# Learning English Literacy through Video Games: A Multimodal Perspective

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**Abstract**

Multimodal analysis in learning English literacy is meant to be an eye-opener for future research related to video games as didactic tools as they are comparatively less studied, although there has been rapid growth in the multimedia industry in the past decades. The data in the present study were taken from three different video game genres: Role Playing Game (RPG), Multiplayer Online Battle Arena (MOBA), and FPS (First Person Shooter), with two different titles for each genre. The data examined in this study were elements of composition and ten student game players. The compositional features in the collected data from the respective footage of the video games were based on a visual grammar by Kress and Leeuwen (2006) This research utilized the interactive model of qualitative data analysis by Miles, Huberman, and Saldana (2014) in analyzing the compositional features. It consists of three parts: data condensation, data display, and drawing and verifying conclusion. After analyzing the composition, the players were interviewed to gather the vocabulary learned through the process of playing the games. This study found that in terms of composition features: 37 elements of information values, 37 saliences, and 36 framings. It can be concluded that these genres own more maximum disconnection framing than maximum connection. However, these students categorized fighting genre and shooting genre elements without centered information value. The implications of the study towards learning the English language are: in the first place, video games can be one the useful media to teach students reading and speaking literacy skills, especially vocabulary and historical knowledge. Secondly, these games help the players acquire the English language subconsciously and make them enjoy the learning process.

**Keywords:** English learning, literacy, multimodal, video game, composition

## 1. Introduction

The advancement of digital technology has led us to the era of multimedia, enabling texts to be delivered through multimodality. The use of digital forms has created additional literacy to reading and writing language skills. Sinar et al. (2021) encourage students to use their technological devices to find, analyze, evaluate and apply their knowledge which means giving them interesting assignments in class time that requires the use of their cell phones. This is needed by students inside and outside of the classroom, especially in learning vocabulary. Al Qahtani (2015) stated that one of the parts is important of the media used by the students is vocabulary information as the center of knowledge in language literacy skills.

A videogame is one of the text types that can be helpful for teaching and learning activities since it is an engaging media that provides a lot of vocabulary that has to be learned by the students if they want to play these games. It is true that teachers are looking for ways to strengthen the students' cognitive skills including language in this digitalization and technological era (Aleksandrov & Levitskaya: 2018). This means that video games as one of the education media are becoming an appropriate step for that purpose in the language learning process.

Along with learning literacy, video games are a form of entertainment. They are entertainment media products that utilize multimedia to be delivered, and of course in the multimodal form, where there is more than one modality delivered at the same time. Video game has gained popularity over the decades and has been proven to be one of the

leading industries, even surpassing movie and North American sport combined (https://www.marketwatch.cp/story/videpgames-are-a-bigger-industry-than-sports-and-movies-combined-thanks-to-the-pandemic-). Aside from that, a video game has also been popular and there have been many international events dedicated to it. For an instance, *The International*, an international championship held by the video game company Valve for one of the most successful video games ever, DOTA 2, was able to reach a prize pool of over 20,000,000 USD (source: http://dota2/prizeterac.kr//international2016).

Digital games appeal to such a wide audience and are reflected in education. One of the 4Cs is to inspire creativity, encourage cooperation, require and reward critical thinking, and educate children on how to communicate. 21st-century education prepares students with the knowledge, skills, and abilities they'll need to succeed in the twenty-first century. Competences include numeracy literacy, scientific literacy, ICT literacy, financial literacy, and cultural and civic literacy (Hallerman.et.al, 2019; Voogt and Pareja Roblin, 2012). In line with the 21st-century skills, Ratama et.al (2021) conducted a study aimed at investigating the kinds of 21st-century skills (4Cs) in English literacy activities.

Studies on using digital games in education have been carried out by Homer, Raffaele, Ober, Plass & Ali (2018) on how digital games can help develop cognitive skills. Other research conducted by Chen, Tseng, & Hsiao (2018) proved that digital gaming facilitates vocabulary teaching. In this respect, students all over the world play digital games in their daily lives and they play the games to improve learning.

Bal (2019) conducted research and proved that gamification increased the interest of students in the course, combined school and non-school life, facilitated classroom management, supported collaborative work, and developed creativity. The findings suggested that digital games can be used as a text type in Turkish language lessons with the method of gamification in order to positively affect the motivation of middle school students toward writing education.

