

# EFL Learners' Perceptions of the Role of Commercial Game-based Interaction in L2 Learning

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**Abstract-** This study is an endeavour to elucidate the pedagogic value of interaction within video game environments by the calculation of selected learning opportunities (negotiation of meaning, language-related episodes, feedback, noticing) by using descriptive statistics and learner perception of seven English language learners. The study adopted one cognitive approach to address the first topic and two sociolinguistic approaches to account for the latter. Such collaborations were found to stem from processes of community of practice, language socialisation and willingness to communicate. Additionally, the thematic analysis of the narratives queries suggests wide acceptance of the use of video games towards L2 learning. The findings advocate for the role of the interaction in video games, while also paying attention to numerous factors which affect it: personality, feedback, region and communicative competence. In the study, accompanied with the findings are a set of recommendations. This provides a new approach for EFL educators who can blend leisure games with formal educational setting.

**Keywords—** video games, L2 learning, learner perception, interaction

## I. INTRODUCTION

The interactivity of digital video games has affected the manner in which we learn, thus providing useful alternatives to current educational practices (Chen and Yang, 2013). Playing video games is not restricted to entertainment as many types of learning can transpire while playing games (Gee, 2007). Further, they could be a superior social tool which support the literacy development of English language learners (Wu et al., 2014). Also, video games are perceived as an extramural activity capable of enhancing communicative skills of learners (Sylvén and Sundqvist, 2016). The context of the research is the examination of learning opportunities of prolonged use of Commercial Off-the-Shelf Games (COTS) to EFL learners. Many EFL learners' experiences of playing games have suggested computer games design and characteristics encourage a low stress atmosphere, involving L2 learners in a relaxed settings leading to more opportunities for learners to communicate and frequently use L2 (Reinders and Wattana, 2015). The practical significance of this topic is the need to evaluate the interactive aspects of games and how it benefits learners in digital-game based language

learning. Theoretically, the fact that video games and education has not received proper academic attention in EFL context in Kuwait warrants investigation as it will help ascertain the various forms of learning that occur from playing through EFL learners' perception of video games as an educational resource.

### 1. Research aims and objectives

The main purpose of this study is to thoroughly investigate the merits of commercial video games as an interactive tool for language learning through students' personal beliefs. This study aims to validate the notion that commercial online games do in fact provide various language learning events through interaction.

## II CRITICAL LITERATURE REVIEW

### 1. Learner Perception

Horwitz (1988) classifies learner perception as students' opinions on a variety of issues and controversies related to language learning situations and their self-efficacy as language learners. Learner perception is often critiqued as it seems not to be a proper category of individual differences for it is a

dilemma to consider beliefs as durable (Dornyei, 2005). However, understanding a foreign learner is matter of examining a growing body of evidence, both observable and unobservable about their process of mastering learning language (Wesley, 2012). This is crucial as second language learners of all ages have beliefs about language learning, whether it takes place in formal setting such as classrooms or informal context like home (Kalaja and Barcelos, 2019). Besides, learners' beliefs show the personal reflection of experiential or analytical approach to learning, which could be adapted for education use (Ellis and Shintani, 2014). To follow, studying learner's perception towards any type of given object is important as it shows whether the response is in a consistently favourable or unfavourable manner (Li, 2020; Getie, 2020), and this applies to the utilisation of highly interactive video games for language learning. The attitude of an EFL learner towards learning influences their behaviour (Dornyei, 2005). For example, a student could select and read a book, browse and listen to a podcast or choose to speak in a foreign language. These choices and actions are not random as they are influenced by students' experience, emotions, imaginations, memories and beliefs (Brianita, 2019).

VGs influences EFL learner's perception of mainstream video game-based interaction serving pedagogical benefits as it affects learning through stimulating the player's ability to think and create meaning (Jabbar and Felicia, 2015) and how to act and interact within a game to achieve their goals (Csikszentmihalyi, 2008). As to learner's perceptions, it should be noted that the nature of gaming is often associated with task-based language teaching (Cornillie et al., 2012). In L2 pedagogy, a task is an activity that entails a meaning-focused usage of language as opposed to form-focused (Ellis, 2003), resulting in an outcome intended to complete a specific language aim. This means a task can have both linguistic and non-linguistic target. This affects students' attitude toward using games for L2 learning; to illustrate, gamer and non-gamer students reported games are positively associated with: vocabulary gains (Ebrahimzadeh and Alavi, 2016), lower learning anxiety (Hwang et al., 2017)

and increase motivation to learn (Vahdat and Behbahani, 2013).

## **2. Learner Personality**

Personality is the intrinsic features that determine potentialities and common abilities exclusive to an individual (Reyes, 2018). Richards and Schmidt (2013) supplement this definition by adding three aspects of individual's behaviour, attitude and beliefs which are seen typical of that learner and recognised by others. Further, Fatma (2014) sees these character qualities important in the process of acquiring the L2 in that it gives a learner's behaviour a pattern of consistency and individuality. The extroversion-introversion dimension is the most researched personality aspect in L2 studies (Zafar and Meenakshi, 2012; Fatma, 2014). This construct sees extroverts as more suited to language learning, suggesting the more social the person is the more amount input they receive (Krashen, 1985), prefer communicative approaches (Cook, 2001) and more likely to participate in group tasks (McDonough, 1986). Swain (1985) hypothesises this maximises the interaction in L2 to gain more output and overall language proficiency. Therefore, using this model will address behaviour patterns of learners in situations where inconsistencies arise in interactions while playing. Nevertheless, Dörnyei and Ryan, (2015) questioned this concept by claiming that while all parties to the language learning process agree that personality plays a huge role in successful L2 learning, there is a disconnect between this concept and research findings. This suggests that either the perception of it is misguided or mixed, or researchers are reluctant to find links between personality and SLA.

### **Willingness to communicate as a personality construct**

As tendency to communicate is impacted by personality factors, McCroskey and Richmond (1991) proposed WTC model to capture the major implications that concepts like reduced communication desire, introversion, reticence and shyness have for communication behaviour. It is conceptualised by readiness to enter into discourse at a particular time with a specific speaker or speakers using L2 (MacIntyre et al., 2008). Burgoon

(1976) claims these variables show significant correlation with the choice to communicate. Scholarly contributions from MacIntyre et al. (2001) and Reinders and Wattana (2012) suggest this model is a personality-based, trait-like predisposition factor which is consistent across various communicative contexts in classroom and gaming environments. The model of MacIntyre et al.'s (1998) is used for this study as it integrates psychological, linguistic and communicative variables to describe, explain and predict L2 communication (see appendix 9). The pyramid-like model consists of six categories: communication behaviour, behavioural intention, situated antecedents, motivational propensities, affective-cognitive context, social and individual context (Bukhari et al., 2015). High WTC is associated with increased frequency and volume of communication; thus, the choice to speak to remain silent is a factor in the success of second language learning (Gharibi and Seyyedrezaei, 2016). This model implies heavily implies behavioural intention which leads to the communication behaviour. This happens when the individual is in a state of control over their behaviour.

