Ayda en az bir kez
- I have played computer/video games only once or few times / Bilgisayar/video oyunlarını sadece bir veya birkaç kez oynadım
- I don't play computer/video games / Bilgisayar/video oyunlarını oynamadım

16. **What's your level of Computer Technology Skills?-Rate yourself. / Bilgisayar Teknolojisi Becerileri seviyeniz nedir?-Kendinizi değerlendirin.** *
Mark only one oval.

- Beginner / Başlangıç
- Intermediate / Orta Seviye
- Advanced / İleri Seviye

17. **Date/Tarih** *

Example: December 15, 2012

Powered by
Google Forms

G. Demographic Information Survey for the EFL Learners

İngilizceyi Yabancı Dil Olarak Öğrenenler İçin Demografik Bilgi Anketi

Sorulara doğru cevaplar vermeniz çalışmanın sonuçları için önem arz etmektedir.

* Gerekli

1. E-posta adresi *

2. Takma adınızı yazınız *

3. Kayıtlı olduğunuz yarıyıl *

4. Önceden çevrimiçi (online) ders aldınız mı? *

   Yalnızca bir şıkkı işaretleyin.

   - Evet
   - Hayır

5. Geçmişte almış olduğunuz çevrimiçi ders/derslerin bilgilerini paylaşınız. *

6. Hangi cihazları veya ekipmanları düzenli olarak kullanıyorsunuz (haftada en az 3 kez)? Sizin için geçerli olanların her birini işaretleyiniz *

Uygun olanların tümünü işaretleyin.

- [ ] Akıllı Telefon
- [ ] Tablet
- [ ] Masaüstü Bilgisayar
- [ ] Dizüstü Bilgisayar
- [ ] Dijital Kamera
- [ ] E-Kitap Okuyucu
- [ ] Bilgisayar Oyunları

Diğer: [ ] _____

7. Hangi web sitelerini veya yazılım uygulamalarını düzenli olarak (haftada> 3 kez) kullanıyorsunuz ?Sizin için geçerli olanların her birini işaretleyiniz *

Uygun olanların tümünü işaretleyin.

- [ ] E-posta
- [ ] Facebook
- [ ] Twitter
- [ ] Instagram/Snapchat/ diğer fotoğraf paylaşma siteleri
- [ ] Facetime
- [ ] You Tube
- [ ] Oyun siteleri
- [ ] Haberler
- [ ] Seyahat siteleri
- [ ] Sağlık siteleri
- [ ] Eğitici siteler
- [ ] Google sites - Web sitesi oluşturma

Diğer: [ ] _____

8. Kendinizi teknoloji meraklısı olarak görüyor musunuz? *

Yalnızca bir şıkkı işaretleyin.

- ( ) Evet
- ( ) Hayır

9. Ne kadar süredir İngilizce dil eğitimi görmektesiniz? *

10. Üniversitede İngilizce Hazırlık okudunuz mu? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

11. İngilizce Hazırlıkta geçirdiğiniz eğitim süresi ne kadardır? *

Yalnızca bir şıkkı işaretleyin.

- Hazırlık okumadım
- 1 Dönem
- 2 Dönem
- Diğer: _____

12. İngilizce haricinde başka bir dil eğitimi aldınız mı?Evet ise adını ve seviyenizi belirtiniz: *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

13. İngilizce haricinde almış olduğunuz bir dil eğitiminin adını/adlarını yazınız ve seviyenizi belirtiniz: *

14. İngilizce dilinin konuşulduğu herhangi bir ülkede yaşadınız mı veya ziyaret ettiniz mi? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

15. Yaşadığınız ya da Ziyaret etmiş olduğunuz İngilizce dilinin konuşulduğu ülkeler hangileridir? Kaldığınız Süreyi Belirtiniz. *

16. İngilizce konuşma becerinizi geliştirmek için ekstra bir ders, kurs, eğitim, (konuşma kulübü, vb.) aldınız mı? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

17. İngilizce konuşma becerinizi geliştirmek için almış olduğunuz ekstra dersi, kursu, eğitimi, (konuşma kulübü, vb.) kısaca açıklayınız. *

18. Ortalama olarak, mobil cihazlarınızda (cep telefonu, tablet) haftada ne kadar zaman harcıyorsunuz? *

Lütfen saat cinsinden hesaplayınız

19. Mobil cihazlarınızda dil becerilerinin gelişmesine yardımcı olan kullandığınız bir uygulama/lar var mı? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

20. Mobil cihazlarınızda dil becerilerinin gelişmesine yardımcı olan kullandığınız bir uygulama/lar nelerdir? Ortalama olarak uygulamada haftada ne kadar zaman harcıyorsunuz? *

Lütfen saat cinsinden hesaplayınız.

21. İngilizce film, dizi veya televizyon programları ne kadar sıklıkta izliyorsunuz? *

Yalnızca bir şıkkı işaretleyin.

- Hayır izlemiyorum
- Ayda bir defadan az izliyorum
- Ayda birkaç kez izliyorum
- Haftada bir defa izliyorum
- Haftada bir defadan fazla izliyorum

İngilizce Yeterlilik Düzeyiniz

22. İngilizce yeterlilik düzeyleri (Küresel Ölçek) ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
İngilizce yeterlilik düzeyiniz						

İngilizce Yeterlilik Düzeyleri - Küresel Ölçek

A1 - Somut gereksinimlerini karşılayabilmek adına bilinen, günlük ifadeleri ve çok temel deyimleri anlayabilir ve kullanabilir. Kendini ya da başkalarını tanıtabilir, bu bağlamda, nerede oturduğu, kimleri tanıdığı, sahip oldukları ve benzeri temel sorular yoluyla iletişim kurabilir. Konuştuğu kişilerin yavaş ve anlaşılır bir şekilde konuşması ve yardıma hazır olması halinde basit düzeyde iletişim kurabilir.

A2 - Kişisel, aile, alışveriş, iş ve yakın çevre ile ilgili konularda çok sık kullanılan temel deyimleri ve cümleleri anlayabilir. Bildiği, alışılmış konularda doğrudan bilgi alışverişinde bulunarak basit düzeyde iletişim kurabilir. Basit bir dil kullanarak kendi özgeçmişi ve yakın çevresi hakkında bilgi verebilir ve anlık gereksinimleri karşılayabilir.

B1 - Günlük yaşamda, işte ya da okulda, sık karşılaştığı ve tanıdık olduğu konulara dayalı yazılı ve sözlü ifadeleri ana hatlarıyla anlayabilir. Seyahatlerde, dilin konuşulduğu yerlerde karşılaşılabilecek çoğu durumların üstesinden gelebilir. Kişisel ilgi alanları doğrultusunda ya da bildiği konularda, basit, ancak fikirler arası bağlantıların oluşturulmuş olduğu metinler yoluyla kendini ifade edebilir. Yaşadığı olayları ve deneyimlerini aktarabilir; düşlerinden, umutlarından ve isteklerinden söz edebilir, görüşlerini ve planlarını kısaca nedenleriyle ortaya koyabilir.

B2 - Soyut ve somut konulara dayalı karmaşık metinlerin ana fikrini anlayabilir, kendi uzmanlık alanı olan konularda teknik tartışmalar yürütebilir Çok zorlanmadan, belli ölçüde doğal ve akıcı bir dil kullanarak anadilde konuşan birisiyle iletişim kurabilir. Farklı konularda, ayrıntılı ve anlaşılır bir şekilde kendini ifade edebilir ve bir konunun olumlu ve olumsuz yönlerini ortaya koyarak kendi bakış açısını yansıtabilir.

C1 - Farklı yapıya sahip uzun ve karmaşık metinleri anlayabilir ve bu metinlerdeki dolaylı anlatımları ve imaları fark edebilir. Gereksinim duyduğu ifadeleri fazla zorlanmadan bularak kendini doğal ve akıcı bir şekilde ifade edebilir. Dili akademik ve mesleki amaçlar için ve günlük yaşamda esnek ve etkili bir şekilde kullanabilir. Karmaşık konularda, bağlantıların ve ilişkilerin açıkça ortaya konduğu, iyi yapılandırılmış, ayrıntılar içeren metinler yoluyla kendini akıcı bir şekilde ifade edebilir.

C2 - Duyduğu ve okuduğu her şeyi kolayca anlayabilir. Farklı yazılı ya da sözlü kaynaklardan edindiği bilgiyi özetleyebilir, bu kaynaklara dayalı olarak bir tartışmayı yapılandırabilir, akıcı ve doğal bir anlatım ile sunabilir. Akıcı bir dil kullanarak kendini tam anlamıyla ifade edebilir. Karmaşık durumlarda bile kendini ifade ederken ince anlam farklarından yararlanabilir.

23. İngilizce Dinleme yeterlilik düzeyleri ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
Dinleme yeterlilik düzeyiniz	◯	◯	◯	◯	◯	◯

İngilizce Dinleme Yeterliliği

A1 - Benimle, ailemle ve yakın çevremle ilgili tanıdık sözcükleri ve çok temel kalıpları, yavaş ve net konuşulduğunda anlayabilirim.
A2 - Beni doğrudan ilgilendiren konularla ilişkili kalıpları ve çok sık kullanılan sözcükleri anlayabilirim. (Örneğin; En temel kişisel ve ailevi bilgiler, alışveriş, yerel çevre, meslek). Kısa, net, basit ileti ve duyurulardaki temel düşünceyi kavrayabilirim.
B1 - İş, okul, boş zaman vb. ortamlarda sürekli karşılaşılan bildik konulardaki net, standart konuşmanın ana hatlarını anlayabilirim. Güncel olaylar ya da kişisel ilgi alanıma giren konularla ilgili radyo ve televizyon programlarının çoğunun ana hatlarını yavaş ve net olduğunda anlayabilirim.
B2 - Güncel bir konu olması koşuluyla uzun konuşma ve sunumları anlayabilir, karmaşık tümcelerle yapılan tartışmaları takip edebilirim. Televizyon haberlerini ve güncel olaylara ilişkin programların çoğunu anlayabilirim. Standart dilin kullanıldığı filmlerin çoğunu anlayabilirim.
C1 - Açıkça yapılandırılmamış ve ilişkiler açıkça belirtilmemiş sadece ima edilmiş olsa bile uzun konuşmaları anlayabilirim. Televizyon programlarını ve filmleri fazla zorluk çekmeden anlayabilirim.
C2 - İster canlı ister yayın ortamında olsun, hiçbir konuşma türünü anlamakta zorluk çekmem. Sadece normal anadili konuşma hızında ise, aksana alışabilmem için biraz zamana ihtiyacım olabilir.

24. İngilizce Okuma yeterlilik düzeyleri ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
Okuma yeterlilik düzeyiniz	◯	◯	◯	◯	◯	◯

İngilizce Okuma Yeterlilik Düzeyleri

A1 - Katalog, duyuru ya da afiş gibi yazılı metinlerdeki bildik adları, sözcükleri ve çok basit tümceleri anlayabilirim.
A2 - Kısa ve basit metinleri okuyabilirim. İlanlar, kullanım kılavuzları, mönüler ve zaman çizelgeleri gibi basit günlük metinlerdeki genel bilgileri kavrayabilir ve kısa kişisel mektupları anlayabilirim.
B1 - Meslekle ilgili ya da günlük dilde en sık kullanılan sözcükleri içeren metinleri anlayabilirim. Kişisel mektuplarda belirtilen olay, duygu ve dilekleri anlayabilirim.
B2 - Yazarların belirli tutum ya da görüşü benimsedikleri, güncel sorunlarla ilgili makaleleri ve raporları okuyabilirim. Çağdaş edebi düzyazıyı anlayabilirim.
C1 - Üslup farklılıklarını da ayırt ederek uzun ve karmaşık, somut ya da edebi metinleri okuyabilir, ilgi alanımla alakalı olmasalar bile herhangi bir uzmanlık alanına giren makale ve uzun teknik bilgileri anlayabilirim.
C2 - Kullanım kılavuzları, uzmanlık alanına yönelik makaleler ve yazınsal yapıtlar gibi soyut, yapısal ve dilbilgisel açıdan karmaşık hemen hemen tüm metin türlerini kolaylıkla okuyabilir ve anlayabilirim.

25. İngilizce Karşılıklı Konuşma yeterlilik düzeyleri ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
Karşılıklı konuşma yeterlilik düzeyiniz	◯	◯	◯	◯	◯	◯

İngilizce Konuşma - Karşılıklı Konuşma Yeterlilik Düzeyleri

A1 - Karşımdaki kişinin söylediklerini daha yavaş bir konuşma hızında yinelemesi ve söylemek istediklerimi oluşturmada bana yardımcı olması koşuluyla, basit yoldan iletişim kurabilirim. O anki gereksinime ya da çok bildik konulara ilişkin alanlarda basit sorular sorabilir ve cevap verebilirim.
A2 - Bildik konular ve faaliyetler hakkında doğrudan bilgi alışverişini gerektiren basit ve alışılmış işlerde iletişim kurabilirim. Genellikle konuşmayı sürdürebilecek kadar anlamasam da kısa sohbetlere katılabilirim.
B1 - Dilin konuşulduğu ülkede seyahat ederken ortaya çıkabilecek bir çok durumla başa çıkabilirim. Bildik, ilgi alanıma giren ya da günlük yaşamla ilgili (Örneğin; aile, hobi, iş, yolculuk ve güncel olaylar gibi) konularda hazırlık yapmadan konuşmalara katılabilirim.
B2 - Öğrendiğim dili anadili olarak konuşan kişilerle anlaşmayı mümkün kılacak bir akıcılık ve doğallıkla iletişim kurabilirim. Bildik konularlardaki tartışmalarda, kendi görüşlerimi açıklayıp destekleyerek etkin bir rol oynayabilirim.
C1 - Kullanacağım sözcükleri çok fazla aramaksızın, kendimi akıcı ve doğal bir biçimde ifade edebilirim. Dili, toplumsal ve mesleki amaçlar için esnek ve etkili bir şekilde kullanabilirim. Düşünce ve fikirlerimi açık bir ifadeyle dile getirebilir ve karşımdakilerin konuşmalarıyla ilişkilendirebilirim.
C2 - Hiç zorlanmadan her türlü konuşma ya da tartışmaya katılabilir; deyimler ve konuşma diline ait ifadeleri anlayabilirim. Kendimi akıcı bir şekilde ifade edebilir, anlamdaki ince ayrıntıları kesin ve doğru bir biçimde vurgulayabilirim. Bir sorunla karşılaşırsam, geriye dönüp, karşımdaki insanların fark etmelerine fırsat vermeyecek bir ustalıkla ifadelerimi yeniden yapılandırabilirim.