This research concerns the multimodal composition meanings of video games and how to apply them in language learning, especially in vocabulary learning. According to Kress and Van Leeuwen (1996), compositional meaning is "how the representational and interactive parts are made to relate to one another and how they are merged into a meaningful whole." The compositional meanings include informational value, framing, and salience. Moreover, the composition of meanings is helpful for students, teachers, researchers, and linguists, showing that video game has recently become a crucial object of research since nowadays it is easily accessed by anyone at any time, yet, there is very low exposure to what it actually is, and often misinterpreted as ‘child’s play. Meanwhile, just as with any other entertainment such as books and movies, there are ratings that are used for video games called Entertainment Software Rating Board (ESRB), regulating the ratings for video games from ‘Everyone’ to ‘Adults Only’ (source: https://www.esrb.org/ratings-guide/). This indicates that there are some video games that should not be casually played by minors. The case when parents overlook the content of video games and their children are playing it is not rare to be found, in fact, a childcare specialist website had a survey with 2000 parents about paying attention to age restrictions in video games and 86% admitted that they did not pay any attention to this factor (source: https://bit-tech.net/news/gaming/parents-ignoring-game-age-ratings-survey-finds/1/)

The study of composition meaning has been based on the English Systemic Functional Linguistic (SFL) theory and there have been many studies conducted in this field (Sinar, et al. 2021). The composition is analysed using metafunction concept of multimodal analysis introduced by Kress and Van Leeuwen (2006) which focuses on the images represented in multimodal modes. It is a branch study of systemic functional linguistics which is able to analyze more than one modality in language. The area of multimodal research is the relationships across and between modes in a multimodal text (Bezzemer, 2012). Getting the picture of composition is considered to be suitable in this research due to the fact that video games need to be played on a screen where images are presented in a multimodal form. Hence, multimodal analysis is currently a potential analysis of video game content that is presented in multiple modes.

Understanding the relationship between multimodality and video games is not as vast to be found currently, as it is considered new. In fact, there is a similar multimodal study using video game as an object, *A Multimodal Analysis of Video Games: A Ludonarative Model* by Toh (2015) which investigates the player’s understanding of the multiple modes presented by the video game that create a multiplicative meaning. Aside from that, there is also another multimodal study titled *Multimodality: Menafsir Verbal, Membaca Gambar, dan Memahami Teks* by Hermawan (2013) that elaborates on multimodality as a procedure of analysis. In multimodality, video games are not a single schema, but it is more comprehensive in understanding the visual art given by the genres of the games (Aleksandrov & Levitskaya: 2018). The interesting point about many video game genres is that they are based on literature and

history to re-create a sense of knowledge in history and literature, and game maps, with accompanying music.

Roblox online games in game-based learning activities. Meier et al. (2020) researched a user-generated 3D environment (Roblox) that could be used to teach English language skills and discovered that an online gaming module in English Language Problem-based Learning could be beneficial to students. According to the patent document published on Google, Roblox was described as a network-based gaming system includes a website hosted by a web server connected to the network, the website including a member login interface, a social graph application program interface (API) (Baszucki, 2015) .

This present study aims at examining different genres through multimodal composition analysis to examine students' vocabulary learning. The rationale behind examining different genres through multimodal composition is to contribute to the improvement of English literacy learning regarding multimodality and video games to give implications to vocabulary learning, and the present study can give further impetus to the research on the pedagogical applicability of video games. Since this world is already in the multimedia era, and multimedia entertainment such as video games has already taken up a massive role in our society, also, with the introduction of multimodal conceptual analysis, thus, the question formulated is: what is the multimodal composition structure of three different genres in terms of learning English literacy?

With the availability of data, video games that are used in this research are divided into genres: Role Playing Game (RPG), Multiplayer Online Battle Arena (MOBA) and First Person Shooter (FPS). By using these different types of genres as multimodal data found in video games, has become interesting for learning English literacy to appreciate the created works of visual design from a semiotic and linguistic angle. Aleksandrov & Levitskaya (2018) believed that the students are actually assigning a causal connection to the gaming process that bears the understanding of the language skills.

The multimodal approach to video games can be utilized for educational purposes, particularly for literacy, because video game is a media that interacts with the user to advance (Granic, Lobel, and Rutger 2014). In other words, the user is demanded to understand the interaction needed to play the game, and those interactions are spread all over the screen with user interface (UI). User interface (UI) is anything that is designed to be an information device, which the user can interact with. This can include the display screen, keyboard, mouse, and desktop display. UI can be broken down using a multimodal approach so the user is able to understand which function is needed to trigger an action.