### 3. Interaction

The term interaction refers to the oral exchange a learner participates in with native and non-native speaker — which is capable of input and output provision (Ellis, 2015). Both Hatch (1978) and Ellis (2003) stress that learners acquire a language through conversation and interaction, and from this human action linguistic structures are then developed. Indeed, interaction is recognised as an indispensable component in SLA (Loewen and Sato, 2018; Reinders and Wattana, 2014, Hatch, 1978). In theory, Long's (1996) interaction hypothesis is highly influential as it shifts the attention from comprehensible input as a means of stimulating acquisition towards more interactive aspects of foreign language discourse (Mitchell et al., 2013). Further, Long (1996) states the reason is conversational and linguistic modifications occurring in discourse contain necessary comprehensible linguistic input for learners. In line with this statement, Muho and Kurani (2014) see interaction as a fundamental core of learning through exposure of input, production of output and receiving

feedback. This view is further advanced by Gass (2003) as she sees learning is stimulated by communicative pressure, which connects acquisition and mechanisms such as noticing and attention. Also, Mackey and Goo (2012) assert that EFL learners can benefit from partaking in interaction due to a variety of opportunities which interaction can bring exposure to, including patterns like language-related episodes (Swain and Lapkin, 1998), acts of negotiation of meaning (Long, 1985), feedback (Shirazi et al., 2016), modified output (Swain, 1995) and communication strategies.

Another pivotal interaction theory is Vygotsky's sociocultural theory which is based on comprehending the role of cultural and social roots on the advancement of human mental processes and higher mental capacities (Daniels, 2001). Vygotsky created an instructional area which he labelled as zone of proximal development (ZPD) where he combined two levels of cognition: the individual and social levels (Vygotsky, 1978). In traditional learning, scaffolding is provided by teachers or an expert who expands the knowledge of the learner's skills and knowledge through collective task assignment (Perry and Rahim, 2011). VGs have a powerful interactive environment for oral or written social interactions, including a range of opportunities from receiving tips from other players to verbal chats in collaborative dialogues (Alamr, 2019). Hence, VGs can be investigated through the perspective of Vygotsky's sociocultural theory. This study employs young learners (see chapter 3.4) so ZPD would not be an issue.

#### 2.3.2 Community of practice

Building links between the geographical location of game users and use of L2 is best done through the adaptation of ecological sociolinguistic rather than the frequent reliance on cognitive lenses because they view language as a socio-cultural phenomenon rather than cognitive process. This first model was initially utilised by cognitive anthropologists Lave and Wenger (1991) followed by sociolinguistic research by Eckert and McConnel-Ginnet (1992) who both found its utility for the relationship between the individual and group identity between micro and macro-level social categories (Bauman, 2016). This approach is concerned with the region of players who define a community as a COP, focusing on three

aspects as suggested by Wenger (1998): mutual engagement, joint enterprise and shared repertoire. The first term acts as an attachment for the members of the community together as social entity. Further, the second term is what binds them together through their interactions. The last term shows the shared repertoire which includes literal and symbolic meanings. The inherent player interactivity and opportunities for interaction leads to the creation of regional linguistic variables which construct shared repertoire (LaFave, 2016). Thus, in video game environments, EFL learners, who are video game players as well are particularly well-suited to be perceived as communities of practice for they satisfy the above criteria. Furthermore, Peake and Reynolds (2020) articulate that players gain geographical positions of other co-players by casual chat: having access to regional information of other players displays a specificity of gaming as a virtual but situated community of practice.

### **Language Socialisation Theory**

The second theory LS proposes a model to understand how speakers become competent members of particular speech communities and the role of language in this process (Schieffelin and Ochs, 1986). Interactions with members of a community are seen as pivotal processes to use the language in socially and pragmatically appropriate (Thorne et al., 2009). According to Duran (2017), this process is fluid, dynamic and multidirectional. What this suggests is language is passed from one person to another through linguistic and sociocultural norms. Linking this with this study, MMOGs requires tightly coordinated teamwork with other players to complete objectives. Inevitably, this type of assistance leads to the formation of casual dyadic relations and social organisations that are dedicated to create spaces for new players to participate and learn through exposure and co-play (Thorne et al., 2009). The significance of this model relies on the fact that it provides opportunities for learning through intent participants, that is, learning through observation and listening (Rogoff et al., 2003). According to Sperry et al. (2015), LS theorists situate two solutions to the ability to use language socially. They suggest language has cultural meanings indexed in its daily usage between speakers in

situations that reflect values and beliefs of the speaker and their knowledge of culture. Therefore, language then is shaped as the means through which socialization occurs, and the communicative eventualities itself becomes the field in which socialization is exercised.

### **4. Communicative Competence**

Communicative competence is connected to a synthesis of regulations that create an ideal speech situation in which mutuality of understanding is possible (Habermas, 1970). According to Hymes (1972) model, CC as a theoretical entity is not only inherent in grammatical competence but to the capability to employ grammatical competence in several communicative situations, thereby associating the sociolinguistic dimension into Chomsky's (1965) homogeneous linguistic impression of competence. Furthermore, Canale and Swain (1980) and Canale (1983) model perceived CC as a mixture of an underlying structure of knowledge and skill necessary to start communication. Therefore, they refined Hymes (1972) model and classified CC into four categories: grammatical; the awareness of language code, sociolinguistic; applying language in distinct sociocultural events, discourse; linkage of language forms in written and oral texts, strategic; spoken and unspoken means to reconcile communication breakdowns such as meaning negotiation and repair mechanisms (Celce-Murcia et al., 1995).

A robust continuance of Canale and Swain (1980) and Canale (1983) predominant work is Celce-Murcia, Dornyei and Thurrell (1995) model of CC. Within this model, Celce-Murcia et al. (1995) modified the term sociolinguistic competence into sociocultural competence to explore socio-pragmatic variance in language usage. Another key adjustment is the introduction of actional competence. This addition is seen of value because it conceptualises competence as social intentions by performing and interpreting speech acts: information exchanges, expression of feelings and emotions, problems and future scenarios (Celce-Murcia, 2008). Therefore, this augmented model is of suitability for this study's interviews.

### 5. Commercial Off-the-Shelf Games (COTS)

VGs are intentionally tailored for the attraction of users through motivating and challengeable elements in an interactive environment with a higher standard and reinforcement of gameplay mechanics (Prot et al., 2014; Mozeliuss et al., 2017). VGs are recognised in two categories: education-intended, typically known as serious games (Shepherd et al., 2011) and commercially developed-off-the-shelf games which are oriented around leisure (Ruth and Kasper, 2021), engaged problem resolving, collaborative interaction and competition (Reinhardt and Thorne, 2020). To expand on previous statement, Anderson et al. (2010) and Ferguson (2007) insist that prolonged use of commercial video games could lead to adverse circumstances, namely addiction, violence and self-harm. This acts as a reminder that caution is crucial as COTS are not viewed equally in terms of quality and content resources. What is more, it seems that any type of entertainment video games such as strategy, simulation, action and fantasy is capable of increasing several cognitive and executive functions such as attention, decision-making, visuospatial, working memory and problem-solving abilities (Choi et al., 2020; Ruiz-Marquez et al., 2019; Bediou et al., 2018). These factors are related to academic learning (Martinez, 2022) as they are both strong predictors of reading and mathematics skills (Peng & Kievit, 2020).