26. İngilizce Sözlü Anlatım yeterlilik düzeyleri ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
Sözlü Anlatım yeterlilik düzeyiniz	◯	◯	◯	◯	◯	◯

İngilizce Konuşma - Sözlü Anlatım Yeterlilik Düzeyi

A1 - Yaşadığım yeri ve tanıdığım insanları betimlemek için basit kalıpları ve tümceleri kullanabilirim.
A2 - Basit bir dille ailemi ve diğer insanları, yaşam koşullarımı, eğitim geçmişimi ve son işimi betimlemek için bir dizi kalıp ve tümceyi kullanabilirim.
B1 - Deneyimlerimi, hayallerimi, umutlarımı, isteklerimi ve olayları betimlemek için çeşitli kalıpları yalın bir yoldan birbirinebağlayabilirim. Düşünce ve planlara ilişkin açıklamaları ve nedenleri kısaca sıralayabilirim. Bir öyküyü anlatabilirim, bir kitap ya da filmin konusunu aktarabilirim ve izlenimlerimi belirtebilirim.
B2 - İlgi alanıma giren çeşitli konularda açık ve ayrıntılı bilgi verebilirim. Çeşitli seçeneklerin olumlu ve olumsuz yanlarını ortaya koyarak bir konu hakkında görüş bildirebilirim.
C1 - Karmaşık konuları, alt temalarla bütünleştirerek, açık ve ayrıntılı bir biçimde betimleyebilir, belirli bakış açıları geliştirip uygun bir sonuçla konuşmamı tamamlayabilirim.
C2 - Her konuda bağlama uygun bir üslupla ve dinleyenin önemli noktaları ayırt edip anımsamasına yardımcı olacak şekilde konuşmamı etkili ve mantıksal bir şekilde yapılandırabilir, açık, akıcı bir betimleme ya da karşıt görüş sunabilirim.

27. İngilizce Yazılı Anlatım yeterlilik düzeyleri ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
Yazılı Anlatım yeterlilik düzeyiniz	◯	◯	◯	◯	◯	◯

İngilizce Yazma - Yazılı Anlatım Yeterlilik Düzeyleri

A1 - Kısa ve basit tümcelerle kartpostal yazabilirim. Örneğin; Tatil kartpostalıyla selam göndermek gibi. Kişisel bilgi içeren formları doldurabilirim Örneğin: Otel kayıt formuna isim, uyruk ve adres yazmak gibi.
A2 - Kısa, basit notlar ve iletiler yazabilirim. Teşekkür mektubu gibi çok kısa kişisel mektupları yazabilirim.
B1 - Bildik ya da ilgi alanıma giren konularla bağlantılı bir metin yazabilirim. Deneyim ve izlenimlerimi betimleyen kişisel mektuplar yazabilirim.
B2 - İlgi alanıma giren çok çeşitli konularda anlaşılır, ayrıntılı metinler yazabilirim. Belirli bir bakış açısına destek vererek ya da karşı çıkarak bilgi sunan ve nedenler ileri süren bir kopozisyon ya da rapor yazabilirim. Olayların ve deneyimlerin benim için taşıdıkları önemi ön plana çıkaran mektuplar yazabilirim.
C1 - Görüşlerimi ayrıntılı bir biçimde, açık ve iyi yapılandırılmış metinlerle ifade edebilirim. Bir mektup, kompozisyon ya da rapor yazabilirim. Önemli olduğunu düşündüğüm konuları ön plana çıkararak karmaşık konularda yazabilirim. Hedef belirlediğim okuyucu kitlesine uygun bir üslup seçebilirim.
C2 - Uygun bir üslup açık, akıcı metinler yazabilirim. Okuyucunun önemli noktaları ayırt edip anımsamasına yardımcı olacak etkili, mantıksal bir yapılandırmayla bir durum ortaya koyan karmaşık mektuplar, raporlar ya da makaleler yazabilirim. Mesleki ya da edebi yapıt özetleri ve eleştirileri yazabilirim.

Bilgisayar Okuryazarlığı ve Sanal Dünyalar

28. Bilgisayar Okuryazarlığınızı geliştirmek için ekstra bir ders, kurs, eğitim aldınız mı? *

Yalnızca bir şıkkı işaretleyin.

- ◯ Evet
- ◯ Hayır

29. Bilgisayar Okuryazarlığınızı geliştirmek için almış olduğunuz ekstra bir dersi, kursu, eğitimi kısaca açıklayınız. *

_____

30. Bir sanal dünyada hiç avatar ile gezindiniz mi? *

Yalnızca bir şıkkı işaretleyin.

- ◯ Evet
- ◯ Hayır

31. Sanal dünyalar hakkında bilgi sahibi misiniz? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

32. Aşağıda sanal dünya kullanımı ile ilgili verilen ifadelere ne ölçüde katıldığınızı, size en uygun seçeneği işaretleyerek belirtiniz *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Sanal dünyayı kullanabileceğime eminim.					
Sanal dünya İngilizce konuşma becerisini geliştirmede yararlı olabilir.					
Sanal dünya sosyal etkileşim için yararlı olabilir.					
Sanal dünya benim için yararlı olabilir.					
Sanal dünya kullanmak hayat kalitemi artırabilir.					

H. Demographic Information Survey for the Instructor

Öğretim Elemanı için Demografik Bilgi Anketi

Sorulara doğru cevaplar vermeniz çalışmanın sonuçları için önem arz etmektedir.

* Gerekli

1. E-posta adresi *

2. Takma adınızı yazın *

   Örneğin, Sarah G1, Oliver G3

3. İş Deneyim süreniz *

   Öğrencenlik - 2 yıl, Araştırma Görevlisi - 6 ay, 1 yıl, vb.

4. Önceden çevrimiçi (online) ders aldınız mı? *

   Yalnızca bir şıkkı işaretleyin.

   - Evet
   - Hayır

5. Geçmişte almış olduğunuz çevrimiçi ders/derslerin bilgilerini paylaşınız. *

6. Hangi cihazları veya ekipmanları düzenli olarak kullanıyorsunuz (haftada en az 3 kez)? Sizin için geçerli olanların her birini işaretleyiniz *

Uygun olanların tümünü işaretleyin.

- [ ] Akıllı Telefon
- [ ] Tablet
- [ ] Masaüstü Bilgisayar
- [ ] Dizüstü Bilgisayar
- [ ] Dijital Kamera
- [ ] E-Kitap Okuyucu
- [ ] Bilgisayar Oyunları

Diğer: [ ] _____

7. Hangi web sitelerini veya yazılım uygulamalarını düzenli olarak (haftada> 3 kez) kullanıyorsunuz ?Sizin için geçerli olanların her birini işaretleyiniz *

Uygun olanların tümünü işaretleyin.

- [ ] E-posta
- [ ] Facebook
- [ ] Twitter
- [ ] Instagram/Snapchat/ diğer fotoğraf paylaşma siteleri
- [ ] Facetime
- [ ] You Tube
- [ ] Oyun oynama
- [ ] Haberler
- [ ] Seyahat siteleri
- [ ] Sağlık siteleri
- [ ] Eğitici siteler
- [ ] Google sites - Web sitesi oluşturma

Diğer: [ ] _____

8. Kendinizi teknoloji meraklısı olarak görüyor musunuz? *

Yalnızca bir şıkkı işaretleyin.

- ( ) Evet
- ( ) Hayır

9. Ne kadar süredir İngilizce dil eğitimi görmektesiniz? *

10. İngilizce yeterlilik sınav sonucunuzu/sonuçlarınızı yazınız. *

11. İngilizce haricinde başka bir dil eğitimi aldınız mı?Evet ise adını ve seviyenizi belirtiniz: *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

12. İngilizce haricinde almış olduğunuz bir dil eğitiminin adını/adlarını yazınız ve seviyenizi belirtiniz: *

13. İngilizce dilinin konuşulduğu herhangi bir ülkede yaşadınız mı veya ziyaret ettiniz mi? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

14. Yaşadığınız ya da Ziyaret etmiş olduğunuz İngilizce dilinin konuşulduğu ülkeler hangileridir? Kaldığınız Süreyi Belirtiniz. *

15. İngilizce konuşma becerinizi geliştirmek için ekstra bir ders, kurs, eğitim, (konuşma kulübü, vb.) aldınız mı? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

16. İngilizce konuşma becerinizi geliştirmek için almış olduğunuz ekstra dersi, kursu, eğitimi, (konuşma kulübü, vb.) kısaca açıklayınız. *

17. Ortalama olarak, mobil cihazlarınızda (cep telefonu, tablet) haftada ne kadar zaman harcıyorsunuz? *

Lütfen saat cinsinden hesaplayınız

18. Mobil cihazlarınızda dil becerilerinin gelişmesine yardımcı olan kullandığınız bir uygulama/lar var mı? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

19. Mobil cihazlarınızda dil becerilerinin gelişmesine yardımcı olan kullandığınız bir uygulama/lar nelerdir? Ortalama olarak uygulamada haftada ne kadar zaman harcıyorsunuz? *

Lütfen saat cinsinden hesaplayınız.

20. İngilizce film, dizi veya televizyon programları ne kadar sıklıkta izliyorsunuz? *

Yalnızca bir şıkkı işaretleyin.

- Hayır izlemiyorum
- Ayda bir defadan az izliyorum
- Ayda birkaç kez izliyorum
- Haftada bir defa izliyorum
- Haftada bir defadan fazla izliyorum

İngilizce Yeterlilik Düzeyiniz

21. İngilizce yeterlilik düzeyleri (Küresel Ölçek) ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
İngilizce yeterlilik düzeyiniz	◯	◯	◯	◯	◯	◯

İngilizce Yeterlilik Düzeyleri - Küresel Ölçek

A1 - Somut gereksinimlerini karşılayabilmek adına bilinen, günlük ifadeleri ve çok temel deyimleri anlayabilir ve kullanabilir. Kendini ya da başkalarını tanıtabilir, bu bağlamda, nerede oturduğu, kimleri tanıdığı, sahip oldukları ve benzeri temel sorular yoluyla iletişim kurabilir. Konuştuğu kişilerin yavaş ve anlaşılır bir şekilde konuşması ve yardıma hazır olması halinde basit düzeyde iletişim kurabilir.
A2 - Kişisel, aile, alışveriş, iş ve yakın çevre ile ilgili konularda çok sık kullanılan temel deyimleri ve cümleleri anlayabilir. Bildiği, alışılmış konularda doğrudan bilgi alışverişinde bulunarak basit düzeyde iletişim kurabilir. Basit bir dil kullanarak kendi özgeçmişi ve yakın çevresi hakkında bilgi verebilir ve anlık gereksinimleri karşılayabilir
B1 - Günlük yaşamda, işte ya da okulda, sık karşılaştığı ve tanıdık olduğu konulara dayalı yazılı ve sözlü ifadeleri ana hatlarıyla anlayabilir. Seyahatlerde, dilin konuşulduğu yerlerde karşılaşılabilecek çoğu durumların üstesinden gelebilir. Kişisel ilgi alanları doğrultusunda ya da bildiği konularda, basit, ancak fikirler arası bağlantıların oluşturulmuş olduğu metinler yoluyla kendini ifade edebilir. Yaşadığı olayları ve deneyimlerini aktarabilir; düşlerinden, umutlarından ve isteklerinden söz edebilir, görüşlerini ve planlarını kısaca nedenleriyle ortaya koyabilir.
B2 - Soyut ve somut konulara dayalı karmaşık metinlerin ana fikrini anlayabilir, kendi uzmanlık alanı olan konularda teknik tartışmalar yürütebilir Çok zorlanmadan, belli ölçüde doğal ve akıcı bir dil kullanarak anadilde konuşan birisiyle iletişim kurabilir. Farklı konularda, ayrıntılı ve anlaşılır bir şekilde kendini ifade edebilir ve bir konunun olumlu ve olumsuz yönlerini ortaya koyarak kendi bakış açısını yansıtabilir.
C1 - Farklı yapıya sahip uzun ve karmaşık metinleri anlayabilir ve bu metinlerdeki dolaylı anlatımları ve imaları fark edebilir. Gereksinim duyduğu ifadeleri fazla zorlanmadan bularak kendini doğal ve akıcı bir şekilde ifade edebilir. Dili akademik ve mesleki amaçlar için ve günlük yaşamda esnek ve etkili bir şekilde kullanabilir. Karmaşık konularda, bağlantıların ve ilişkilerin açıkça ortaya konduğu, iyi yapılandırılmış, ayrıntılar içeren metinler yoluyla kendini akıcı bir şekilde ifade edebilir
C2 - Duyduğu ve okuduğu her şeyi kolayca anlayabilir. Farklı yazılı ya da sözlü kaynaklardan edindiği bilgiyi özetleyebilir, bu kaynaklara dayalı olarak bir tartışmayı yapılandırabilir, akıcı ve doğal bir anlatım ile sunabilir. Akıcı bir dil kullanarak kendini tam anlamıyla ifade edebilir. Karmaşık durumlarda bile kendini ifade ederken ince anlam farklarından yararlanabilir.