There are many video games that are presented in foreign languages, so with this interaction demand, the user who is not native to the video game language can use the multimodal approach which focuses on the image presented on the screen to interact with the video game and learn the language through the action that is triggered by the video game.

### *1.1 Composition Concepts*

Kress and Van Leeuwen (2006) adopted Halliday's metafunction concepts and introduced a grammar of visual design in multimodal texts. The metafunction consists of ideational, interpersonal, and textual while Kress and Van Leeuwen modified them into Representation, Interaction, and Composition, and this study applies composition analysis to the images found in video games of different genres.

Composition analysis relates the representation and interaction of meanings of the image through three interrelated systems which are 'Information Value', 'Salience', and 'Framing'. The placement of elements endows them with the specific informational values attached to the various 'zones' of the image which are left and right, top and bottom, center and margin.

The elements are made to attract the viewer's (in this article referred to as the player) attention to different degrees. Salience is divided into 'Maximum Salience' which attracts the player's attention the most and 'Minimum Salience' which attracts less attention from the player compared to the 'Maximum Salience'. This can be determined by the relative size of an image, contrast of color, the difference in sharpness, and the placement of elements (informational value), the presence or absence of framing devices in form of dividing lines or actual frame lines. In its presence, Framing can be divided into 'Maximum Connection' and 'Maximum Disconnection'. 'Maximum Connection' means that the frame shows that the elements belong together and 'Maximum Disconnection' means that the elements do not belong together.

## 2. Method

### *2.1 Data and Data Source of Study*

The data were taken from the video games on their respective platforms. Some footage is taken from a documentary on youtube.com, a video-sharing website. The footage was taken by using the screenshot feature for the game that is being played, and the print screen feature for the footage taken from youtube.com. There were elements in a total of visual texts as data being used in this study. The data source was 6 games in total taken from 3 different genres (2 games for each genre Role Playing Game (RPG), Multiplayer Online Battle Arena (MOBA), and FPS (First Person Shooter) which work as samples in this study. The platforms were named as Nintendo Switch, PC, and Mobile/Smartphone.

The data that are considered as elements in this study was the user interface and character which interact with the player. In many video games there are environments that act as a background, and this background is constantly changing along with the movement made by the player, and in many cases, do not interact with the player, because of that, the environment/background of the video game is considered elements in this research because it causes countless anomalies. The user interface and character, on the other hand, are considered constant in video games, hence it showed several patterns that featured each other.

There are 10 students as participants played and four were allocated to each of the six games in the study. They chose these games due to enjoy the game which would enable the researcher to collect natural data. To get the implication, this study conducted an interview after they had played the game.

Preliminary data were collected during the first session. Participants were playing the game for the first time, and they were learning about the story and gameplay. PC gamers were also allowed to play the games at their homes. The PC participants were to record their gameplay at home, the researchers observed their recording of the gameplay afterward.

The instruments used in the game were played by electronically manipulating images produced by a computer program on a television screen or other display screen. The users already understood the interaction needed to play the game on a platform with a controller, and those interactions were spread all over the screen with User Interface (UI). The user interface (UI) had been designed to be an information device, which the user interacted with. The gamers played video games with the controller, PC, and screen; presently they provided video games with handsets.

### *2.2 Data Analysis Methods*

This research used the document type of data collection method with the recording technique to examine existing data in the form of databases. Moreover, the interview was also done after the analysis of the composition data.

The technique of data analysis uses the interactive model of qualitative data analysis by Miles, Huberman, and Saldana (2014) that is divided into three parts which are Data Condensation, Data Display, and Drawing and Verifying Conclusion.