This is linked with SLA; Eck (2009) implies there are two theoretical frameworks that establish commercial games as a medium for successful learning opportunities: situated learning and intrinsic motivation. As a theory, situated learning studies the cognition of humans in recurrent contexts. The theory suggests knowledge and transfer are inextricably coupled with context, suggesting that learning is embedded in meaningful context (Cohen and Siegel, 1991; Choi and Hannafin, 1995). As for intrinsic motivation, it refers to the individual's own decision to be involved in repetitive task re-engagement stemming from a desire to pursue a certain activity or behaviour with no extrinsic rewards or benefits (Deci et al., 1999; Malone and Lepper, 1987). COTS game that encompass challenge, control, curiosity and fantasy

are intrinsically motivating (Eck, 2008), meaning the game context causes individuals to be immersed in the experience and conditioned to the environment of the game (Virvou and Katsionis, 2008).

## III STUDY RATIONALE

The trajectory of the study is to explore and describe the potentiality of second language education inherent in game-based interactions of EFL learners and how they are conceived. Moreover, this will justify the adaptation of VGs as an educational source in Kuwait. To achieve these answers, the study attempts to answer the following questions:

### 1. Research Questions

- RQ1. To what extent do learning opportunities occur from game-based interaction in MMOGs?
- RQ2. What factors affect EFL learners during their interaction in video games?
- RQ3. To what extent do EFL learners believe video games contribute to their communicative competence?

### 2. Methodology

### 3. Study Design

To reach the research goals, the approach is will be through administration of mixed-methods and pure qualitative instruments. Based on these ideas four tools will be used: coding, descriptive statistics, interviews and stimulated re-call interviews. The rationale for this design is because the quantization of non-numeric data corroborates qualitative analysis (Saldana, 2016), in that it provides a reality-check to interaction-based data in relation to research questions. Most importantly, quantification of findings from qualitative research can help uncover the generality of the phenomena being described (Silverman, 1985), in this case, learning opportunities within active in-game interaction. Each theme is preceded by an overview in relation to participants' narratives. The next step is to present any sub-themes evident from interviews to incorporate participants' perception. The final step is to explain and interpretation on participants' voice to accentuate the essence of my findings in relation to research questions. To verify the existence of an

influence of student's interaction in video games, question 3, 13 and 14 were created to identify communication factors which could play a role in interaction.

#### 4. Sample population and Participant selection

Following guidance from Dornyei (2007) and Hancock et al. (2009) the sample population will entail seven male participants to fulfil quota sampling. The reason because the access to female participants displayed no interest to the game genre used in the study. Purposive sampling method was applied in this research by using an assortment of criterion and snowball sampling strategies. This

allowed other four participant to partake in the study. The criteria of eligibility of participants in Kuwait must be:

- A current student either enrolled in a private or public university sector in Kuwait.
- The preferred English level is upper-intermediate.
- The age range of study sample must be between 18-26.
- EFL learners situated in Kuwait who are regular VG users.
- 3.5 Participants' education and gaming profile

Table 1: Participants' education and gaming profile

| Name   | Gender | Age | Origin   | Current education program | Age started learning English | Age started playing video games | Interview duration |
|--------|--------|-----|----------|---------------------------|------------------------------|---------------------------------|--------------------|
| Albert | Male   | 22  | Kuwaiti  | BA Electrical engineering | 7                            | 11                              | 59:23              |
| Bane   | Male   | 21  | Kuwaiti  | BA Digital marketing      | 6                            | 14                              | 1:12:32            |
| Clary  | Male   | 18  | Saudi    | Diploma journalism        | 7                            | 12                              | 1:09:03            |
| Steph  | Male   | 24  | Iraqi    | BA creative writing       | 5                            | 10                              | 58:06              |
| Hank   | male   | 23  | Kuwaiti  | BA English literature     | 9                            | 9                               | 1:23:11            |
| Nate   | Male   | 19  | Lebanese | Diploma Arts              | 6                            | 7                               | 57:19              |
| Frank  | Male   | 20  | Syrian   | BA Bank auditing          | 6                            | 12                              | 1:31:04            |

#### 6. Game selection

Recommendations from Adcock (2008) in agreement with Landers and Sanchez (2022) suggest that video-game based impact and interaction are most effective when the content and characteristics of the game are aligned to the desired outcome. Accordingly, Sanchez's (2022) four selection criteria are applied to fit the present study to reveal natural initiation of interaction and learning opportunities. First, the game must have meaningful learning components which are applicable in educational settings. The game Ready or Not focuses on encouraging teamwork skills, abundance of communication and presenting basic knowledge about hostile and confronting situations (e.g., hostage negotiations, effective employment, trigger discipline, situation awareness). In addition, the game focuses on cooperative behaviours rather than competitive behaviours. Second, the game needs to

have an interesting, immersive and challenging elements which would increase participants' engagement in the game. RON has several immersive components such as realistic scoring system, strategic organisation of approaches, on-screen command interface, vast options of weaponry customisation and improvisation under stress (VOID Interactive, nd). Third, the game should offer consequences of actions to boost feedback opportunities. RON has high-risk situations which require constant interaction and failure to plan with team members often results in failure of mission as whole. This means feedback on this game limits players' options and drive their progress toward pre-determined goals (Zimmerman and Tekinbaş, 2006).

## **7. Materials**

### **Semi-structured online Interviews**

Semi-structured online interviews are beneficial as data collection tool as adequate overview of learners' beliefs and interactions on MMOG were obtained. More on this, it assisted the study as the open-ended structure provided flexibility to the dynamics of the interview. This was achieved the using introductory pre-prepared questions (see appendix 1) in each interview. More critically, it builds follow-up questions on the development of communicative proficiency through interviewee's response of questions in exploratory fashion (Dornyei, 2007) (see appendix 2). This notion is stressed by Cohen et al. (2007) as this interview structure gives access to a person's mentality, making the knowledge measurable and have direct bearing on the research objectives.

As previously stated in the literature review, Celce-Murcia et al. (1995) model is adopted for the third research question interviews of its adequate focus on communicative components, namely pragmatic and actional competence found in COTS games (see chapter 2.5.1). In concurrence with the recommendation of Yin (2014), Merriam and Tisdell (2016), the potentiality to trace communication improvement of a group of foreign learners' engaged in digital commercial games engagement can be achieved through a qualitative narrative case study approach.