22. İngilizce Dinleme yeterlilik düzeyleri ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
Dinleme yeterlilik düzeyiniz	◯	◯	◯	◯	◯	◯

İngilizce Dinleme Yeterlilik Düzeyleri

A1 - Benimle, ailemle ve yakın çevremle ilgili tanıdık sözcükleri ve çok temel kalıpları, yavaş ve net konuşulduğunda anlayabilirim.
A2 - Beni doğrudan ilgilendiren konularla ilişkili kalıpları ve çok sık kullanılan sözcükleri anlayabilirim. (Örneğin; En temel kişisel ve ailevi bilgiler, alışveriş, yerel çevre, meslek). Kısa, net, basit ileti ve duyurulardaki temel düşünceyi kavrayabilirim.
B1 - İş, okul, boş zaman vb. ortamlarda sürekli karşılaşılan bildik konulardaki net, standart konuşmanın ana hatlarını anlayabilirim. Güncel olaylar ya da kişisel ilgi alanıma giren konularla ilgili radyo ve televizyon programlarının çoğunun ana hatlarını yavaş ve net olduğunda anlayabilirim.
B2 - Güncel bir konu olması koşuluyla uzun konuşma ve sunumları anlayabilir, karmaşık tümcelerle yapılan tartışmaları takip edebilirim. Televizyon haberlerini ve güncel olaylara ilişkin programların çoğunu anlayabilirim. Standart dilin kullanıldığı filmlerin çoğunu anlayabilirim.
C1 - Açıkça yapılandırılmamış ve ilişkiler açıkça belirtilmemiş sadece ima edilmiş olsa bile uzun konuşmaları anlayabilirim. Televizyon programlarını ve filmleri fazla zorluk çekmeden anlayabilirim.
C2 - İster canlı ister yayın ortamında olsun, hiçbir konuşma türünü anlamakta zorluk çekmem. Sadece normal anadili konuşma hızında ise, aksana alışabilmem için biraz zamana ihtiyacım olabilir.

23. İngilizce Okuma yeterlilik düzeyleri ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
Okuma yeterlilik düzeyiniz	◯	◯	◯	◯	◯	◯

İngilizce Okuma Yeterlilik Düzeyleri

A1 - Katalog, duyuru ya da afiş gibi yazılı metinlerdeki bildik adları, sözcükleri ve çok basit tümceleri anlayabilirim.
A2 - Kısa ve basit metinleri okuyabilirim. İlanlar, kullanım kılavuzları, mönüler ve zaman çizelgeleri gibi basit günlük metinlerdeki genel bilgileri kavrayabilir ve kısa kişisel mektupları anlayabilirim.
B1 - Meslekle ilgili ya da günlük dilde en sık kullanılan sözcükleri içeren metinleri anlayabilirim. Kişisel mektuplarda belirtilen olay, duygu ve dilekleri anlayabilirim.
B2 - Yazarların belirli tutum ya da görüşü benimsedikleri, güncel sorunlarla ilgili makaleleri ve raporları okuyabilirim. Çağdaş edebi düzyazıyı anlayabilirim.
C1 - Üslup farklılıklarını da ayırt ederek uzun ve karmaşık, somut ya da edebi metinleri okuyabilir, ilgi alanımla alakalı olmasalar bile herhangi bir uzmanlık alanına giren makale ve uzun teknik bilgileri anlayabilirim.
C2 - Kullanım kılavuzları, uzmanlık alanına yönelik makaleler ve yazınsal yapıtlar gibi soyut, yapısal ve dilbilgisel açıdan karmaşık hemen hemen tüm metin türlerini kolaylıkla okuyabilir ve anlayabilirim.

24. İngilizce Karşılıklı Konuşma yeterlilik düzeyleri ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
Karşılıklı konuşma yeterlilik düzeyiniz	◯	◯	◯	◯	◯	◯

İngilizce Konuşma - Karşılıklı Konuşma Yeterlilik Düzeyleri

A1 - Karşımdaki kişinin söylediklerini daha yavaş bir konuşma hızında yinelemesi ve söylemek istediklerimi oluşturmada bana yardımcı olması koşuluyla, basit yoldan iletişim kurabilirim. O anki gereksinime ya da çok bildik konulara ilişkin alanlarda basit sorular sorabilir ve cevap verebilirim.
A2 - Bildik konular ve faaliyetler hakkında doğrudan bilgi alışverişini gerektiren basit ve alışılmış işlerde iletişim kurabilirim. Genellikle konuşmayı sürdürebilecek kadar anlamasam da kısa sohbetlere katılabilirim.
B1 - Dilin konuşulduğu ülkede seyahat ederken ortaya çıkabilecek bir çok durumla başa çıkabilirim. Bildik, ilgi alanıma giren ya da günlük yaşamla ilgili (Örneğin; aile, hobi, iş, yolculuk ve güncel olaylar gibi) konularda hazırlık yapmadan konuşmalara katılabilirim.
B2 - Öğrendiğim dili anadili olarak konuşan kişilerle anlaşmayı mümkün kılacak bir akıcılık ve doğallıkla iletişim kurabilirim. Bildik konularlardaki tartışmalarda, kendi görüşlerimi açıklayıp destekleyerek etkin bir rol oynayabilirim.
C1 - Kullanacağım sözcükleri çok fazla aramaksızın, kendimi akıcı ve doğal bir biçimde ifade edebilirim. Dili, toplumsal ve mesleki amaçlar için esnek ve etkili bir şekilde kullanabilirim. Düşünce ve fikirlerimi açık bir ifadeyle dile getirebilir ve karşımdakilerin konuşmalarıyla ilişkilendirebilirim.
C2 - Hiç zorlanmadan her türlü konuşma ya da tartışmaya katılabilir; deyimler ve konuşma diline ait ifadeleri anlayabilirim. Kendimi akıcı bir şekilde ifade edebilir, anlamdaki ince ayrıntıları kesin ve doğru bir biçimde vurgulayabilirim. Bir sorunla karşılaşırsam, geriye dönüp, karşımdaki insanların fark etmelerine fırsat vermeyecek bir ustalıkla ifadelerimi yeniden yapılandırabilirim.

25. İngilizce Sözlü Anlatım yeterlilik düzeyleri ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
Sözlü Anlatım yeterlilik düzeyiniz	◯	◯	◯	◯	◯	◯

İngilizce Konuşma - Sözlü Anlatım Yeterlilik Düzeyi

A1 - Yaşadığım yeri ve tanıdığım insanları betimlemek için basit kalıpları ve tümceleri kullanabilirim.
A2 - Basit bir dille ailemi ve diğer insanları, yaşam koşullarımı, eğitim geçmişimi ve son işimi betimlemek için bir dizi kalıp ve tümceyi kullanabilirim.
B1 - Deneyimlerimi, hayallerimi, umutlarımı, isteklerimi ve olayları betimlemek için çeşitli kalıpları yalın bir yoldan birbirinebağlayabilirim. Düşünce ve planlara ilişkin açıklamaları ve nedenleri kısaca sıralayabilirim. Bir öyküyü anlatabilirim, bir kitap ya da filmin konusunu aktarabilirim ve izlenimlerimi belirtebilirim.
B2 - İlgi alanıma giren çeşitli konularda açık ve ayrıntılı bilgi verebilirim. Çeşitli seçeneklerin olumlu ve olumsuz yanlarını ortaya koyarak bir konu hakkında görüş bildirebilirim.
C1 - Karmaşık konuları, alt temalarla bütünleştirerek, açık ve ayrıntılı bir biçimde betimleyebilir, belirli bakış açıları geliştirip uygun bir sonuçla konuşmamı tamamlayabilirim.
C2 - Her konuda bağlama uygun bir üslupla ve dinleyenin önemli noktaları ayırt edip anımsamasına yardımcı olacak şekilde konuşmamı etkili ve mantıksal bir şekilde yapılandırabilir, açık, akıcı bir betimleme ya da karşıt görüş sunabilirim.

26. İngilizce Yazılı Anlatım yeterlilik düzeyleri ile ilgili aşağıda verilen ifadeleri inceledikten sonra size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	A1	A2	B1	B2	C1	C2
Yazılı Anlatım yeterlilik düzeyiniz	◯	◯	◯	◯	◯	◯

İngilizce Yazma - Yazılı Anlatım Yeterlilik Düzeyleri

A1 - Kısa ve basit tümcelerle kartpostal yazabilirim. Örneğin; Tatil kartpostalıyla selam göndermek gibi. Kişisel bilgi içeren formları doldurabilirim Örneğin: Otel kayıt formuna isim, uyruk ve adres yazmak gibi.
A2 - Kısa, basit notlar ve iletiler yazabilirim. Teşekkür mektubu gibi çok kısa kişisel mektupları yazabilirim.
B1 - Bildik ya da ilgi alanıma giren konularla bağlantılı bir metin yazabilirim. Deneyim ve izlenimlerimi betimleyen kişisel mektuplar yazabilirim.
B2 - İlgi alanıma giren çok çeşitli konularda anlaşılır, ayrıntılı metinler yazabilirim. Belirli bir bakış açısına destek vererek ya da karşı çıkarak bilgi sunan ve nedenler ileri süren bir kopozisyon ya da rapor yazabilirim. Olayların ve deneyimlerin benim için taşıdıkları önemi ön plana çıkaran mektuplar yazabilirim
C1 - Görüşlerimi ayrıntılı bir biçimde, açık ve iyi yapılandırılmış metinlerle ifade edebilirim. Bir mektup, kompozisyon ya da rapor yazabilirim. Önemli olduğunu düşündüğüm konuları ön plana çıkararak karmaşık konularda yazabilirim. Hedef belirlediğim okuyucu kitlesine uygun bir üslup seçebilirim
C2 - Uygun bir üslup açık, akıcı metinler yazabilirim. Okuyucunun önemli noktaları ayırt edip anımsamasına yardımcı olacak etkili, mantıksal bir yapılandırmayla bir durum ortaya koyan karmaşık mektuplar, raporlar ya da makaleler yazabilirim. Mesleki ya da edebi yapıt özetleri ve eleştirileri yazabilirim.

Bilgisayar Okuryazarlığı ve Sanal Dünyalar

27. Bilgisayar Okuryazarlığınızı geliştirmek için ekstra bir ders, kurs, eğitim aldınız mı? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

28. Bilgisayar Okuryazarlığınızı geliştirmek için almış olduğunuz ekstra bir dersi, kursu, eğitimi kısaca açıklayınız. *

_____

29. Bir sanal dünyada hiç avatar ile gezindiniz mi? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

30. Sanal dünyalar hakkında bilgi sahibi misiniz? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

31. Aşağıda sanal dünya kullanımı ile ilgili verilen ifadelere ne ölçüde katıldığınızı, size en uygun seçeneği işaretleyerek belirtiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Sanal dünyayı kullanabileceğime eminim.					
Sanal dünya İngilizce konuşma becerisini geliştirmede yararlı olabilir.					
Sanal dünya sosyal etkileşim için yararlı olabilir.					
Sanal dünya benim için yararlı olabilir.					
Sanal dünya kullanmak hayat kalitemi artırabilir.					
Sanal dünya öğrencilerim için yararlı olabilir.					
Sanal dünya kullanmak öğrencilerimin hayat kalitemi artırabilir.					

İ. Community of Inquiry Survey (Turkish Version)

Original: Arbaugh et al. (2008)

Turkish Version: Öztürk (2012)

Araştırma Topluluğu Anketi

Sorulara doğru cevaplar vermeniz çalışmanın sonuçları için önem arz etmektedir.
* Gerekli

1. E-posta adresi *

2. Takma İsim *

Öğretimsel Buradalık

3. Tasarım ve Organizasyon *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Öğretmen, dersin önemli konularını açıkça belirtmiştir.					
Öğretmen, dersin önemli hedeflerini açıkça belirtmiştir.					
Öğretmen, ders etkinliklerine nasıl katılacağımıza ilişkin açık bir yönerge sunmuştur.					
Öğretmen, öğrenme etkinlikleri için önemli olan tarihleri/takvimi açık olarak belirtmiştir.					

4. Kolaylaştırma *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Öğretmen, öğrenmeme yardım eden ders konularına ilişkin fikir birliği ve fikir ayrılığı olan noktaları belirterek öğrenmeme yardım etmiştir.					
Öğretmenin ders konularının anlaşılmasındaki rehberliği, görüşlerimin netleşmesinde yardımcı oldu.					
Öğretmen derse katılan öğrencilerin derse katılımına ve üretken bir iletişim sürecini devam ettirmelerine yardımcı oldu.					
Öğretmenin sınıfın dersle ilgili çalışmalara odaklanmasını sağlaması öğrenmeme yardımcı oldu.					
Öğretmen, derse katılan öğrencileri dersle ilgili yeni kavramları/fikirleri keşfetmeleri için cesaretlendirmiştir					
Öğretmen, derse katılan öğrenciler arasındaki "biz" hissinin gelişmesini güçlendirmiştir.					

5. Doğrudan Öğretim *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Öğretmen, dersle ilgili konuları tartışmaya odaklanmamızda yardımcı olmuştur.					
Öğretmen, dersin hedeflerine ilişkin güçlü ve zayıf yanlarımı anlamamda yardımcı olarak bana geri bildirimler vermiştir.					
Ders öğretmeni zamanlaması iyi geribildirimler vermiştir.					

Toplumsal Buradalık

6. Duyuşsal İfadeler *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Dersin diğer katılımcılarının olduğunu bilmek, kendimi bu derse ait hissetmemi sağlamıştır.					
Derse katılan bazı öğrencilerle ilgili belirgin izlenimler edindim.					
Çevrimiçi ya da web-temelli iletişim, sosyal etkileşim için mükemmel bir ortamdır.					

7. Açık İletişim *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Çevrimiçi ortamlar yoluyla konuşurken kendimi çok rahat hissettim.					
Ders tartışmalarına katılırken kendimi çok rahat hissettim.					
Dersin diğer öğrencileri ile etkileşim kurarken kendimi rahat hissettim					

8. Grup Uyumu *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Dersin diğer katılımcılarının görüşlerine katılmadığımda bile kendimi rahat hissettim, üstelik bu durumda bile gruba karşı güvenim sürmekteydi.					
Kendi bakış açımın dersin diğer katılımcıları tarafından kabul edildiğini hissettim					
Çevrimiçi tartışmalar, başkalarıyla işbirliği yaptığım hissinin gelişmesine yardımcı oldu					

Bilişsel Buradalık

9. Tetikleyici Olay *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Ortaya atılan soru/sorunlar ders konularına olan ilgimi arttırdı.					
Ders etkinlikleri beni meraklandırdı.					
Dersle ilgili soruların yanıtlarını bulmak için kendimi güdülenmiş hissettim.					