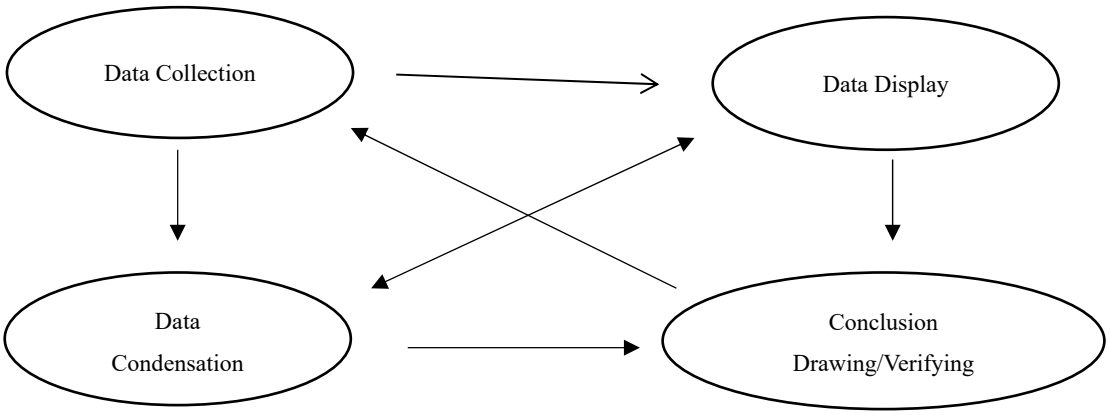
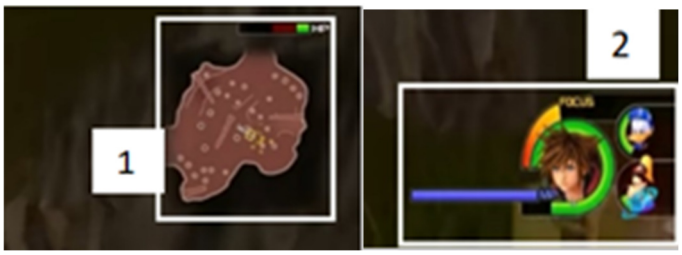



**Figure 1.** Interactive Data Analysis Model by Miles, Huberman, and Saldana

This study condensed data through the process of selecting, focusing, simplifying, abstracting, and transforming the data that resulted from the videogames players to make the data stronger. The selection of data from the footage was done during playing the video game on their respective platform. The selection focused on ordering the data from the video according to what genre the game belongs to. In this analysis, the data collected from the video game were focused according to what genre the game belongs to, so the features were found for each of the genres.

Using the multimodal composition analysis, numbering 1 to 10 was used to simplify codes to identify components of information value, salience, and framing such as the following:




Abstracting was done narratively by giving an explanation of each of the elements found in the footage. The transforming of data was done in form of six images applied to the multimodal composition analysis and transformed into six images (*Kingdom Hearts III*, *Final Fantasy VII Remake*, *DOTA 2 Mobile Legends*, *Valorant* and *Apex Legends.* After labelling the images, the summary of the scores were placed into five (4) columns such as number**,** information value, salience and framing.

| No. | Information Value | Salience | Framing |
|---|---|---|---|

Data display was presented in the form of fixing and filling in all elements of composition analysis in the images and the results of data identification were put on each genre. Each genre was organized in its composition position, then observed for conclusion drawing. The conclusion was drawn from the displays, and then they were verified by referring back to the theoretical concepts. Then the results of the conclusion drawing were put on the table demonstrating the features of each genre such as the following:

| Information Value | | Salience | | Framing | |
|---|---|---|---|---|---|
| Centered | Polarized | Maximum | Minimum | Maximum Connection | Maximum Disconnection |

**3. Results**

This analysis of video game genres is being focused on this analysis of RPG (Role Playing Game) *Kingdom Hearts III* and *Final Fantasy VII Remake*, MOBA (Multiplayer Online Battle Arena) *DOTA 2 Mobile Legends*, and FPS (First Person Shooter) *Valorant Apex Legends* with 2 video game titles for each genre. Multimodal composition structure and the meanings

*3.1 RPG*

In RPG genre, the players control a character to follow a story and make actions based on the available option that are presented by the UI. The RPG game titles that are used in this analysis are *Kingdom Hearts III* and *Final Fantasy VII Remake.*

*3.2 KINGDOM HEARTS III*

In this game, a single-player RPG video game follows the story of a character whose name is Sora. During the game, the player uses the controller to control the character through the story, fighting enemies and progressing with the game.


**Figure 2.** UI of Kingdom Hearts III

Focusing on the composition analysis, the feature types that recurrently occur in the UI of *Kingdom Hearts III* provides the players with 4 information displayed in the table below.