### **Recordings**

Participants were asked to submit audio and screen recordings of their gameplay for each session. Audio recording is favoured over screen recording as screen recording may require higher PC/Laptop requirements such as RAM and hard drive for smooth gameplay. However, screen recordings are necessary to complement the study in stimulated re-call interviews.

### **N-Vivo**

I used N-Vivo to code and transcribe the dialogues of interaction recording. Coding of data is employed to seek repetitive patterns of human behaviour, which then solidify the observation of the audio and video recordings into concrete examples of themes

(Saldana, 2016). This means I was able to understand patterns via embedding various social codes for actions like response, requests, clarifications and so on.

## **8. Data collection**

### **Interaction-based data**

After the grant of partakers consent, I proceeded and asked them to participate and record several game sessions using a recording software ActivePresenter. A 15-minute was given to allow participants get familiar with the study and be reminded that their interaction in the game is not graded and they were encouraged to use minimal L1 to ensure feasibility of interaction is unaffected. During gameplay recordings, there were 13 game sessions, involving both text-based and voice-based interaction; this is to allow for promotion of natural and instant communication in game (Reinders and Watana, 2014). The data was coded and transcribed multiple times in several sessions.

Bryman's (2012) four stages of coding in N-vivo are executed. The first stage includes the highlight of quotes or passages worthy of attentions (Lofland et al., 2006). In the second coding stage, chunks of the dialogues are labelled to codes/themes to identify its function. In the third stage, after identifying the initial set of codes the themes developed in the dialogue were systematically indexed. Then, the codes are reviewed to eliminate repetition and similarity. For the last stage, application of thematic interpretation of themes in codes; identify the key concepts of significance from respondents to refine coding; and relate the codes to research questions and research literature.

### **Stimulated re-call interviews**

To further grasp the intricacies of interaction which would answer RQ2, the implementation of video re-call stimulated interviews yielded insightful and useful raw data for the examination of the way people experience a specific phenomenon such as interaction (Haw and Hadfield, 2011; Dempsey, 2010; Rowe, 2009). This allowed the access to the concurrent decision-making processes of students while engaged in on-going interactions scenarios in video games and allow them to confront and reflect

on their thoughts and choices as they occurred (Nguyen et al., 2013; Gass and Mackey, 2017). The purpose of such reflective question is to discover the factors that influenced those events (Sanchez and Grimshaw, 2019). Also, adaptation of think-aloud protocol (Hu and Gao, 2017; Li et al., 2012) by asking participants to verbalise their gameplay experience as they play complemented stimulated recall to elicit the participants' demonstration of their learning due to the prompt response of a problem to progress in the game (Ericsson and Simon, 1993).

### Semi-structured online interviews

The study used narratives as a follow-up source of data; thus, it is advocated to proceed with immediate online interviews for data collection (Creswell and Creswell, 2018). First, spoken discourse between the researcher and participants in a private server was conducted after the end of interaction sessions. Each participant was interviewed twice in a private server and the interviews were tape-recorded to not have abrupt disruptions for note-taking (Elliot, 2005). The first interview (see Appendix 1) lasted 30 minutes to 45 minutes to help build rapport between the interviewer and interviewee, build a profile of the participant and explore the communication difficulties they have experienced in the early stages of communication in video games. Moving on into the second interview (see Appendix 2), this interview will commence after one week of the first interview and it will last 1 hour to 1 hour 30 minutes. It will begin by introducing questions influenced by the adapted mode of Celce-Murcia et al. (1995) communicative competence. This will give clear feedback of the development of communicative competence within participants' communicative traits.

## 9. Data analysis

### Data coding and generating of initial codes

In order to answer the first research question, I followed Saldana's (2016) advice by analysing visual data in qualitative content through one-word or short phrase codes. Welsh et al. (2007) notes that the acts of interaction in the recordings can be coded multiple times for in-depth detail by replaying each recording while focusing on different aspects (see appendix 3). I focused in four categories: negotiation

for meaning, language-related episodes, noticing and feedback, then transcribed verbatim. Further, each one of these measures was analysed by extracting excerpts from the interaction. Finally, descriptive measures are then used to validate the findings present in interaction by calculating the number of occurrences of these values in the communication dialogues.

Negotiation of meaning (NoM): The process by which two or more interlocutors identify and then attempt to resolve a communication breakdown" (Ellis, 2003, p. 346)

|          |                            |       |        |           |                  |
|----------|----------------------------|-------|--------|-----------|------------------|
| Mean= 15 | Standard Deviation= 3.0879 | Min=2 | Max=30 | Total=120 | Percentages= 53% |
|----------|----------------------------|-------|--------|-----------|------------------|

Excerpt from interaction:

1)

Bane: "I see, what what's tango?"

Albert: "Tango is a threat. So T is a T for tango. Tango is a threat."

Bane: "Yeah. Tango is what?"

Albert: "Tango is a threat. So the threat,"

Bane: "Oh threat threat".

2)

Clary: "Suppressors or?"

Albert: "Sorry?"

Albert: "No,no,no."

Clary: "Suppressors too loud?"

Albert: "yea, yes."

Language-related episodes (LRE): Any segment of a dialogue where EFL learners "talk about the language they are producing, question their language use, or correct themselves or others" (Swain and Lapkin, 1998, p326)

|         |                           |       |        |          |                  |
|---------|---------------------------|-------|--------|----------|------------------|
| Mean= 6 | Standard Deviation= 2.081 | Min=3 | Max=11 | Total=78 | Percentages= 35% |
|---------|---------------------------|-------|--------|----------|------------------|

Excerpt from interaction:

1)Nate: "you got damage?"

Bane: "you mean damaged? na I'm good".

Nate: "I thought you got damaged".

Albert: "alright."

Nate: "Okay, let's go back to Ahmed".

2) "Bane: I'm gonna peek the door. Ahmed check it."

Clary: "It's uh, clear."



Bane: "I'm gonna put a, uh toss a grenade. Ready? go."

Noticing (NT): The detection of the occurrence of any linguistic feature in conscious awareness and its acquisition in long-term memory (Schmidt, 1994)

|             |                           |        |         |           |                  |
|-------------|---------------------------|--------|---------|-----------|------------------|
| Mean= 11.83 | Standard Deviation= 6.823 | Min= 2 | Max= 19 | Total= 71 | Percentages= 31% |
|-------------|---------------------------|--------|---------|-----------|------------------|

Excerpt from interaction:

1) Frank: "Should I flash it?"

Albert: "You mean flash him? Yea. you could flash. Flash lights on. Always"

2) Albert: "Okay. it's a very long hallway let's have us stacking both sides".

Frank: "you said severely?"

Albert: "No I meant it's a very, I talk too fast sorry haha. Okay. Bagz I'm gonna need you to throw a bang".