10. Keşfetme *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Bu dersle ilgili soru/sorunları çözmek için çeşitli bilgi kaynaklarını kullandım.					
Beyin fırtınası yapmak ve ilgili bilgileri bulmaya çalışmak içerikle ilgili soruları yanıtlamamda yardımcı oldu.					
Çevrimiçi tartışmalar, farklı görüşleri anlamama yardım ederek değerli bir katkı sağladı.					

11. Bütünleştirme *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Karşılaştığım yeni bilgi/fikirler ders etkinliklerindeki soruları yanıtlamamda bana yardım etti.	◯	◯	◯	◯	◯
Öğrenme etkinlikleri, açıklamalar ve çözümler oluşturmamda bana yardım etti.	◯	◯	◯	◯	◯
Ders kapsamındaki tartışmalar ve ders içeriğine ilişkin düşüncelerim bu dersteki temel fikirleri anlamama yardım etti.	◯	◯	◯	◯	◯

12. Çözüm - Karar *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Bu derste oluşturulan bilgileri uygulamak ve sınamak (test etmek) için çeşitli yollar tanımlayabilirim.	◯	◯	◯	◯	◯
Derste ele alınan sorunlara, gerçek yaşamda uygulayabileceğim çözümler geliştirdim.	◯	◯	◯	◯	◯
Bu derste oluşturulan bilgileri, ilerde işimde ya da dersle ilgili olmayan diğer etkinliklerde kullanabilirim.	◯	◯	◯	◯	◯

J. Inquiry Form

Sorgulama Formu - Görev 1 Alışveriş Merkezleri

Sorulara doğru, ve uygun cevaplar vermeniz çalışmanın sonuçları için önem arz etmektedir.

* Gerekli

1. E-posta adresi *

2. Takma adınızı yazın *

3. Bu göreve (Görev 1 - Alışveriş Merkezleri) katıldınız mı? *

   Yalnızca bir şıkkı işaretleyin.

   - Sadece ders içi etkinliğe katıldım.
   - Sadece ders dışı etkinliğine katıldım.
   - Hem ders içi hem de ders dışı etkinliğine katıldım.

4. Ders başladıktan hemen sonra dersin öğretim elemanı ile neler yapıldı? Görevi gerçekleştirmek için yapılanlar ne kadar etkili oldu? Lütfen açıklayınız. *

OLAYLARI BAŞLATMA

5. Bu görevi (Görev 1)'i tanımlar mısınız? Görevin amacı nedir? *

6. Görev hakkında bilgiye kimden/nereden ulaştınız? *

7. Görev hakkında bilgiye ulaşmada TeachinGrid ortamında yararlandığınız/etkileşim içinde olduğunuz bir ortam aracı oldu mu? Neden bu aracı kullandınız? Bu araç yeterli oldu mu? Bu araç ile ilgili bir sorun yaşadınız mı? *

8. TeachinGrid'e görev hakkında bilgiye ulaşmada kolaylık sağlayabilecek neler eklenebilir? *

9. Bu görev hakkında bir şeyler yapmaya (konuşma/tartışmaya başlatan - tetikleyen olay) nasıl başladınız? *

10. Bu görevde anlaşılması güç olan, kafa karıştırıcı durumlarla/sorularla karşılaştınız mı? Bu durumda neler yaptınız? Lütfen açıklayınız. Deneyiminizi paylaşınız. *

11. Bu görevde ilginizi çeken ve merakınızı arttıran unsurlar nelerdir? Lütfen açıklayınız. *

12. Görevin bu aşamasında herhangi bir sorun ile karşılaştınız mı? Sorunu çözebildiniz mi? Nasıl çözebildiniz? Lütfen açıklayınız. *

ARAŞTIRMA / KEŞFETME

Görevi gerçekleştirmek için araştırma yapma, bilgi alışverişi yapma süreci

13. Görev hakkında bilgi aldıktan sonra, görevi gerçekleştirmek için bireysel olarak TeachinGrid'te neler yaptınız? *

14. Görev hakkında bilgi aldıktan sonra, görevi gerçekleştirmek için grup üyeleriniz ile TeachinGrid'te neler yaptınız? *

15. Görev hakkında bilgi aldıktan sonra, görevi gerçekleştirmek için grup üyeleriniz ile TeachinGrid'te hangi tartışmalar (fikir alışverişleri, beyin fırtınası vb.) yapıldı? *

16. Grup üyelerinize görev hakkında önerileriniz oldu mu? Bu öneriler nelerdi? Öneriniz yoksa lütfen nedenini belirtiniz. *

17. Araştırma sürecinde görev hakkında sorularınızı yanıtlamak çözüm bulmak için başvurduğunuz bilgi kaynakları nelerdi? Neden bu kaynakları seçtiniz? Bu kaynaklar yeterli oldu mu? Lütfen nedenlerini belirtiniz. *

18. Araştırma/Keşfetme sürecinde TeachinGrid ortamında yararlandığınız/etkileşim içinde olduğunuz bir ortam aracı oldu mu? Neden bu aracı kullandınız? Bu araç yeterli oldu mu? Bu araç ile ilgili bir sorun yaşadınız mı? *

19. TeachinGrid'e Araştırma/Keşfetme sürecinde kolaylık sağlayabilecek neler eklenebilir? *

20. Görevin bu aşamasında (araştırma/keşfetme) herhangi bir sorun ile karşılaştınız mı? Sorunu çözebildiniz mi? Nasıl çözebildiniz/Neden çözemediniz? Lütfen açıklayınız. *

21. Bu görevdeki grup içi tartışmalardan hangi önerileri ve sonuçları elde ettiniz? *

22. Bu öneri ve sonuçların elde edilmesinde "grup üyelerinin öne sürdüğü fikirler/bilgi" ne kadar etkili oldu? Lütfen açıklayınız. *

23. Bütünleştirme (grup üyeleri ile etkileşim sonucunda ortaya atılan fikirlerin bir araya getirilerek anlamlı hale getirilmesi / bütünleştirilmesi) aşamasında TeachinGrid ortamında yararlandığınız/etkileşim içinde olduğunuz bir ortam aracı oldu mu? Neden bu aracı kullandınız? Bu araç yeterli oldu mu? Bu araç ile ilgili bir sorun yaşadınız mı? *

24. TeachinGrid'e Bütünleştirme sürecinde kolaylık sağlayabilecek neler eklenebilir? *

25. Görevin bu aşamasında (Bütünleştirme - grup üyeleri ile etkileşim sonucunda ortaya atılan fikirlerin bir araya getirilerek anlamlı hale getirilmesi / bütünleştirilmesi) herhangi bir sorun ile karşılaştınız mı? Sorunu çözebildiniz mi? Nasıl çözebildiniz/Neden çözemediniz? Lütfen açıklayınız. *

ÇÖZÜMLEME

Grup üyeleri ile etkileşim sonucunda ortaya çıkan yeni fikirlerin uygulanması

26. Görev performansında neler yaptınız? *

27. Bu görevde öğrendiklerinizin gelecekte ders dışı etkinlikte ve iş hayatında işinize yarayacağını düşünüyor musunuz? Lütfen açıklayınız. *

28. Görevin bu aşamasında (Çözümleme aşaması - grup üyeleri ile etkileşim sonucunda ortaya çıkan yeni fikirlerin uygulanması) herhangi bir sorun ile karşılaştınız mı? Sorunu çözebildiniz mi? Nasıl çözebildiniz/Neden çözemediniz? Lütfen açıklayınız. *

29. Bu görevi başarılı tamamlayabilmek için kendinize özgü denediğiniz/geliştirdiğiniz yollar/stratejiler oldu mu? Bu stratejiler nelerdir? Açıklayınız. *
Başarılı olmak için neler yaptın?

30. Görev sonunda bu yolların/stratejilerin başarılı olduğunu düşünüyor musunuz? Stratejinizi değerlendiriniz. *

Yansıtma

Ders İçerisinde Yansıtmalar

31. TeachinGrid'te ders içerisinde görev sonunda geribildirim/yorum aldınız mı? Bu geribildirim/yorum faydalı olduğunu düşünüyor musunuz? Lütfen açıklayınız. *

32. TeachinGrid'te arkadaşlarınızın(kendi grup arkadaşlarınız ve diğer grup üyelerine) performanslarına yönelik ders içerisinde geri bildirim, dönüt verdiniz mi? Neler söylediniz, paylaştınız? *

Ders Sonrasında Yansıtmalar

33. Görev sonrasında görev ile ilgili yansıtmalarda bulundunuz mu? Bu yansıtmaların faydalı olduğunu düşünüyor musunuz? Lütfen açıklayınız. *

Ders dışı etkinlikler

Ders Dışı Etkinlik Kayıtları

34. Bu göreve yönelik ders dışı etkinlik kaydı oluşturdunuz mu? *

Yalnızca bir şıkkı işaretleyin.

- Evet
- Hayır

Ders dışı etkinlikler ve Yansıtmalar

35. Ders içerisinde gerçekleştirmiş olduğunuz görevlerin performans kısımlarını ders dışı etkinlikte aynı süreci takip ederek tekrar oluşturdunuz. Sadece bu görev için ders içi kaydınız ile ders dışı kaydınızı kıyaslayabilir misiniz? Aralarında fark olduğunu düşünüyor musunuz? Lütfen nedenlerini belirtiniz. *

36. Ders dışı etkinlik sonrasında diğer grupların kayıtları ile ilgili yansıtmalarda bulundunuz mu? Bu yansıtmaların faydalı olduğunu düşünüyor musunuz? Lütfen açıklayınız. *

37. Ders dışı etkinlik sonrasında diğer grupların sizin grubunuza yönelik geri bildirimleri hakkında ne düşünüyorsunuz? Bu yansıtmaların faydalı olduğunu düşünüyor musunuz? Lütfen açıklayınız. *

38. Yapılan tüm yansıtmalardan sonra grubunuzun gerçekleştirmiş olduğu göreve yönelik aklınıza takılan sorular, öneriler var mı? Görevi tekrar gerçekleştirme imkanınız olsaydı ne gibi değişiklikler yapardınız? *

39. Varsa, yorum, önerileri ve isteklerinizi yazınız.

K. Reflection Form for the EFL Learners

Yansıtma Formu - Görev 1 Alışveriş Merkezleri

Sorulara doğru, ve uygun cevaplar vermeniz çalışmanın sonuçları için önem arz etmektedir.
* Gerekli

1. E-posta adresi *

2. Takma adınızı yazın *
   Örneğin, Sarah G1, Oliver G3

3. Bu etkinliğe katıldınız mı? *

   Yalnızca bir şıkkı işaretleyin.

   - Evet *4. soruya gidin*
   - Hayır

"Görev 1-Alışveriş Merkezleri" - Yansıtma

4. Bu etkinlikte neler yaptığınızı açıklayınız? Neler öğrendiniz? *

5. Bu etkinlikte, TeachinGrid ortamı hakkında neler öğrendiniz? *

6. "Görev 1 - Alışveriş Merkezleri" etkinliğinde, senin için ne iyi gitti? Öğrenmeni olumlu etkileyen ortamda beğendiğin özellikler nelerdir? *

7. "Görev 1 - Alışveriş Merkezleri" etkinliğinde, senin için ne iyi gitmedi? Öğrenmeni olumsuz etkileyen ortamda karşılaştığın zorluklar nelerdir? *

8. Bir sonraki görev(Görev 2 - Fobiler) için daha iyi neyi yapmayı düşünüyorsun? *

9. Bu etkinlik için KİŞİSEL konuşma (etkinliklere katılma) performansınızı değerlendiriniz. *

Yalnızca bir şıkkı işaretleyin.

1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○

10. Önceki sorudaki değerlendirme notunu seçme nedeniniz nedir? *

11. "Görev 1 - Alışveriş Merkezleri" etkinliğinde, GRUBUNUZ için ne iyi gitti, ne iyi gitmedi ve bir sonraki görev(Görev 2-Fobiler) için grubunuz ile daha iyi ne yapacaksınız? *

12. Bu etkinlik için grubunuzun konuşma(etkinliklere katılma) performansını değerlendiriniz. *

Yalnızca bir şıkkı işaretleyin.

1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○

13. Önceki sorudaki grup değerlendirme notunu seçme nedeniniz nedir? *

14. "Sadece bu konuşma görev etkinliğinin", yabancı dil konuşma becerinize katkısını açıklayınız? *

15. "Sadece bu etkinlik için TeachinGrid ortamının", yabancı dil konuşma becerinize katkısını açıklayınız? Örnek vererek açıklayınız. *

16. TeachinGrid ortamı, bu konuşma görev etkinliği için nasıl geliştirilebilir? *

17. Varsa, yorum, önerileri ve isteklerinizi yazınız.

L. Reflection Form for the Instructor

Yansıtma Formu - Görev 1 Alışveriş Merkezleri - Öğretim Elemanı

Sorulara doğru, ve uygun cevaplar vermeniz çalışmanın sonuçları için önem arz etmektedir.

* Gerekli

1. E-posta adresi *

2. Takma adınızı yazın *

   Örneğin, Sarah G1, Oliver G3

3. Bu etkinlikte neler yaptığınızı açıklayınız? *

4. Bu görev etkinliği için kendinizi değerlendiriniz. *

   Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Dersin önemli konularını açıkça belirttim.					
Dersin önemli hedeflerini açıkça belirttim.					
Ders etkinliklerine nasıl katılacaklarına ilişkin açık bir yönerge sundum.					
Öğrenme etkinlikleri için önemli olan tarihleri/takvimi açık olarak belirttim.					