**Table 1.** Composition of UI of Kingdom Hearts III

| No. | Information Value | Salience | Framing |
|---|---|---|---|
| 1 | Ideal New | Minimum | Max. Disconnection |
| 2 | Real New | Minimum | Max. Disconnection |
| 3 | Ideal Given | Minimum | Max. connection |
| 4 | Real New | Minimum | Max. Disconnection |

The UI of *Kingdom Hearts III* starts with the map (1) Ideal New, minimum and maximum disconnection. They show the position of the character in the game that is currently played by the player. The status bar (2) Real New, minimum and maximum disconnection show the condition of the character that is played by the player. After that the UI proceeds to Ideal Given, minimum and maximum connection to obtain munny (3) which is the currency that is obtained by the player in the game. Lastly, he proceeds to a command prompt (4) Real New, minimum and maximum disconnection that let the player control the character with a controller.

Most vocabulary are shown in the command prompt (4), it contains words that trigger an action that performed by the character if the player pressed a corresponding button in his/her controller. The player comprehends the vocabulary given in the command prompt (4), then soon he makes the character carry out an action that is provided by the game to continue or finish the game.

*3.3 Final Fantasy Vii Remake*

The Final fantasy VII remake game is also a single-player RPG video game. At this time, the players follow the story of a character whose name is Cloud. During the game, the players use the controller to control the character through the story fighting enemies and progressing with the game.

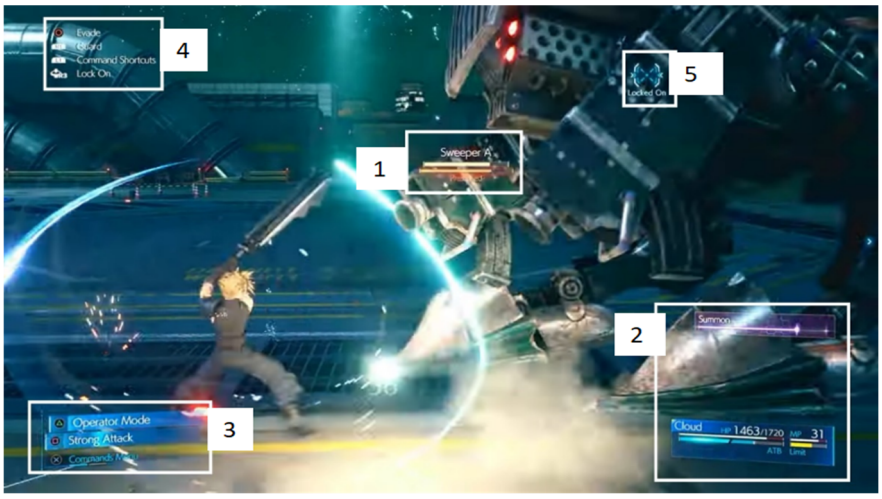



**Figure 3.** UI of Final Fantasy VII Remake

The table below features the composition of UI of *Final Fantasy VII Remake* that characterise the player's choice.

**Table 2.** Composition of Final Fantasy VII Remake

| No. | Information Value | Salience | Framing |
|---|---|---|---|
| 1 | Centred | Minimum | Max. Disconnection |
| 2 | Real New | Minimum | Max. Disconnection |
| 3 | Ideal Given | Minimum | Max. Disconnection |
| 4 | Ideal Given | Minimum | Max. connection |
| 5 | Ideal New | Minimum | Max. connection |

The UI of *Final Fantasy VII Remake* provides the players with compositions. The information value is quite similar to *Kingdom Hearts III* with difference in centered. UI shows the health of the enemy (1) that is being fought by the character that is played by the player has centred, minimum and max. disconnection. Then status bar (2) works similarly with the status bar in *Kingdom Hearts III* has Real New, minimum, and Max. Disconnection. This game provides the player with two command prompts (3) which has Real given, minimum, max disconnection and (4) that has ideal given, minimum and max.disconnection, both help the player to move the character, and there is a lock-on UI (5) on ideal new, minimum, and max. connection that shows which enemy that is currently being fought by the character that is played by the player.

Each UI in this game provides vocabularies that are needed to be understood by the player, but similar to *Kingdom Hearts III* most vocabularies are provided in the command prompt (3,4). Both of the command prompts are located in the given information.

*3.4 MOBA*

In MOBA games the players form a team with 4 other players against another 5 players, so a very frequent communication is needed in the game. Moreover, there are many vocabularies that are presented at once on the screen which can be used for vocabulary learning right away.

*3.5 Mobile Legends*

*Mobile Legends* as a mobile MOBA video game played on smartphone. The UI strongly depends on the touchscreen feature. This time the game involves 10 people at once through online connection, so language and communication became important in the game.