Feedback (FB): Peer and teacher responses to learner's erroneous second language production, mainly through six types of strategies: recast, explicit correction, clarification, repetition, metalinguistic feedback and elicitation (Li, 2013; Lyster and Ranta; 1997)

|             |                           |       |        |           |                  |
|-------------|---------------------------|-------|--------|-----------|------------------|
| Mean= 13.25 | Standard Deviation= 2.433 | Min=3 | Max=23 | Total=106 | Percentages= 47% |
|-------------|---------------------------|-------|--------|-----------|------------------|

Excerpt from interaction:

1) Albert: "Yeah. How you wanna move towards I"?

Frank: "Towards you? Ok."

2) Bane: "I'm gonna go. Oh, is this glitching for me only?"

Excel was used calculate the following descriptive statistics: mean, standard deviation, min, max, total/sum and percentages. This is to note the frequency of learning opportunities seen from various game-based interaction. Nassaji (2015) and Given (2008) recommend the use of descriptive statistics as the data collected qualitatively can be analysed quantitatively. This helps to thoroughly examine the data collected for relevant themes and then summarised for enhanced representation to examine a phenomenon of interest.

Analysis of data obtained through stimulated-recall and face-to-face interview are answered through thematic analysis to account for learners' perceptions of collaborative work in video games and its impact on learning. The successful application of TA relies on six staged proposed by Braun and Clarke (2006) below:

- Familiarisation with data: Transcription of verbal data, multiple attempts of reading the data and noting initial concepts.
- Generating initial codes: Coding interesting features of data in a systematic manner across the entire data set and collating data relevant to each code.
- Theme development: examination of codes and combining, clustering or collapsing codes together into potential meaningful patterns.
- Theme review: Checking if the themes relate to the coded extracts and the data set as a whole by generating a thematic map of analysis.
- Definition of themes: Shifting to interpretative focus to refine the specifics of each theme and generate concise names for each theme.
- Report production: Selection of vivid and robust extract exemplars with the analyses of selected extracts to relate back to the research questions and literature.

This study aimed to follow a latent approach for coding as it goes "beyond participant-expressed meanings, to the underlying patterns/stories in the data to bring the analyst's theoretical frameworks to bear on the data" (Terry et al., 2017, p23). Each recorded interview was transcribed manually into written verbatim using N-vivo. This process took place immediately after the interviews as it made recalling and transcribing less laborious and easier (McGrath et al., 2019). Then, main codes and sub codes were generated and were common within the dialogue of interviews with participants.

As for the third research question, Savignon (1972) suggest communicative competence is dependent on all individuals being immersed on an activity. Thus, the analysis of themes found in the narrative inquiry of the participants' communication whilst engaged in a video game is of suitability for this study. The theoretical justification of adapting TA is

the identification of patterns/themes within narratives. The generated themes assist the researcher to find segments of data from narratives in the form of think-aloud verbalisations and player's reflections on the gameplay recordings which provide insight to the topic or research questions (Toh and Lim, 2021; Flick, 2013).

### Reviewing and defining themes

The next vital stage is to review and define the themes as some themes are further shaped, clarified or even rejected (Willig and Stainton-Rogers, 2017). Braun and Clarke (2006) claim reviewing themes allows to guarantee captured themes from candidates are in relation to the coded data and research questions. The process is then transitioned into naming and defining themes. By this point in analysis, interpretative orientation is initiated. This stage is about ensuring clarity, cohesion, precision and quality of developing TA. Theme definitions can confirm whether there are adequate depth and detail for each theme to stand alone as a key finding in the analysis phase. Additionally, subthemes are necessary for this study as it captures a distinct aspect of the theme but still shares the same central concept. Working titles are given to the finalised themes to give a clear indication of the content within the theme and draw the reader into the analysis.

### Ethical Considerations

Since interviews usually elicit highly personal material, assuring confidentiality and respect for the interviewee is of paramount for the integrity of research. The ethics of the interview are carefully considered in advance, during the interview itself and in preparation of the research report. In accordance with The Data Protection Act (1998), I took adequate steps to protect participants privacy through storing video recording on a secure server without identifiable information and using ethics form.

## IV. RESULTS

### 1. RQ1. To what extent do learning opportunities occur from game-based interaction?

Table 1: Overview of learning opportunities per total sessions.

| N. Sessions = 13 | NFM       | Feedback  | LRE     | Noticing |
|------------------|-----------|-----------|---------|----------|
| No (%)           | 120 (32%) | 106 (28%) | 78(21%) | 71 (19%) |

The four themes: NFM, feedback, LRE and noticing have been observed in all 13 sessions, which suggests that interaction within video game environment does promote learning opportunities. The tables illustrate the numerical significance and occurrence of each theme in relation to the sessions and duration of individual interaction session. The final step is to triangulate evidence from interaction-based data and stimulated re-call to strengthen quantitative findings.

From the data above, large volume of learning instances corroborates key claims made in the rationale of the use of digital game to provide access to highly engaging communicative contexts to elicit social interactions in the target language (Peterson, 2012; Rama et al., 2012; Thorne, 2008). To verify this finding, the following finding reported the acquisition of new vocabulary item coms:

- Albert: "We'll keep coms to a minimum so we cannot intervene."
- Bane: "So what do you mean by keeping coms to a minimum?"
- Albert: "Like.. like yeah let's not lets make our communication minimalistic; no long sentences like.."
- Bane: "oh okay."
- Albert: "If you wanna say there's a door in front of me that is open. Just say open door in front. Like that."
- Bane: "Oh okay okay, I got you."

Table 2: Average of learning opportunities per interaction.

| Average session duration = 15 minutes | NFM                                              | LRE                                             | Noticing                                      | Feedback                                     | Sum of instances |
|---------------------------------------|--------------------------------------------------|-------------------------------------------------|-----------------------------------------------|----------------------------------------------|------------------|
|                                       | M/SD                                             | M/SD                                            | M/SD                                          | M/SD                                         | 375              |
|                                       | 9.2                                              | 8.1                                             | 6                                             | 5.3                                          |                  |
|                                       | 3.06 instances occur every 5 minutes per session | 2.7 instances occur every 5 minutes per session | 2 instances occur every 5 minutes per session | 1.7 instance occur per 5 minutes per session |                  |

Table 2 shows that per individual session, the probability of selected learning opportunities to happen is deemed high, proving that learning is evident from game-based interaction. This presupposes that EFL learners in this study has L1 output proportionately less than L2 output when engaged in communicative discourse in gaming environments. This finding is observed in Chotipaktanasook and Reinders' (2018) finding of Thai EFL learners who are supportive of using English frequently when talking with friends via voice chat than by responding to the tutor. As postulated by Bryant (2006) and Peterson (2010), my finding confirms that the chosen MMORPG potentially provides extensive opportunities for authentic L2 interaction.