Öğrencilerin öğrenmelerine yardım eden ders konularına ilişkin fikir birliği ve fikir ayrılığı olan noktaları belirterek onların öğrenmelerine yardım ettim.					
Ders konularının anlaşılmasındaki rehberliğim, öğrencilerin görüşlerinin netleşmesinde yardımcı oldu.					
Derse katılan öğrencilerin derse katılımına ve üretken bir iletişim sürecini devam ettirmelerine yardımcı oldum.					
Sınıfın dersle ilgili çalışmalara odaklanmasını sağlamam öğrencilerin öğrenmelerine yardımcı oldu.					
Derse katılan öğrencileri dersle ilgili yeni kavramları/fikirleri keşfetmeleri için cesaretlendirdim.					
Derse katılan öğrenciler arasındaki "biz" hissinin gelişmesini güçlendirdim.					
Öğrencilerin dersle ilgili konuları tartışmaya odaklanmamızda yardımcı olmuştur.					
Öğrencilerin dersin hedeflerine ilişkin güçlü ve zayıf yanlarını anlamalarında yardımcı olarak onlara geri bildirimler verdim.					

5. Bu görevde öğrencilerin ilgisini çeken ve merakını arttıran unsurlar nelerdir? Lütfen açıklayınız. *

6. Bu etkinlik sırasında öğrencilerin hangi kafa karıştırıcı/şaşırtıcı problemlerle karşılaştıklarını gözlemlediniz? *

7. Bu etkinlik ile ilgili olarak, hangi konularda tartışmalar yapıldı? Bu tartışmalarda hangi sonuçlara varıldı? *

8. Bu etkinlikte yapılanların, bu konuşma dersinin hangi kazanımlarına (temel fikirleri) ulaşmasında etkili olduğunu düşünüyorsunuz? Nedenlerini açıklayınız. *

9. Bu etkinlikte öğrencilerin öğrendiklerini gelecekte ders dışı etkinlikte ve iş hayatında işinize yarayacağını düşünüyor musunuz? Lütfen açıklayınız. *

10. Bu etkinlikte, "TeachinGrid ortamı" hakkında neler öğrendin? *

11. "Görev 1 - Alışveriş Merkezleri" etkinliğinde, senin için ne iyi gitti? *

12. "Görev 1 - Alışveriş Merkezleri"etkinliğinde, gözlemlediğiniz öğrenciler için ne iyi gitti? Öğrencilerin öğrenmelerini olumlu etkilediğini düşündüğünüz ortamdaki özellikler nelerdir? *

13. "Görev 1 - Alışveriş Merkezleri" etkinliğinde, senin için ne iyi gitmedi? Öğretimini olumsuz etkileyen ortamda karşılaştığın zorluklar nelerdir? Problemler ile nerede ve hangi aşamada(görev öncesi, görev sırasında, görev sonrasında) karşılaştın? *

14. "Görev 1 - Alışveriş Merkezleri" etkinliğinde, gözlemlediğiniz öğrenciler için ne iyi gitmedi? Öğrencilerin öğrenmelerini olumsuz etkileyen ortamda karşılaştıkları zorluklar nelerdir? Öğrenciler problemler ile nerede ve hangi aşamada(görev öncesi, görev sırasında, görev sonrasında) karşılaştı? *

15. Bir sonraki görev(Görev 2 - Fobiler) için daha iyi neyi yapmayı düşünüyorsun? *

16. Bu konuşma görev etkinliğinin, öğrencilerin yabancı dil konuşma becerilerine nasıl katkı sağladığını düşünüyorsunuz? *

17. Bu etkinlik için TeachinGrid ortamının, yabancı dil konuşma becerilerine nasıl katkı sağladığını düşünüyorsunuz? Lütfen açıklayınız. *

18. TeachinGrid ortamı, bu konuşma görev etkinliği için nasıl geliştirilebilir? *

19. Varsa, yorum, önerileri ve isteklerinizi yazınız.

M. General Evaluation Form for the EFL Learners

Genel Değerlendirme Formu

Sorulara doğru cevaplar vermeniz çalışmanın sonuçları için önem arz etmektedir.
* Gerekli

1. E-posta adresi *

2. Takma adınızı yazın *
Örneğin, Sarah G1, Oliver G3

Genel Değerlendirme

3. Size uygun olan seçeneği işaretleyiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Sanal dünya İngilizce konuşma becerisini geliştirmede yararlı oldu.					
Sanal dünya sosyal etkileşim için yararlı oldu.					
Sanal dünya benim için yararlı oldu.					
Sanal dünya kullanmak hayatımın kalitesini artırdı.					

4. Dersin öğretim elemanı hakkında düşünceleriniz nelerdir? *

5. Grup arkadaşlarınız hakkında düşünceleriniz nelerdir? *

6. TeachinGrid ortamının beğendiğin özellikleri nelerdir? Lütfen açıklayınız. *

7. TeachinGrid ortamının beğenmediğin / geliştirilmesinin gerekli olduğunu düşündüğün özellikleri nelerdir? Lütfen açıklayınız. *

8. Çalışma boyunca herhangi bir sorunla karşılaştınız mı? Eğer cevabınız evetse, bu sorunlar nelerdi? Sorunları nasıl çözdünüz? *

Konuşma Becerisi

9. TeachinGrid ortamının "özellikle konuşma becerisinin geliştirilmesinde" katkı sağlayan beğendiğin özellikleri nelerdir? Üzerinde nasıl bir etkisi oldu? Lütfen açıklayınız. *

10. TeachinGrid ortamının "özellikle konuşma becerisinin geliştirilmesine" engel olan beğenmediğin özellikleri nelerdir? Üzerinde nasıl bir etkisi oldu? Lütfen açıklayınız. *

11. TeachinGrid ortamını kullandığın ilk günden bugüne konuşma becerinizde bir değişiklik olduğunu düşünüyor musun? Olumlu/olumsuz olarak nitelendirebileceğiniz değişimler nelerdir? *

12. TeachinGrid ortamında İngilizce konuşurken neler hissettin? Lütfen açıklayınız. *

13. TeachinGrid'ten önce İngilizce konuşmaya yönelik endişe/kaygı durumunuz nasıldı? *

14. Çalışma sonunda İngilizce konuşmaya yönelik endişe/kaygı açısından herhangi bir değişiklik gözlemlediniz mi? Kendinizi bu anlamda nasıl değerlendiriyorsunuz? *

15. TeachinGrid'ten önce İngilizce konuşmaya yönelik motivasyon durumunuz nasıldı? *

16. Çalışma sonunda İngilizce konuşmaya yönelik motivasyonunuz açısından herhangi bir değişiklik gözlemlediniz mi? Kendinizi bu anlamda nasıl değerlendiriyorsunuz? *

17. TeachinGrid'ten önce İngilizce konuşmaya yönelik özgüven durumunuz nasıldı? *

18. Çalışma sonunda İngilizce konuşmaya yönelik özgüveniniz açısından herhangi bir değişiklik gözlemlediniz mi? Kendinizi bu anlamda nasıl değerlendiriyorsunuz? *

19. TeachinGrid'ten önce İngilizce iletişim kurma istekliliği/iletişime isteklilikleri durumunuz nasıldı? *

20. Çalışma sonunda İngilizce iletişim kurma istekliliği açısından herhangi bir değişiklik gözlemlediniz mi? Kendinizi bu anlamda nasıl değerlendiriyorsunuz? *

21. TeachinGrid ortamını kullandığın ilk günden bugüne sizde nasıl değişiklikler oldu? Olumlu/olumsuz olarak nitelendirebileceğiniz değişimler nelerdir? *

22. Varsa, yorum, önerileri ve isteklerinizi yazınız.

N. General Evaluation Form for the Instructor

Genel Değerlendirme Formu - Öğretim Elemanı

Sorulara doğru cevaplar vermeniz çalışmanın sonuçları için önem arz etmektedir.
* Gerekli

1. E-posta adresi *

2. Takma adınızı yazın *
Örneğin, Sarah G1, Oliver G3

Genel Değerlendirme

3. Size uygun olan seçeneği işaretleyiniz. *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Sanal dünya(TeachinGrid) İngilizce konuşma becerisini geliştirmede yararlı oldu.					
Sanal dünya (TeachinGrid) sosyal etkileşim için yararlı oldu.					
Sanal dünya(TeachinGrid) benim için yararlı olabilir.					
Sanal dünyayı (TeachinGrid) kullanmak hayatımın kalitesini arttırabilir.					
Sanal dünya(TeachinGrid) öğrencilerimin İngilizce konuşma becerisini geliştirmede yararlı oldu.					

Sanal dünya (TeachinGrid) öğrencilerimin sosyal etkileşim için yararlı oldu.					
Sanal dünya(TeachinGrid) öğrencilerimin benim için yararlı olabilir.					

4. Genel olarak dersin işlenişi hakkında düşünceleriniz nelerdir? *

5. Dersin öğrencilerin genel durumu hakkında düşünceleriniz nelerdir? *

6. Gruplar hakkında düşünceleriniz nelerdir? *
   Grup içi uyum, işbirliği, iletişim, vb.

7. TeachinGrid ortamının beğendiğin özellikleri nelerdir? Lütfen açıklayınız. *

8. TeachinGrid ortamının beğenmediğin / geliştirilmesinin gerekli olduğunu düşündüğün özellikleri nelerdir? Lütfen açıklayınız. *

9. Çalışma boyunca herhangi bir sorunla karşılaştınız mı? Eğer cevabınız evetse, bu sorunlar nelerdi? Sorunları nasıl çözdünüz? *

Konuşma Becerisi

10. TeachinGrid ortamının "özellikle konuşma becerisinin geliştirilmesinde" katkı sağlayan beğendiğin özellikleri nelerdir? Üzerinde nasıl bir etkisi oldu? Lütfen açıklayınız. *

11. TeachinGrid ortamının "özellikle konuşma becerisinin geliştirilmesine" engel olan beğenmediğin özellikleri nelerdir? Üzerinde nasıl bir etkisi oldu? Lütfen açıklayınız. *

12. TeachinGrid ortamını kullandığın ilk günden bugüne öğrencilerinizin konuşma becerinizde bir değişiklik olduğunu düşünüyor musun? Olumlu/olumsuz olarak nitelendirebileceğiniz değişimler nelerdir? *

13. TeachinGrid ortamında İngilizce konuşurken neler hissettin? Lütfen açıklayınız. *

14. TeachinGrid'ten önce/başlangıcında öğrencilerinizin İngilizce konuşmaya yönelik endişe/kaygı durumunu hakkında genel olarak düşünceleriniz nelerdir? *

15. Çalışma sonunda İngilizce konuşmaya yönelik endişe/kaygı açısından öğrencilerinizde herhangi bir değişiklik gözlemlediniz mi? Öğrencilerinizi bu anlamda nasıl değerlendiriyorsunuz? *

16. TeachinGrid'ten önce/başlangıcında öğrencilerinizin İngilizce konuşmaya yönelik motivasyon durumu genel olarak nasıldı? *

17. Çalışma sonunda İngilizce konuşmaya yönelik motivasyon açısından öğrencilerinizde herhangi bir değişiklik gözlemlediniz mi? Öğrencilerinizi bu anlamda nasıl değerlendiriyorsunuz? *

18. TeachinGrid'ten önce/başlangıcında öğrencilerinizin İngilizce konuşmaya yönelik özgüven durumu genel olarak nasıldı? *

19. Çalışma sonunda İngilizce konuşmaya yönelik özgüven açısından öğrencilerinizin herhangi bir değişiklik gözlemlediniz mi? Öğrencilerinizi bu anlamda nasıl değerlendiriyorsunuz? *

20. TeachinGrid'ten önce/başlangıcında öğrencilerinizin İngilizce iletişim kurma isteklilliği/iletişime isteklilikleri durumu genel olarak nasıldı? *

21. Çalışma sonunda İngilizce iletişim kurma istekliliği açısından öğrencilerinizde herhangi bir değişiklik gözlemlediniz mi? Öğrencilerinizi bu anlamda nasıl değerlendiriyorsunuz? *

22. TeachinGrid ortamını kullandığın ilk günden bugüne sizde nasıl değişiklikler oldu? Olumlu/olumsuz olarak nitelendirebileceğiniz değişimler nelerdir? *

23. TeachinGrid ortamını kullandığın ilk günden bugüne öğrencilerinizde nasıl değişiklikler oldu? Olumlu/olumsuz olarak nitelendirebileceğiniz değişimler nelerdir? *

24. Varsa, yorum, önerileri ve isteklerinizi yazınız.

O. Interview Protocol

Görüşme Soruları

Hazırlanan 3B sanal ortamda İngilizce Konuşma ile ilgili deneyimler edindiniz. Bu aşamada 3B sanal ortamda bilişsel buradalığınızı ve konuşma becerinizin gelişimini etkileyen faktörleri, ortamda karşılaşılan sorunlar hakkında sizin görüşlerinize ihtiyaç duymaktayız. Samimi cevaplarınız bizi mutlu edecektir. Görüşme yaklaşık 40-50 dakika sürecektir. Çalışmanın daha sağlıklı yürümesi için izin verirseniz görüşmenin ses kaydını almak istiyorum. Cevaplarınız tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Görüşmeyle ilgili sorularınızı çekinmeden sorabilirsiniz. Görüşmeyi kabul ettiğiniz için şimdiden teşekkür ederiz.