**Figure 4.** UI of *Mobile Legends*

Focusing on the composition analysis, the feature types that occur in the UI of *Mobile Legends* are displayed in the table below.

**Table 3.** Composition of Mobile Legends

| No. | Information Value | Salience | Framing |
|---|---|---|---|
| 1 | Ideal | Maximum | Max. Disconnection |
| 2 | Real New | Minimum | Max. Disconnection |
| 3 | Ideal Given | Minimum | Max. Disconnection |
| 4 | Ideal Given | Minimum | Max. Disconnection |
| 5 | Ideal | Minimum | Max. Disconnection |
| 6 | Real New | Minimum | Max. Disconnection |

In relation to UI of *Mobile Legends,* it shows six information, starting from the notification board (1) ideal, maximum, max. disconnection that let the player know about what just happened in the game, in this figure, "Has Slain" is written between two images of the characters' face, it implies that the character whose face is on the left side has defeated the character whose face in on the right side. This information is put on the center and with a relatively big size compared to other information which makes it a salience in this figure, it implies the importance of this information which is very crucial for the player.

After that, the command prompt (2,) real new, minimum, max. Disconnection, (3) real given, maximum, max. Disconnection has real information value. This is necessary because the game is played on a smartphone using the touch screen feature, so the players directly touch the command prompt using their fingers and it is considered easier for the players to reach the real information value instead of ideal information value while holding the smartphone. The command prompt that has Real New information value (2) is used by the players to trigger action of the character, and the one on Real Given (3) is used by the players to move the character on the screen.

The game also provides the players with a map (4) ideal given, minimum, max. Disconnection. It has given information value which means UI wants the player to pay attention to it, and it is considered the most crucial part of a MOBA game, because the map here shows not only the position of the character that is played by the player, but also the allies and enemies. It is strongly needed to make coordination with the allies or to attack the enemies.

Finally, there are scoreboards (5) ideal, minimum, max. disconnection (6) ideal new, minimum, max. disconnection. Both show the score that has been gained by the player's team and enemies. Its information value of Ideal and Ideal New show that those are not crucial information to be known by the players.

In this title, there are not many vocabularies that can be seen directly, but the touch screen feature actually shows a massive number of vocabularies in each UI when being touched, but aside from that, the UI already provided some vocabularies in the command prompt (2) with "recall", "regen", and "inspire" written on it.

*3.6 DOTA 2*

*DOTA 2* as a MOBA video game is played on PC (Personal Computer). The UI is considered complex because the use of a keyboard and mouse as controller reach a vast amount of control possibilities. The game involved 10 people at once through an online connection, so language and communication play important in the game.

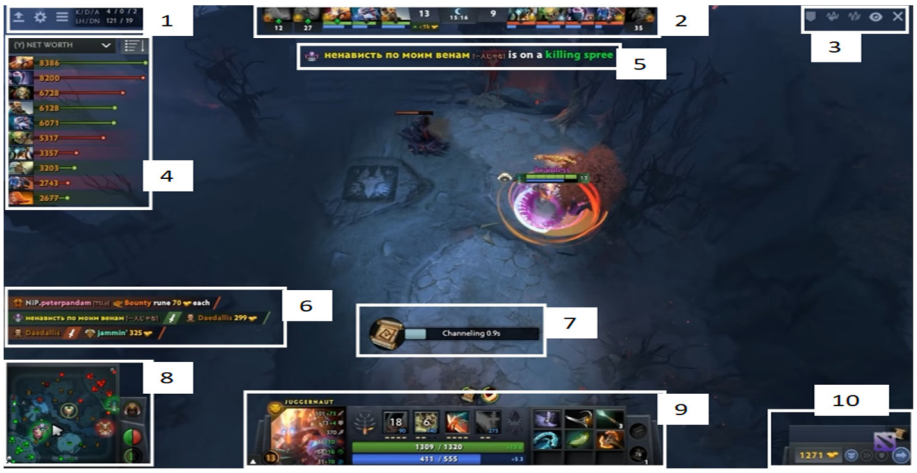



**Figure 5.** UI of DOTA 2

The feature types of composition of the UI of *DOTA 2* are observable in the table below.