## 2. RQ2. What factors affect students during their interaction in video games?

### Personality as an interaction factor

In this finding, personality factors such as motivation, aptitude and perception are significant indicators in shaping and moderating the interaction. All seven students used comparisons of talkative/shy dimension and how it causes variation in interaction and game outcomes. Further, the finding is similar to other research findings (Reinders and Wattana, 2012). The findings demonstrate personality of the learner can shape the way interaction are construed, whether they are stressful or motivated of achieving game-related rewards because it directly affects human behaviour. Below is the response of Hank of whether personality exerts any influence on interaction:

Hank: "when you have someone who's shy, uh, you tend to use like really simple and direct words in order, uh, to get a, uh, feedback or you are for him

to communicate with you because, uh, if you are really talking in long sentences and complicated, he might not even answer you. He might ignore you."

Within the finding, personality seems to be often overlapped with social skills as an integral trait. This is overlapped with Freiermuth and Jarrell's (2006) finding; when communication is online-conditioned, this lets the learners participate in conversations more willingly since the risk of losing face is minimised, compared to face-to-face conditions. Below is the responses of Bane and Frank when asked if personality is a significant factor in video-game oriented interaction:

Bane: "Definitely, definitely. Yeah, yeah, yeah, exactly. Like, like what I said, you know, a person with good social skills, he would enjoy being around him. You know, he would be, you know, funny."

Frank: "Yes. And yeah, I agree. It does relate back to personality. So if they're talkative, they're more confident, more, uh that could relate to more a positive interaction experience with them."

The literature (see chapter 2.2 and 2.2.1) and students expressed that personality is fundamentally involved in interaction that attracts more attention from and peers and social learners are less inhibited when asked to display their unfiltered proficiency level. Therefore, Bane and Frank favoured the personality of extroverts excel in language and video game learners because the tendency to be sociable leads to more social interaction.

### **Feedback in a gaming environment**

This finding sees feedback a dominant factor in affecting communicative events by consensus among all participants but one.

#### **Myself: "What about feedback?"**

Clary: "Yes, I would say that is significant. It really helps when someone is knowledgeable about the game and gives you good feedback, Truly helps with improving your gameplay or your session. Where if it's know where, if there's no feedback or little non-helpful feedback, that would really like, uh, sometimes it would ruin the session"

In addition to this finding, Hank mentioned willingness to communicate and using feedback in situations where it would benefits others in need to maintain game outcomes and communication:

#### **Myself: "Would you say feedback is important?"**

Hank: " Yeah. Because of someone who gives you feedback and. Uh, yeah. For people who give you feedback will be more compelled towards, uh, communicating more, you know, uh, because you, you have an interaction"

This introduces a certain quality of feedback called motivational feedback, which is aimed to influence beliefs and impact willingness to participate (Seering et al., 2019). This is further emphasised by Nate:

Nate: "Not all people are the same. Some people will try to give you tips and guide you. They might not know your language but they will work hard to help you."

Nate ruminated that feedback is essential for beginners in video games just as those in classrooms; feedback guides, breaks social barriers and promotes confidence. Thus, this can be related back to Vygotsky's ZPD theory (see chapter 2.2) as players need scaffolding where one competent player provides feedback in various forms to others to help them acquire new knowledge when the game becomes more challenging; when difficulty commensurate with ability level, this ensures gaming proficiency grows with the player's pace (Abrams and Gerber, 2022). More related to the literature of

DGBL, a seminal finding from Horowitz's (2019) relates to this in that the use of L2 in MMOG does not carry a sense of risk inherent in classroom setting as no judgments are made to the usage and no evaluations are done to it.

One polarising finding is that of Albert's narration: Albert: "Uh, you can, you can take feedback from silence as a form of, uh, understanding or you can take it as the form of confusion."

#### **Myself: "How?"**

Albert: "It will show like within the game 'cause you're communicating. Uh, if the guy is not understanding or the girl is not understanding what is being communicated, you will see in the game not being implemented."

This finding is reminiscent of Price et al. (2010) research on feedback; stating even though feedback has been widely assumed to promote learning gains, the measurement of its effectiveness is difficult and perhaps improbable. This is complemented by Kluger and DeNisi's (1996) results on feedback interventions do not always improve performance and under certain conditions are detrimental based on the task being achieved. Another way of addressing this is building on links formed in Hattie and Timperley (2007) (see chapter 2.3.3) concerns about cognitive load when delivering feedback.

### **Regionalization of Social Interactions**

The captured finding covers three areas: education, communication and sociolinguistics. Evidence of the merits of using video games in pedagogical setting: Myself: "Ok, so what if video games were incorporated in education? do you think it could benefit students?"

Bane: " Yeah, yeah. No, it depends on, uh, the region. Like, let's say, what do, what do, like, uh, Americans, what do Americans go, How can Americans learn from, uh, from English and their video games? You know, it's very basic to them. To them it's very basic. The second finding on region is connected to communication issues with players met in online environments:

**Myself: " have you ever had any social encounter online that was inefficient or unsuccessful? if so, how it was solved or fixed?"**

Steph: "Mm-hmm. Mm-hmm. . Sometimes, I would, I would, I would explain myself like, if he felt offended by something I said 'cause you know different regions different cultures, I would definitely explain myself because, uh, nobody like being offended."

The final finding is more related to the community of video games and their usage of language. This was seen in:

**Myself: "Do you believe the gaming community has tolerance to language mistakes?"**

Hank: "Uh, yeah, they fairly do. They, They fairly do because, you know, I play in, uh, usually I play in Europe servers. So in European servers, uh, most people, they don't have English as their first. So they, yeah, there is a, there is somewhat of tolerance in for language mistakes, but if you play in like, uh, North American LA services, stuff like that, not as much. So it's a more of a region thing then."

This finding links video game integration with community of practices (see chapter 2.3.1). The finding is seen on Kasmiya's (2015) discussion on the concern of video game and region interaction in EFL context and other contexts. This is congruent with sociolinguistic research Garner (2005): interaction of any L2 within virtual realm places learners with different register to form, co-exist and interact in a multilingual community. Thus, English in video games is not treated as a structural system, rather a holistic, dynamic, interactive and situated constructed or designed one.

### **3. RQ3. To what extent do learners believe video games contribute to their communicative competence?**

In relation with the literature section (see chapter 2.4, 2.5, 2.5.1), this finding found communicative competence can be achieved through willingness to communicate in video games. In order to be able to answer this research question properly I have chosen to divide the sections of communicative competence into subsections dealing with each competence

development separately joined with my coded theme.

### **Grammatical competence and obtainment of vocabulary**

Myself: "Do you think video games contributed on developing your English? what improved?"

Hank: "Everything. Yeah, we can say everything, but, uh, mainly like vocabulary because, uh, you will, you will stumble upon people saying new words, and you don't know this, the meaning of these words. So you have to do a search for, uh, for these words and you will know the meaning. And then you'll start using these words. Yeah."

Nate: "It's very helpful for vocabulary, especially movies helped me also, but video games taught me better, helped me use them more in different situations also. Because I enable the subtitles."