TEACHINGRID'TE GERÇEKLEŞTİRİLEN KONUŞMA GÖREVLERİ

1. Konuşma görevlerinin hangilerine katıldınız?
   (Görev 1- Alışveriş Merkezleri – Görev 2-Fobiler – Görev 3-Geleceğin Tren İstasyonu – Görev 4-Sahte/Gerçek Haberler)
   1.1. Görevlere hiç katılmadığınız oldu mu? Nedenini lütfen açıklayınız.
2. Katıldığınız görevleri tamamlayabildiniz mi? Tamamlayamadıysanız nedenini lütfen açıklayınız.
3. Genel olarak konuşma görevleri hakkında düşüncelerinizi kısaca paylaşabilir misiniz?
4. TeachinGrid'i ilk kez kullanmaya başladığında neler yaptınız? (Görev 0-Eğitim/Tanıtım).
   4.1. Bu görevde ilgini çeken, merakınızı arttıran unsurlar nelerdi? Yaşadığınız deneyimi lütfen paylaşınız.
5. Bu göreve (Görev 1-Alışveriş Merkezleri) katıldınız mı?
   5.1. Ders içi etkinliği ve Temiz kayda katıldınız mı? Katılamadıysanız nedenini lütfen açıklayınız.
6. Ders başladıktan hemen sonra dersin öğretim elemanı ile neler yapıldı?
   (Görev öncesinde - Görev tanıtımı yapılmadan önce neler konuşuldu? neler tartışıldı -video gösterimi vb.)
   6.1. Bu görevi gerçekleştirmek için ne kadar etkili oldu? Lütfen açıklayınız.

TE. OLAYLARI BAŞLATMA – Sense of puzzlement

7. Görev 1'i tanımlar mısınız?
   7.1. Görevin amacı nedir?

8. Görev hakkında bilgiye kimden/nereden ulaştınız? (TeachinGrid ortam araçları, Moodle)
   8.1. Görev hakkında bilgiye ulaşmada TeachinGrid ortamında yararlandığınız/etkileşim içinde olduğunuz bir ortam aracı oldu mu? (Web aracı (televizyon şeklinde), sunum aracı, bilgi panoları, ortamdaki nesneler, vb.)
   - Bu araç yeterli oldu mu?
   - Bu araçla ilgili bir sorun ile karşılaştınız mı?
9. TeachinGrid'e görev hakkında bilgiye ulaşmada kolaylık sağlayabilecek neler eklenebilir?
10. Bu görev hakkında bir şeyler yapmaya (konuşmaya/tartışmaya başlatan - tetikleyen olay) nasıl başladınız?
11. Bu görevde anlaşılması güç olan, kafa karıştırıcı durumlarla/sorularla karşılaştınız mı?
    11.1. Bu durumda neler yaptınız? Lütfen açıklayınız. Yaşadığınız deneyimi lütfen paylaşınız.
12. Bu görevde ilginizi çeken ve merakınızı arttıran unsurlar nelerdir? Lütfen açıklayınız.
    12.1. Konuşma görevine yönelik unsurlar nelerdir?
    12.2. TeachinGrid ortamına yönelik unsurlar nelerdir?
13. Görevin bu aşamasında herhangi bir sorun ile karşılaştınız mı?
    13.1. Sorunu çözebildiniz mi?
    13.2. Nasıl çözebildiniz? Lütfen açıklayınız.

EX. ARAŞTIRMA – Information Exchange
(Görevi gerçekleştirmek için araştırma yapma, bilgi alışverişi yapma süreci)

14. Görev hakkında bilgi aldıktan sonra, görevi gerçekleştirmek için
    14.1. Bireysel olarak TeachinGrid'te neler yaptınız? Nasıl araştırmalar yaptınız?
    14.2. Grup üyeleriniz ile TeachinGrid'te neler yaptınız? Nasıl araştırmalar yaptınız?
15. Görev hakkında bilgi aldıktan sonra, görevi gerçekleştirmek için grup üyeleriniz ile TeachinGrid'te hangi tartışmalar (fikir alışverişleri, beyin fırtınası vb.) yapıldı?
16. Grup üyelerinize görev hakkında önerileriniz oldu mu?

16.1. Bu öneriler nelerdi? Lütfen açıklayınız.

17. Araştırma sürecinde görev hakkında sorularınızı yanıtlamak çözüm bulmak için başvurduğunuz bilgi kaynakları (örneğin, kişisel deneyim, web siteleri, makaleler, kitaplar) nelerdi?
    17.1. Bu kaynaklar yeterli oldu mu? Lütfen nedenini belirtiniz.
18. Araştırma/Keşfetme sürecinde TeachinGrid ortamında yararlandığınız/etkileşim içinde olduğunuz bir ortam aracı oldu mu?
    (Web aracı (televizyon şeklinde), sunum aracı, bilgi panoları, ortamdaki nesneler, vb.).
    18.1. Bu araç yeterli oldu mu?
    18.2. Bu araçla ilgili bir sorun ile karşılaştınız mı?
19. TeachinGrid'e Araştırma/Keşfetme sürecinde kolaylık sağlayabilecek neler eklenebilir?
20. Görevin bu aşamasında (Araştırma/keşfetme) herhangi bir sorun ile karşılaştınız mı?
    20.1. Sorunu çözebildiniz mi?
    20.2. Nasıl çözebildiniz/Neden çözemediniz? Lütfen açıklayınız.

IN. BÜTÜNLEŞTİRME – Connecting Ideas
(Grup üyeleri ile etkileşim sonucunda ortaya atılan fikirlerin bir araya getirilerek anlamlı hale getirilmesi / bütünleştirilmesi)

21. Bu görevdeki grup içi tartışmalardan hangi önerileri ve sonuçları elde ettiniz?
22. Bu öneri ve sonuçların elde edilmesinde "grup üyelerinin öne sürdüğü fikirler/bilgi" ne kadar etkili oldu? Lütfen nedenleri ile açıklayınız.
23. Bütünleştirme (grup üyeleri ile etkileşim sonucunda ortaya atılan fikirlerin bir araya getirilerek anlamlı hale getirilmesi / bütünleştirilmesi) aşamasında TeachinGrid ortamında yararlandığınız/etkileşim içinde olduğunuz bir ortam aracı oldu mu?
    23.1. Bu araç yeterli oldu mu?
    23.2. Bu araç ile ilgili bir sorun yaşadınız mı?
24. TeachinGrid'e Bütünleştirme sürecinde kolaylık sağlayabilecek neler eklenebilir?
25. Görevin bu aşamasında (Bütünleştirme - grup üyeleri ile etkileşim sonucunda ortaya atılan fikirlerin bir araya getirilerek anlamlı hale getirilmesi / bütünleştirilmesi) herhangi bir sorun ile karşılaştınız mı?
    25.1. Sorunu çözebildiniz mi?
    25.2. Nasıl çözebildiniz/Neden çözemediniz? Lütfen açıklayınız.

RE. ÇÖZÜMLEME – Apply new ideas
(Grup üyeleri ile etkileşim sonucunda ortaya çıkan yeni fikirlerin uygulanması)

26. Görev performansında (sunum/role play yaptığınız) neler yaptınız?
27. Bu görevde öğrendiklerinizin gelecekte ders dışı etkinlikte ve iş hayatında işinize yarayacağını düşünüyor musunuz? Lütfen nedenini belirtiniz.
28. Görevin bu aşamasında (Çözümleme aşaması- grup üyeleri ile etkileşim sonucunda ortaya çıkan yeni fikirlerin uygulanması) herhangi bir sorun ile karşılaştınız mı?
    28.1. Sorunu çözebildiniz mi?
    28.2. Nasıl çözebildiniz/Neden çözemediniz? Lütfen açıklayınız.
29. Bu görevi başarılı tamamlayabilmek için kendinize özgü denediğiniz/geliştirdiğiniz yollar/stratejiler oldu mu (Başarılı olmak için neler yaptın?)?
    29.1. Bu stratejiler nelerdir? Açıklayınız. (MC)
    29.2. Görev sonunda bu yolların/stratejilerin başarılı olduğunu düşünüyor musunuz? Lütfen stratejinizi değerlendiriniz.

YANSITMA – Ders İçerisinde

30. TeachinGrid'te ders içerisinde görev sonunda geribildirim/yorum/görüş aldınız mı?
    30.1. Kimden/Kimlerden aldınız?
    30.2. Bu geribildirim/yorum/görüşlerin faydalı olduğunu düşünüyor musunuz? Lütfen nedenleri ile açıklayınız.
31. TeachinGrid'te arkadaşlarınızın (kendi grup arkadaşlarınız ve diğer grup üyelerine) performanslarına yönelik ders içerisinde geri bildirim, dönüt verdiniz mi? Yorumunuzu paylaştınız mı?
    31.1. Neler söylediniz, paylaştınız?

YANSITMA – Ders Sonrasında

32. Görev sonrasında görev ile ilgili yansıtmalarda bulundunuz mu? (Moodle'da linki yer alan Yansıtma soruları(ne iyi gitti, vb.)).
    32.1. Bu yansıtmaların faydalı olduğunu düşünüyor musunuz? Lütfen nedenleri ile açıklayınız.

TEMİZ KAYITLAR (DERS DIŞI KAYIT) – Ders Sonrasında

33. Bu göreve yönelik temiz kaydı oluşturdunuz mu?

(Ders içerisinde gerçekleştirmiş olduğunuz görevlerin temiz kayıtlarını aynı süreci takip ederek tekrar oluşturdunuz mu?)

34. Ders içerisinde gerçekleştirmiş olduğunuz görevlerin temiz kayıtlarını aynı süreci takip ederek tekrar oluşturdunuz. Sadece bu görev için ders içi kaydınız ile temiz kaydı kıyaslayabilir misiniz?
    34.1. Aralarında fark olduğunu düşünüyor musunuz? Lütfen nedenleri ile açıklayınız.
35. Temiz kayıtların sonrasında diğer grupların kayıtları ile ilgili yansıtmalarda bulundunuz mu? (Moodle-Grup Değerlendirmeleri-Strong-weak points).
    35.1. Bu yansıtmaların faydalı olduğunu düşünüyor musunuz? Lütfen nedenleri ile açıklayınız.
36. Temiz kayıtların sonrasında diğer grupların sizin grubunuza yönelik geri bildirimleri hakkında ne düşünüyorsunuz?
    (Moodle-Grup-Self Değerlendirmeleri).
    36.1. Bu yansıtmaların faydalı olduğunu düşünüyor musunuz? Lütfen nedenleri ile açıklayınız.
37. Yapılan tüm yansıtmalardan sonra grubunuzun gerçekleştirmiş olduğu göreve yönelik aklınıza takılan sorular, öneriler var mı?
    37.1. Görevi tekrar gerçekleştirme imkânınız olsaydı ne gibi değişiklikler yapardınız? Lütfen açıklayınız.

KONUŞMA GÖREVLERİ - GENEL

38. Konuşma görevlerinden hangisini/hangileri etkili buldunuz? Lütfen nedenleri ile açıklayınız.
39. Konuşma görevlerinin İngilizce konuşma becerilerinize katkısı olduğunu düşünüyor musunuz? Lütfen açıklayınız.
40. En başarılı olduğunuzu düşündüğünüz görev hangisidir? Lütfen nedenleri ile açıklayınız.

KONUŞMA BECERİLERİNE KATKISI

41. TeachinGrid ortamında konuşma görevlerinde görev performansını gerçekleştirmeden önce yapmış olduğunuz grup içi tartışmaların / fikir alış-verişlerinin / beyin fırtınasının (Tartışma süreçleri) İngilizce konuşma becerilerinize katkısı oldu mu?
    41.1. Cevabınız evet ise nasıl bir etkisi oldu? Yaşadığınız deneyimi lütfen paylaşınız.
42. Görevleri gerçekleştirirken İngilizce konuşma becerinize en çok neler katkı sağladı? Yaşadığınız deneyimi lütfen paylaşınız.

(Konuşma görevlerini gerçekleştirirken İngilizce konuşma becerinizin gelişmesini olumlu etkileyen faktörler nelerdi?)

43. Konuşma görevlerini gerçekleştirirken İngilizce konuşma becerinizin gelişmesini olumsuz etkileyen faktörler nelerdi? Yaşadığınız deneyimi lütfen paylaşınız.
    43.1. Sorun yaşadınız mı?
        - Yanıtınız evet ise sorunlar nelerdi?
        - Sorun hangi görev kapsamında ve hangi aşamada (Görev öncesi - Görev yapılırken - Görev sonrasında) gerçekleşti?
    43.2. Sorunları nasıl çözebildiniz/Neden çözemediniz? Lütfen açıklayınız.
44. İngilizce konuşma görevlerini yüz yüze yapmayı tercih eder miydiniz? Lütfen nedenleri ile açıklayınız.
45. TeachinGrid'te neler olsaydı konuşma görevlerini daha iyi gerçekleştirebilirdiniz?
    (Role play, oyun, vb. dışında, Yöntem / Araç)
46. TeachinGrid ortamını kullandığın ilk günden bugüne
    46.1. Konuşma becerinde bir değişiklik olduğunu düşünüyor musun?
    46.2. Başka değişimler oldu mu? Bunlar nelerdi?

P. Coding Scheme

Modified MUVEEET-Form guided by the coding scheme suggested by Shea et al. (2010, p.20) was used in the analysis of task session recordings.

CP Phases and Their Indicators

Phase 1: Triggering Event - TE

- Recognize the problem - TE1
- Sense of puzzlement - TE2

Phase 2: Exploration - EX

- Exploration within the online community - EX1
- Exploration within a single message - EX2
- Information exchange - EX3
- Suggestions for consideration - EX4
- Leaps to conclusions - EX5

Phase 3: Integration - INT

- Integration among group members - INT1
- Integration within a single message (response to prompt) - INT2
- Connecting ideas, synthesis - INT3
- Creating solutions - INT4

Phase 4: Resolution - RES

- Vicarious application to real world testing solutions - RES1
- Defending solutions - RES2

Q. Modified Multi User Virtual Environment Education Evaluation Tool (MUVEEET) – Form

Original: McKerlich and Anderson (2007)

Task Name												
									MUVE CRITERIA			
	Phase			Time Interval								
	Triggering Event	Exploration	Integration	Resolution	Start Time	End Time	Code	Example	Integrated Education Tools	Use of Enhance Multimedia	Mediated Assessment

R. Emerged Tensions in 3D Virtual Learning Environment (3D VLE) – Form

Task Name													
	Phase		Time Interval		Emerged Tensions	Tensions arose between / among							
	Triggering Event	Exploration	Integration	Resolution	Start Time	End Time		Subject	Tools	Community	Division of labour	Rules	Object

S. Ethics Committee Approvals

Approval of Başkent University

Sayı : 17162298.600-196 28.Aralık.2018
Konu : Tez Çalışması

İlgili Makama

Üniversitemiz Eğitim Fakültesi Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü öğretim elemanlarından Arş. Gör. H. Hakan Çetinkaya'nın "Investigation of Learners' Speaking Fluency within Cognitive Presence of English as a Foreign Language via a 3D Virtual Learning Environment / Yabancı Dil Olarak İngilizce Öğrenenlerin 3B Sanal Öğrenme Ortamı Aracılığıyla Konuşma Akıcılığının Bilişsel Buradalık Kapsamında İncelenmesi" başlıklı doktora tez önerisi değerlendirilmiş ve yapılmasında bir sakınca olmadığı tespit edilmiştir.
Bilgilerinize saygılarımızla sunarız.

Başkent Üniversitesi Sosyal ve Beşeri Bilimler ve Sanat Araştırma Kurulu

Adı Soyadı	Değerlendirme	İmza
Prof. Dr. M. Abdülkadir Varoğlu	Olumlu/~~Olumsuz~~	
Prof. Dr. Kudret Güven	Olumlu/~~Olumsuz~~	
Prof. Ali Sevgi	Olumlu/~~Olumsuz~~	
Prof. Dr. Işıl Bulut	Olumlu/~~Olumsuz~~	
Prof. Dr. Sadegül Akbaba Altun	Olumlu/~~Olumsuz~~	
Prof. Dr. Can Mehmet Hersek	Olumlu/~~Olumsuz~~	
Prof. Dr. Özcan Yağcı	Olumlu/~~Olumsuz~~	

Approval of Middle East Technical University

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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21 KASIM 2019

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Gülfidan CAN

Danışmanlığını yaptığınız **Hüseyin Hakan ÇETİNKAYA'nın "Yabancı Dil Olarak İngilizce Öğrenenlerin 3B Sanal Öğrenme Ortamı Aracılığıyla Konuşma Akıcılığının Bilişsel Buradalık Kapsamında İncelenmesi"** başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve **451 ODTU 2019** protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Prof. Dr. Tülin GENÇÖZ
Başkan

Prof. Dr. Tolga CAN
Üye

Doç.Dr. Pınar KAYGAN
Üye

Dr. Öğr. Üyesi Ali Emre TURGUT
Üye

Dr. Öğr. Üyesi Şerife SEVİNÇ
Üye

Dr. Öğr. Üyesi Müge GÜNDÜZ
Üye

Dr. Öğr. Üyesi Süreyya Özcan KABASAKAL
Üye

T. Member Checks for the Interview Transcription & Preliminary Results

Sample E-mail for the Member Check of the EFL Learners for Interview Transcription

Alıcı: Olivia

Merhabalar,

Ben Başkent Üniversitesi, BÖTE bölümü, Araştırma Görevlisi Hüseyin Hakan ÇETİNKAYA. Sizinle yapmış olduğumuz uygulama (TeachinGrid) hakkında görüşme gerçekleştirmiştik. Bu epostayı göndermemin nedeni, ses kaydımızın metne dönüştürülen halinin doğruluğu hakkında onay istemektir. Sizin onayınız tezimin veri güvenilirliğini / geçerliliği için gerekli bir adımdır.

Yapmış olduğumuz görüşmenin yazılı metne dönüştürülmüş hali ektedir. Lütfen görüşme belgesini inceleyiniz ve gerekirse değişiklik yapınız. Düzeltilecek yerleri görebilmem için kırmızı ile yazınız. 7-10 gün içinde linkteki formu doldurmanızı bekliyorum. Katılımınız ve işbirliğiniz için teşekkür ederim.

Arş. Gör. H.Hakan ÇETİNKAYA

Başkent Üniversitesi

OliviaG1-Intervie...

Sample E-mail for the Member Check of the EFL Learners and the Instructor for Preliminary Results

Merhabalar,

Ben Başkent Üniversitesi, BÖTE bölümü, Araştırma Görevlisi Hüseyin Hakan ÇETİNKAYA. Bu epostayı göndermemin nedeni, sizinle yapmış olduğumuz uygulamanın (TeachinGrid) ön sonuçlarının doğruluğu hakkında onay istemektir. Sizin onayınız tezimin veri güvenilirliğini / geçerliliği için gerekli bir adımdır.

Ön sonuçların listelenmiş hali linkte yer almaktadır. Formun doldurulması için 10-15 dk yeterli olacaktır. Lütfen ön sonuçları detaylı inceleyiniz ve gerekirse ilgili alanlara yorumlarınızı yapınız. 7-10 gün içinde linkteki formu doldurmanızı bekliyorum. Katılımınız ve işbirliğiniz için teşekkür ederim.

Arş. Gör. H.Hakan ÇETİNKAYA
Başkent Üniversitesi

U. Research Participants' Quotations in Turkish

Q1: *Görev öncesi yapılan soru-cevaplar ve izlenilen video bizi konuşmaya başlatan ilk adım oldu. Bunun ardından kısa çaplı konuşmalar düzenlendi.*

Q2: *Hocamızın bize görev başlamadan sorular sorması görev için bir şeyler yapmamızı sağladı.*

Q3: *Sanal ortamda gezindim ve etraftaki nesneleri inceledim. Objelerle etkileşime girmeye çalıştım, mağazadaki objelerin yerlerini değiştirmeye çalıştım.*

Q4: *Web sayfaları üstünden birkaç çiçek terimlerine baktım ve nasıl yeni bir şey ekleyip ortamı güzelleştirebileceğimi düşündüm.*

Q5: *Mesela yurtdışına çıktığımda bir satış asistanı olarak çalışma durumunda kalabilirim. Orada müşterilerle nasıl iletişim kurmam gerektiği olsun ya da kendimi nasıl hazırlamam gerektiği, bilmediğim şeyler hakkında önceden araştırma yapmam gerektiği konusunda bir fikir edinmiş oldum. Hayatımın ilerleyen kısımlarında kullanabileceğimi düşünüyorum.*

Q6: *Beni motive eden aslında gerçekten dersten iyi not almaktı. Bu yüzden biz bayağı kendimizi zorladık grupça .... Hiçbir şekilde boş vermiş değildik görevimizde bütün görevleri gerçekten en iyi en üst bir şekilde yapmaya çalıştık biz. Tabii ki not içindi.*

Q7: *Oyun hissi verdiği için karakteri kullanırken çok keyifli oluyor. Bu tür ortamlar öğrenmeyi de daha aktif hale getirebilir.*

Q8: *... aslında bir oyun gibi olduğu için bir şevk geliyor bir şeyleri başarmak istiyor insan. O güzel bir şey.*

Q9: *Bu ortamın yabancı dil kullanımı becerilerini geliştirmeye yardımcı olan, eğlenceli bir uygulama olduğunu düşünüyorum.*

Q10: *TeachinGrid ortamını ilk kez kullanan biri olarak gayet eğlenceli, keyifli, İngilizce konuşmaya olanak sağlayan bir ortam.*

Q11: *... dil gelişimine oldukça katkısı olacağını düşünüyorum aynı zamanda mesleki açıdan da öğrencilerimize yapabileceğiz bazı uygulamalardan biri.*

Q12: *Ben de üniversite hayatım bitince öğretmen olarak devam edeceğim için eğer fırsatım olursa derslerim de bende bu ortamı kullanmak istiyorum.*

Q13: *Görevlerin tamamlanması sonucunda dönem notuna 10 puan verilmesi benim açımdan iyiydi, görevleri tamamladım ve bu sonraki görevler için de beni oldukça motive etmişti.*

Q14: *İlk kez kullanan birisi olarak fazla katı olduğunu düşünüyorum. Her şeyin yeri belli öğretmenin bize yaptıracağı şeyler belli, onun dışında bir şey yapamıyorsunuz. Görünüm olarak ise yetersizdi... Oyun olsa oynamazdım. .*

Q15: *Etkinlik esnasında bilmediğim bir kelime kullanmam gerekti ve kelimeyi bilmediğim için başka şekilde kendimi ifade etmem gerekti. Sonrasında kelimeyi öğrensem de o anda benim için olumsuz bir durumdu.*

Q16: *Hiçbir şey bilmiyordum. Ayrıca çok korkuyordum. Nasıl yaparım diye endişeleniyordum. Bağlanamıyordum birçok zaman.*

Q17: *Grup arkadaşlarım ile gerekli konuşmaları yapabilmiş olmamız, planlamada sıkıntı çıkmamış olması, onlar hakkında hiçbir olumsuz fikrimin olmamasını sağladı.*

Q18: *Bence grup arkadaşlarım gayet pozitif ve çözüm odaklı insanlardı. Herhangi bir problemde yardım eden ve destekleyen kişilerdi.*

Q19: *Genel olarak birbirimizle iyi anlaşıp grup dinamiği kurmaya çalıştık ama devamsızlık yaptıklarında grup dinamiğine zarar vermiş oldular.*

Q20: *Grup arkadaşlarımla yeteri kadar bilgi alışverişi yapamadık ve uyum yakalayamadık.*

Q21: *Bazı gruplar gayet uyum içinde çalışırken bazı gruplar grup çalışmasını yaparken iletişim kurmakta problem yaşadılar. Bunun sebebi öğrencilerin sanal*

ortam aracılığıyla iletişim kurmayı tercih etmemeleri ve bu nedenle de Zoom aracılığıyla açılan breakout room'ları etkili bir şekilde kullanmamaları olabilir. Uyum içinde çalışan gruplar görev paylaşımını yapıp grup çalışmasını ve görevleri başarılı bir şekilde tamamladılar.

Q22: *Grup arkadaşlarımla gayet kolay bir konuşma ile anlaştık ve herkes görevini kolaylıkla yerine getirdi bu nedenle iyi gitmeyen bir şey olmadı. Diğer görevde grup arkadaşlarımın aynı kalması beni sevindirdi çünkü karşılıklı İngilizce konuşma kolaylıkla sağlanıyor ve bu benim rahatlamamı sağladı*

Q23: *Görev 1- Alışveriş Merkezleri etkinliğinde grubumuzu kendimiz oluşturma olanağımız olmadığı için bazı iletişim kopuklukları oldu*

Task 1- There were some communication disruptions in the Shopping Centers event since we were not able to form our group ourselves

Q24: *Bence grubumuz için iyi gitmeyen herhangi bir şey olmadı. Rol dağılımında herkes ılımlı yaklaştı istediği rolü seçti ve herhangi bir anlaşmazlık çıkmadı. Konuşmamızı hazırlarken herkes ne konuşacağını belirledi ve kısaca bahsetti böylelikle konuşmada kopukluklar veya anlaşmazlık olmadı*

Q25: *Grubumuz için her şey yolundaydı güzel bir grup denk geldi ve her şeyi tartıştık güzel kararlar verip bunu konuşmamızda gösterdik*

Q26: *Bu görevde, etkinlikte araştırmalarımızı daha iyi yapıp ve daha iyi iletişim kurduğumuzu düşünüyorum. Her etkinlik sonrası daha rahat konuşup araştırma yapmaya başladık.*

Q27: *Grubumuz iyi bir iletişim içindeydi. Bu sayede haberleri bulup birbirimizin fikirlerini alıp ilerledik. Herhangi iyi gitmeyen veya problemle karşılaşmadık*

Q28: *Sanal ortam olduğu için daha rahattım. Mesela tanımadığım bir sınıfta ilk derste heyecan yaşadığım oldu. Ancak TeachinGrid'te öğrencilerle ilk defa karşılaşmama rağmen böyle bir problem yaşamadım.*

Q29: *Benim için olumsuz bir değişimden ziyade olumlu bir değişim olduğunu belirtmeliyim. Bu benim sanal ortamdaki ilk deneyimimdi ve ilk deneyimimi bir öğrenci olarak değil de öğretmen olarak yaşadım. Eğitim teknolojilerine hep ilgiliydim. Lisans derecesinde aldığım derslerde hep Web tool'ları şöyle kullansak nasıl olurdu diye düşünürdük. Bu sefer sanal ortamların İngilizce'yi kullanarak öğrenme ve öğretme için uygulayarak öğrendim. Bu yüzden benim açımdan anlamlı bir öğrenme süreci olduğunu söyleyebilirim*

Q30: *Görev öncesi öğrencilere alışveriş merkezlerinin ortak noktalarını sordum. Ancak öğrencilere ne demek istediğimi anlatmakta zorlandım. Başka bir şekilde soruyu sormama rağmen katılımın az olması bende motivasyon düşüklüğüne neden oldu. ...*

Q31: *Öğrenciler için iyi gitmeyen şey sosyal alandaki ekran aracılığıyla [web tool] açtığımız videonun sesinin ekrandan uzakta olduğumuz zaman duyulmamasıydı. Öğrencilerden ilk önce oturmalarını istedik. Ancak sesi duyamadıkları için tekrar ayağa kalkmak zorunda kaldılar. Bunu görev öncesi göreve ısınma aşamasında yaşadılar*

Q32: *Bu etkinlikte karşılaştığım zorluk görev öncesi öğrencilerin şişe avı oyunu sırasında gerçekleşti. Çoğu grup aynı şişeyi bulduktan sonra şişe avına devam etmedi. Bu sebeple tartışma sırasında her grup konuşma fırsatı bulamadı*

Q33: *... Bu nedenle de farklı fobileri öğrenme ve bunlar hakkında konuşma şansları olmadı*

Q34: *Bu etkinliğin görev sırasında öğrencilerin sesini duyma konusunda problem yaşadım. Bu da kendimi birden fazla kez tekrar etmeme yol açtı*

Q35: *... Öğrencilerin sesi net gelmediği için kendilerini tekrar etmek durumunda kaldılar. Bu da hem onların hem de benim motivasyonumu düşürdü*