Hank showed he gained access to lexical knowledge, while Nate developed syntactic knowledge. The finding confirms video games can help develop mastery of language code. It means that the speaker knows the rule of language, which includes vocabulary knowledge and its function at word and sentence level (Galaja, 2012). This finding is also relevant in Peterson (2010) research in that through digital gameplay people learn from language exposure and patterns of language use in different parts of speech. Other SLA researches augment this (Ellis, 2002; Lightbown and Spada, 2013) by implying engaging in frequent interactions puts emphasis on frequency with which learners encounter certain linguistic features consistently. This results in developing grammatical competence, leading to the skilful manipulation and interpretation of these rules to construct meaningful sentences (Ellis et al., 2008). Sociolinguistic competence and culture acceptance The finding on sociolinguistic competence entails interactional and cultural environment stress, so it links socio-pragmatics as well. Bane believes this is widely spread in video games environments in the following exchange:

Myself: "So tell me what are the pros and cons of video games interaction?"

Bane: "Pros. Yeah. Pros is you can, you could learn a lot about their culture, their slang, how they talk, how they behave. You know, you would definitely, uh, get to know, uh, people. Like this group of people, this, uh, region of people. You would know what they're interested in, what they dislike and you would know how they talk, you know?"

This relates back to Taguchi (2011) finding, that the ability to communicate and interpret meaning in social interaction is an essential component of L2 proficiency. To complement the finding, having a combination of transfer and adaptive discourse functions in real-time communication is utilised in video games. Navigating through responses in digital game-mediated communication is well-established (Tian, 2014). Further, this is replicated in Palmer (2010) and Rankin et al. (2009) studies (see chapter 2.5).

Strategic competence and immersion of built-in game features as modified discursive tools

Strategic competence is composed of knowledge of verbal and non-verbal interaction strategies that are utilised for communication breakdowns due to lack of sufficient competence. Two findings specified that video games do improve discourse competence through manifestations of non-auditory strategies:

Myself: "So, if you see someone from your teammates performing badly in a game, how would you express yourself?"

Hank: "Yeah. So in League of Legends, there is a ping system where you can choose a certain type of ping, uh, uh, and to pin on the map. So there's a, there's a question mark ping, there is an explanation mark ping. So usually players tend to use these order to like notify their teammates. Uh, so if someone did a poor job, you will ping a question mark."

This is reinforced by another statement from Bane:

Bane: "Yeah, yeah. Command, exactly. Command system, uh, systems is in the game. Like if, uh, my, my, if my enemy would've disappeared from my, uh, lane, you know, I would ping my friend, instead of,

you know, talking about it, like on the mic, it would be too, you know, too much, you know, unnecessary information. Yeah. Yeah, so as a shortcut I would just, uh, go over the map and see where my friend is located at the map and hit the enemies missing button."

Actional competence and context-situation dependency

The finding on actional competence focuses on oral communicative intent, that is, matching the actional intent with linguistic form based on verbal schemata which carries speech acts. During the study, interaction between two participants realised and showed this by offering an explanation to sentence "No eyes":

Albert: "Checking closet. No eyes. Okay."

Steph: "By eyes you mean you have no visual confirmation on cvs or tangos? "

Albert: "Could be both. That's why we gotta see their movement."

According to Celce-Muria et al. (1995), actional competence is seen in cases where learners exercise actional behaviour without being contextually appropriate, or when a stylistically appropriate speech act does not achieve intended meaning. The concern is this type of competence is difficult to master because it is associated with a myriad of language functions, native/non-native dichotomy and situational information. In concurrence with Berns (1990) research, it is hard to give a precise definition of language functions because they could be too broad and too situation-specific, leading to subjective categorisation of language functions. This is evident in Steph's response; as a speaker of L2, he seemed unfamiliar with how this speech act "no eyes" is integrated and sequenced in real-life communication. Depending on the frequency of certain language functions, they can be conventionalised and no longer be considered as indirect speech act.

## V. DISCUSSION

### 1. Learner perspective and personality on game-based interaction

Participants responses revealed a trend toward perceived positive effect of playing and interacting in VG on overall L2 learning. The finding concerns the area of research in the application of digital games and the role of effective factors. This examines areas of relatedness to this study such as learner beliefs and willingness to communicate (Peterson et al., 2020). The results of interviews responses suggest students hold the view that participatory behaviour in MMORPG interaction elicits positive learning experience, with exposure to rich interactive dialogues where they use target language to communicate meaningfully as seen in table 1 and 2. This corresponds with the findings in line with research of Mifsud et al. (2013) and Bourgonjon et al. (2010). Overall, the students in this study have experience of playing digital games from five to seven hours per week in their spare time. Regarding what motivates learners to play, a significant number mentioned it is simply out of entertainment, with no intention to learn any certain language areas. From the interviews, there is a misconception is that introverted people are treated as a problem in communication — they are reserved and alienated when it comes to social activities but they perform better in academic performance. They have more meticulousness, maturity, responsibility and self-confidence in classroom activities (Naiman et al., 1978). This can be linked back to research findings from Muho and Kurani (2014) and Mackey and Goo (2012) view on interaction (see Chapter 2.2)

Overall, the perceptions for the whole cohort of students demonstrated that communication is key when on their L2 learning. I included a finding related to the second research question, a quote from one of the participants on digital interaction being compared to every perceivable activity in physical world:

Myself: "Do you think communication is a necessity in video games?"

Clary: "Definitely it is an essential key for a for, to succeed in a game. If I join a game and none is communicating, I know we are losing already. Just like in marriage, or building a business with someone, or simply buying a house, not communicating with anyone will keep you lost and have very little chance to succeed. It's the same with video games."

### 2. Interaction on MMOG

The findings have hypothesised that the benefits of utilising digital games lies in the opportunities they provide for learners to engage in authentic, meaningful and goal-directed interaction (Pasfield-Neofitou, 2014; Cote and Gaz, 2015; Mackey and Goo, 2012). Many well-designed games incorporate elements of task-based approach to language learning that aims to facilitate language development (Reinhardt and Thorne, 2020). As indicated in game selection phase (see chapter 3.0) many game tasks require immediate decision-making and quick collaboration with others to reach desired objectives. Consequently, communicative engagement is a requirement. While this process is seen stressful in educational setting, learners feel less pressured to engage and take risks in their L2 production (Chotipaktanasook and Reinders, 2018). This is related to a video game characteristic called human interaction. Scholars like Long (1981) and Ellis (1984) view the interplay between L2 input, learner's output and the feedback learners receive on their production is pivotal for L2 enhancement. Video game-based interaction is one potential way of meeting this need; the learner is able to acquire new features of language such new vocabulary and communicative competence from the instances of negotiation of meaning, feedback, language episodes and noticing from collaborative dialogue (Swain, 2000; Sylvén and Sundqvist, 2012).

The first finding (see chapter 4) from the table above shows the totality of learning instances observed and coded from 13 sessions of which accounted for 184 minutes. The nature of the interaction was not intended for learning, but it led to learning new lexis. The quote from Bane stated:

"At first I really did not know what he meant by coms. I thought he meant cams. Like cameras you know. I thought its best to ask before we start killing and clearing the area."