Q36: *Bu etkinlikte, ... öğrencilerin görev sırasında haberlerini sunarken haberlerinin sahte ya da gerçek olduğunu söylememeleri gerekiyordu. Ancak*

uyarılarıma rağmen öğrenciler[bazı] sunum başında hazırladıkları haberlerin gerçek ya da sahte olduğunu belirtti

Q37: *... İlk zamanlarda ortamda aynı anda çeşitli araçlar kullanırken sistem kilitlenip, bizi ortamdan attı. Öğrencilerin ortama giriş süreleri beklenilenden daha çok vakit aldı. Şifreler, mikrofonları ayarlama gibi problemlerle karşılaştım*

Q38: *Öğrencilerin bazıları derse isteksiz geliyordu. Oynanan oyunlar, yapılan etkinlikler aracılığıyla öğrencileri derse ve konuşmaya motive etmeye çalıştık. Bazı öğrencileri motive etmek kolay oldu. Ancak konuşmasını bir iki cümleyle bitiren öğrencilerle farklı görevlerde karşılaştık. Sanal ortama ilgi duyan öğrenciler zaten motive olmuş olarak geldikleri için derse katılım oranları daha yüksekti ve uygulama boyunca da yüksek kaldı*

Q39: *… grup halinde yaptığımız tabii bazı görevlerde, bazı arkadaşlarımızın katılmaması durumunda yaşadığımız problemler oluyordu. Çünkü her taskta en azından 3 veya 4 adımı birlikte bölüşüp, tartışıp ortamda yürürlüğe koymamız gerekiyordu. Ama tabi herkes devamlı olarak katılsa, birbirimizi tanıdığımız için, daha kolay bir şekilde etkileşime girip fikirlerimizi rahat paylaşabilirdik*

Q40: *Grup içerisinde bazı sorunlar yaşadık. Çünkü biz konuşuyoruz sonra bir sessizlik oluşuyor. Birinin bir şey demesi gerekiyor ve bekliyoruz. Orada mesela 30 sn sessizlik. Kendi kayıtlarımızı dinledim, orada da var aynı şekilde. Öyle bir sorun oluyor. Bunu da genel olarak benim konuşmama değil de sadece grup içinde sıkıntı yaratıyordu (Group Harmony)*

Q41: *Hareket etmek zordu. ...*

Q42: *... Dışarıdan [web tarayıcısı] araştırmamız dışında karşılaşmadık yani.*

Q43: *Türkçe konuşamıyordum. Tabii ki İngilizce konuşma kuralı vardı. Dediğim gibi burada konuşmak zorunda olduğum için, bana düşen bir görev olduğu için pratiği geliştirme açısından oldukça yararlıydı*

Q44: *3 kişiyi tek grupta bırakınca her zaman İngilizce konuşmuyorlar. Her öğrenci araya Türkçede giriyor. Mesela biz bize olduğunu bildiği için öğrenci arasında hep İngilizce konuşması olmuyordu o yüzden elimizden geldiğince çünkü İngilizce konuşuyorduk ama başımızda biri dinlediği zaman sanırım daha etkili oluyor. Bizim hatamız ...* [Türkçe kullanılmasına izin] *Verilmedi, verilmiyordu. Kurallar çiğneniyordu, ben çiğnememeye çalıştım. Kendi aramızda tartışma kısmında oluyordu. Ders içi kayıtlarda* [in-class task session]. ... [in out of class task sessions] *İngilizce* [konuştuk] *Tabii ki.*

Q45: *Sınıf ortamı dışında kendi grubumdaki arkadaşlarımla ayrı olarak* [Zoom-Breakout rooms] *özel bir şekilde bu görevi tamamlama açısından konuşabilmemiz bence gayet güzel bir ayrıntıydı .... Çünkü bütün sınıf aynı anda bir şeyler yapmaya çalışırsa kimse kimseyi anlayamazdı. Her grup kendi içerisinde tartışmasını yaptığı için daha anlaşılır olduğunu düşünüyorum*

Q46: *Zoom'un kesilme olayı var* [after 40 minutes]. *Mesela tamam sen o an akıcılığı yakalamışsındır mesela konuşurken. O an oluyor gidiyor. Kendine güvenin yerine gelmiştir patır patır dökülüyorsundur, Zoom bir anda Çat diye gidince hop nerede kalmıştım gibisinden bir şey olabiliyor. O kadar yani. Ama çok büyük bir olumsuzluk değil yani*

Q47: *Fobiler etkinliğinde karşılaştığım, öğrenmemi olumsuz etkilediğini düşündüğüm tek şey ortamdaki ses sorunuydu. Bazı zamanlarda öğretmenin ve diğer kullanıcıların sesini almakta zorlandım ve kaçırdığım şeyler oldu.*

Q48: *Bu etkinlikte karşılaştıkları zorluk görev sırasında öğrencilerin seslerini duyuramamasıydı. Öğrencilerin sesi net gelmediği için kendilerini tekrar etmek durumunda kaldılar. Bu da hem onların hem de benim motivasyonumu düşürdü.*

Q49: *Bazı kısımlarda mikrofon sıkıntısı yaşamamıza rağmen chat kısmını kullanmış biz grupça ve bu daha da verimli olmasını sağladı*

Q50: *Ama ortam içerisinde hepimizin farklı bir karakteri, ismi olduğu için düşüncelerimizi daha rahat bir şekilde arkadaşlarımızla paylaşıyorduk ya da genel*

task açısından. Normal hayattaki speaking yetime göre ortamda daha rahat konuşabildiğimi düşünüyorum. Etkisi oldu, katkısı oldu.

Q51: *Yüz yüze olan İngilizce konuşmalarda çok pasif bir insanımdır. Şimdi orada olunca ve kendimiz gözükmüyoruz, başka bir avatar olduğu için insan hani şey diyor sanki araç çizgi filmde bir karakter seslendiriyormuşsunuz gibi olduğu için, insan daha rahat konuşuyor, rahat konuştuğu için daha az yanlış yapıyor*

Q52: *Ders başladıktan sonra öğretim görevlisi tarafından neler yapacağımız ile ilgili açıkça bilgilendirildik ortamda pano içinde de neler yapacağımızı sırasıyla verilmişti ve evet etkiliydi neler yapacağımızı görme açısından. .*

Q53: *Panolar unuttuğumuz bilgileri hatırlamamızı sağladı.*

Q54: *Önce pano fikri güzeldi fakat içerisinde uzun ve bu küçük yazılar. Açıklanan şey bence tam açıklanmamış ve uzun yazılardan oluşuyordu. Bence, öğrenmek isteyen kişi iten bir konu bu. Daha açık daha şey kelimeler seçilebilirdi bence. Bu yardımcı olabilirdi*

Q55: *Şahsen anlamam biraz zaman aldı ilk başta. Ne yapacağımız ne edeceğimiz birkaç kere sordum hocaya fakat en sonunda anladım. (...). Evet [öğretim elemanı bilgi] verdi o vermeseydi bence o pano yetersiz olurdu ama*

Q56: *Bu bilgi panolarında görevimizi nasıl yapacağımıza kafeteryamızı nasıl geliştireceğimize dair açıklamalar vardı bir araç gereçleri kullanmamız gerektiğinden bahsediyordu. Ama herkes araç gereçlerin nerede olduğunu sorgulamaya başladı kampanya panoları olsun nereden toplayabiliriz diye.*

Q57: *Sadece ilk hafta o bölüme sosyal alana nasıl gideceğimiz hakkında biraz sıkıntı çekmiştik sonra hiçbir problem yaşamadım ben kendi açımdan*

Q58: *Ben panoların yerini bulamamıştım. İlk kez kullanıyoruz sonuçta. Ben panoların [At Social Area] yerini bulmakta zorlandım orada bir zorluk yaşadım. Onun dışında yaşamadım.*

Q59: *Bu görev benim için sanal dünya olayında bir ilk olduğu için teleport ekranını[mini-map] nasıl kullanacağımı çözene kadar, nereye gideceğimi bulmakta bayağı güçlük çektim. Bundan dolayı bir yere yeterince hızlı ulaşamadığımda ve o yerdeki olayı kaçırdığımda da bayağı kötü oldu*

Q60: *Karşılaştığım bir zorluk poster aldığımız alana gidip aynı şekilde dükkânı geri bulmak (...)*

Q61: *"Tv panosunda [web tool] izlediğimiz videolar hem kültürel hem de konu hakkında fikirlerimizi geliştirdi."*

Q62: *(...) sanal ortamın şeyi bizi güdülüyordu karakterlerini oynatabilmek. Yani arabaya binmek bile o kadar zevkli bir şeymiş ki o sanal ortamda (...) Yani çok güzel bir ortamı vardı. Gerçekten. (...) sıkılmıyorsunuz sıkılmayınca bu sefer daha böyle aktif şekilde dinliyorsunuz konuyu o yüzden bence yararlı oluyordu o araçlar*

Q63: *Çok az aldık sanırım [feedback from other groups]çünkü genelde çok aktif konuşma ortamı oluşmamıştı etkinliğimizden sonra. (...) Belki tam anlamıyla verilseydi kendimizdeki eksikleri daha iyi görebilirdik geliştirmeye çalışabilirlik ama çok fazla yorum alamadığımız için pek bir faydası olmadı .*

Q64: *Özellikle öğrencilerin ortamda yapılan uyarılara rağmen motivasyon araçlarını farklı noktalarda bırakma gibi davranışlarda bulunmaları öğrencilerin uygulama öncesi daha yoğun bir oryantasyona ihtiyaç duyduklarını göstermektedir. Bu ortamda oyunlaştırılma öğesinin öğrencinin zaman zaman amacından sapmasına neden olduğu ve bu da görevlere karşı motivasyonlarının düşmesine sebep olmuştur*

Q65: Donanımsal sıkıntılar, hızlı olmaması, bunlar role girmeyi etkileyen ve can sıkan sebeplerdi

Q66: Görevde fobilerle ilgili yerleştirilen kutuları bulmakta zorluk çektim türlerine göre yerleştirilmiş olsa da ortam geniş bir alana sahip olduğu için bulmak zor oldu. Arkadaşlarım ve hocamız yardımıyla bulmaya çalıştım

Q67: Gereken fobilerin hepsini ortamda bulamadım ama buna rağmen role-play kısmını iyi yaptığımı düşünüyorum. Hepsini öğrenemem [bulamamam] beni olumsuz etkiledi

Q68: Olumsuzluklardan bir tanesi ortama toplu giriş süresinin uzun olmasıydı. Yani bütün herkesin ortama giriş sağlamasından derse başlamaya kadar olan süre olması gerektiğinden uzundu

Q69: İyi gitmeyen şey Moodle'dan girip özellikle .pptx dosyasını bulup belli bir kalıpta bu haberi yazmamız gerekmesiydi. Dediğim gibi her şeyin katı, kurallara uygun olması bazen speaking öğrenme ortamını baltalayan bir olay

Q70: [Beğendiğim özellik] Gerçeği yansıtıyor olması. Mesela o dükkanlar, karakterlerin olması, ondan sonra orada bir şeyler yapmamız, iletişim kurmamız, gerçek ortamdaki gibi olmamızı sağlıyor, onları canlandırmamızı. Buydu ilk beğendiğim özelliği ilk aklıma gelecek. Tamamen gerçeklikle alakalı (

Q71: Ortak toplanma alanı. Oradaki ortak toplanma alanındaki grupların birbiriyle interaction'ı olsun orada herkesin görevi için toplanması olsun salondaki. Bence orası katkı sağladı diyebilirim (...) Toplanma yeri olarak Presentation ve Social Area, 2 si de katkı sağladı

Q72: ...fobiler hakkında konuşurken yoruma dayalı bir konu olduğu için bu konunun etki ettiğini düşünüyorum. Bana başka bir konu verseniz belki konuşamayacağım. Çünkü bir fikir sahibi olmayabilirim, ya da ne diyeceğimi şaşıracak olabilirim, zor bir konu olabilir. Ama öyle açık uçlu, dikkat çekici konular olduğu için bunun mesela katkı sağladığını düşünüyorum

Q73: Konuşma bölümleri kesinlikle katkı sağladı. Çünkü konuşma görevlilerinin gerçek hayatta karşılaşılabilecek şeylerden verilmesi bence en fazla katkısı olan şey buydu. Çünkü ileride kullanabilmemiz açısından

Q74: Kesinlikle evet. Direkt genel İngilizceye teşvik ediyor bence böyle bir durumla karşılaşırsanız karşınızdakine nasıl bir konuşma yapacağınızı az buçuk zihninizde yer ediyorsunuz.

Q75: ... Fikirleri bir araya getirme biraz zor oldu. Ne konuşsam ne desem şekilde biraz sıkıntı oldu. Ama günlük hayatta konuştuğumuz gibi görevde de bu şekilde de konuştuk

Q76: Bu etkinlikte benim için konuşmak zor oldu. Çünkü o an için bu konuyla ilgili ne diyeceğimi bilemedim. Düşünmek için zamana ihtiyacım vardı

Q77: Tren istasyonu konusu çok sıradan geldi ve yeterince yaratıcı şeyler gerçekleştiremedik o yüzden pek sevmedim bu etkinliği

Q78: Öğrencilerin ilk başta haberi nasıl hazırlayacakları konusunda kafaları karıştı. Ancak yönlendirmeler sayesinde bunun üstesinden gelebildiler. Öğrenciler için iyi gitmeyen diğer şey görev sırasında haberlerini sunarken haberlerinin sahte ya da gerçek olduğunu söylemeleri oldu. Bunu söylememeleri gerekiyordu çünkü biz bunu dinleyici olan diğer öğrencilere sormayı planlamıştık

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1. Çetinkaya, H.H., and Can, G. "Community of Inquiry Framework Applied in the 3D Virtual Language Learning Environments". The 17th Asia TEFL International Conference & The 6th FLLT International Conference. Bangkok, Thailand. 27/06/2019 - 29/06/2019 (2019).