This shows significant connection between playing in L2, in this case, English language and online interaction to achieve linguistic achievement.

### **3. Communicative competence on MMOG**

The findings on communicative competence improvement from video games is replete with studies indicating minimises learner stress, increases willingness to communicate and offering safe space to commit language mistakes without fear of embarrassment or failure (Jauregi-Ondarra and Canto, 2022; Soyoo and McLay, 2018), which demonstrate that the benefits of virtual game-based interaction is not limited to linguistic gains. To elaborate, excerpts of interviews and stimulated recall has shown it may stimulate participants' communicative competence in organisation and planning of speech. For successful communication, learners need more than grammatical skills and knowledge; they need socio-cultural knowledge, strategic and pragmatic awareness to create necessary attitudes for communicative competence to occur (Barr, 2017).

In this respect, Hampel (2014) accentuates the importance of well-designed game tasks in order to facilitate intercultural communicative competence. Command and ping system are used interchangeably to encourage spontaneous dialogue involving collaborative task-oriented directions to other team members. Bagarić (2007) points that some of these strategies include avoidance of words and modifications of messages. It can be argued that the use of ping system enhances strategies competence because it enables players to deal successfully with the arise of social problems. Using the words of participant B, for example, instead of saying "An enemy has disappeared from my sight" a player could use a function which would transmit the same verbal utterance intended in much shorter period. The efficacy of this feature on video games gives an opportunity for the player for decision for best

course of action to adequately assess the situation about an interaction, paying attention to partner's intention to deliver plausible and benevolent problem-solving to communication conflict. This strategic choice is influenced by emotional, cognitive and behavioural responses to the opposite interlocutor (Canary, 2003).

### **4. Language learning potential from interactions in Commercial-Off-the-Shelf games**

Considering the assumptions of the participants on using games in education and frequency of four interaction categories suggest it could be a promising non-traditional methodological tool, which takes the form of a medium for L2 learning. These findings are in harmony with Al-jifri and Elyas' (2017) findings, as they revealed that the participants acquired English naturally from using gaming as a recreational and optional activity. By the same vein, Kirriemuir and McFarlane (2004) add that a more exciting and prosperous learning experience occurs in a natural uncontrolled context. Appendix 3 and 5 (see chapter 4.2) can be used as evidence that players had the opportunities to negotiate player-produced input and in-game input as a means to achieve game objectives in a contextually rich social dialogue, a finding found in Dixon and Christison's (2018) study.

Interaction in a digital world whether for entertainment or language learning is considered a multifaceted concept that includes: multimodal social interactions between parties via verbal and non-verbal modes, mediated by the environment and its communication channels; avatar interactions which allow the learner to not interact with the environment but also occupy a sense of belonging with space; interactions compiling of linguistic and cultural elements mediated by the usage of target language (Wigham et al., 2018). As for education, game playing can afford game literacy (Gee, 2007; Squire, 2008) that illustrates a much greater variety of linguistic register, genre, complexity and reading level (Thorne et al., 2012).

### **5. Feedback in MMOG**

Findings on feedback relate to prominent studies of Seering et al. (2019) and Canals (2022), with students



developing collaborative skills by giving and receiving peer feedback, an activity commonly conducted in classrooms. Beavis and O'Mara (2010) described the process of students providing constructive feedback on peers' gameplay. The researchers found that the nature of game required more collaborative feedback and necessitated constructive dialogue among students, who were honest about the performance of other students. Gerber et al. (2014) described how peer feedback, when embedded in the VG curriculum, led learners to go beyond the official curriculum to provide friendly and volunteered comments, which students used to refine their game performance. The authors posit that collaborative, peer feedback based on texts such as games generated a more equitable type of learning experience, in which the expertise does not lie solely with the tutor (ibid).

## **6. The concept of region**

There was a growing recognition of region as a sub-theme in interviews. Region as a socio-cognitive construct in video games interferes intricate interrelationships among audience and formality (Tarone, 2008), thereby creating variants that influence the stylistic choices of the speaker during interaction (Chambers et al., 2002). Both for interaction and education, region is seen pivotal for development of interaction, implementation in educational setting and tolerance of language errors. The core findings on regionality of video games, complemented by the theory of language socialisation by Schieffelin and Ochs (1986) represents excellent loci for my study: socialisation through language and socialisation to use language. The first type of language socialisation is a straightforward one. Every COTS game has rules which players must abide by to some extent to be considered an actual participant in the game; they use language functions required to communicate and execute in-game tasks. To relate this to this research the criterion of the game used for this study (see chapter 3.0) regards the rules specified for Ready or Not, in which players follow the rules or invent rules as the game is played to promote social interaction. The second type goes beyond simply learning how the game's communicative nature goes. Furthermore, this covers the gaming

community members as a whole and whether they communicate appropriately with other gaming communities. This aligns with the concept of community of practice as habitual video game users follow the three core tenets (see chapter 2.4.3) to construct linguistic and social norms, variable to those from other gaming communities.

## **VI. CONCLUSION**

Taken together, all these findings lead to the concluding remark. They lend strong support to the claims that the nature of interaction digital games can be largely effective for L2 learning. The study confirms routine use of games that are designed for entertainment purposes only can be effective for developing not only linguistic gains, but also social. The findings were successful in determining whether they include learning opportunities or an effective alternative learning method in educational setting.

### **1. Limitations**

The findings of this study is subject to certain limitations. First, the study did not have access to female participants. This is considered a limitation as it is crucial for the selection choices of the study to be representative of both gender spectrum to avoid gender bias and study limitations (Reybold et al., 2012). Second, the quantitative and qualitative analysis of this study captures the feeling that video games should be implemented in education. However, it is associated with barriers such as attitudes, training experience and perceived benefits that shape the overall pedagogical approach. This study suggests that extensive hours of daily play or per week is required to see the benefits of interaction on students' language achievement in L2. This could be an implication of VGs implementation in classroom setting. Fourth, both pedagogical and methodological drawback in game and learning studies, particularly in the academic domain, is the lack of interest in all genres of video games.

### **2. Contributions and future research**

This mixed-method study potentially provides three contributions to the field of SLA and CALL, namely, pedagogical, methodological and theoretical. First, it extends knowledge on the effectiveness of COTS

interactions for teaching and learning purposes. The study pointed that VGs is viewed as a potential avenue for enhancing learning and creating authentic interactions to practise L2. As a methodological tool, the results confirm the assumptions of Prensky (2001) and Gee (2003) that learning with video games places learners in an affinity space: rule-governed, goal-oriented, interactive, outcome-based, challenging and feedback-abundant content. The theoretical significance is that the outcomes of this study identified social interaction experiences through online games as a crucial provider L2 environment. This is supported by theoretical concepts of WTC, COP and LS, which highlights the importance of interaction in SLA.

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