**Table 3.** Composition of DOTA 2

| No. | Information Value | Salience | Framing |
|---|---|---|---|
| 1 | Ideal Given | Maximum | Max. Connection |
| 2 | Ideal | Minimum | Max. Disconnection |
| 3 | Ideal New | Minimum | Max. Connection |
| 4 | Given | Minimum | Max. Disconnection |
| 5 | Ideal | Minimum | Max. Disconnection |
| 6 | Given | Minimum | Max. Disconnection |
| 7 | Real | Minimum | Max. Disconnection |
| 8 | Real Given | Minimum | Max. Disconnection |
| 9 | Real | Minimum | Max. Disconnection |
| 10 | Real New | Minimum | Max. Disconnection |

The UI of *DOTA 2* provides 10 pieces of information for the player, there are massive vocabularies provided in the UI as can be seen in figure 6. This game is played on PC (Personal Computer), so it uses a keyboard and mouse to control. The settings (1) ideal given, minimum, max. disconnection provides the player with some symbols that send the player to the menu interface on click, where the player can choose settings for the game.

The scoreboard (2) ideal, minimum, max. disconnection here works the same as the scoreboard in *Mobile Legends* and also has the same information value. The menu (3) provides the player about several options, for example, the X symbol there lets the player out of the game on click. There is also a UI that provides the player with the current statistic (4) given, minimum, max. Disconnection of each player in the game that has given information value. The notification (5) ideal, minimum, max. disconnection in this game is much smaller compared to *Mobile Legends.* The history (6) given, minimum, max. disconnection shows several events that happened in the game in a certain amount of time.

The current action UI (7) real, minimum, max. disconnection is showing what is the character that is played by the player currently doing, by understanding what is written in this UI, the player is aware of what is the character he/she is currently playing doing. The map (8) real given, minimum, max. disconnection in *DOTA 2* still has Given information value, similar to *Mobile Legends*, but it has Real Given information value.

After that the status bar (9) real, minimum, max. disconnection that shows the condition of the character that is played by the player is shown in Real information value. And lastly, there is the shop (10) real new, minimum, max. disconnection that is symbolized by numbers and coins, the number is the amount of the currency of the game and it opens the shop interface if clicked by the player.

*3.7 FPS*

FPS game is a shooting game that gives a first-person perspective to the player. Most of the game uses symbols instead of words, so teaching vocabulary about symbols to the player helps the player to advance in the game.

*3.8 VALORANT*

Valorant as an online FPS game involves 10 people. It needs a good coordination about position to each player so a team can win the game against another team, so having a good amount vocabulary about position and direction helps the player in this game.


**Figure 6.** UI of Valorant

Focusing on the composition analysis, the feature types that recurrently occur in the UI of Valorant are displayed in the table below.

**Table 4.** Composition of Valorant

| No. | Information Value | Salience | Framing |
|---|---|---|---|
| 1 | Ideal | Minimum | Max. Disconnection |
| 2 | Ideal | Maximum | Max. Disconnection |
| 3 | Ideal Given | Minimum | Max. Disconnection |
| 4 | New | Minimum | Max. Disconnection |
| 5 | Real | Minimum | Max. Disconnection |

Valorant UI provides 5 information for the player. There is a scoreboard (1) Ideal, minimum, max. Disconnection works and also has the same information value as the UI in MOBA genre. By understanding the vocabulary in this UI, the player is able to be aware of what title he/she obtained.

The map (3) ideal given, minimum, max. disconnection shows the position of the player in the game. Combat report (4) new, minimum, max. Disconnection shows the history of what the player did during the whole game. The command prompt (5) real, minimum, max. disconnection in *Valorant* has information value of Real and shown with symbols instead of words, unlike the command prompt in RPG game.

*3.9 Apex Legends*

In playing *Apex Legends* game, the players this time are 4 people. Each player has good coordination about position and this team won the game against another team, so having a good amount vocabulary about position and direction helps the player in this game.


**Figure 7.** UI of Apex Legends

The recurrent features of the *Apex Legends* are observable in the table below.

**Table 5.** Composition of *Apex Legends*

| No. | Information Value | Salience | Framing |
|---|---|---|---|
| 1 | Ideal Given | Minimum | Max. Disconnection |
| 2 | Ideal | Minimum | Max. Disconnection |
| 3 | Ideal Real | Minimum | Max. Disconnection |
| 4 | Ideal Given | Minimum | Max. Disconnection |
| 5 | Ideal Given | Minimum | Max. Disconnection |
| 6 | Real | Minimum | Max. Disconnection |
| 7 | Real New | Minimum | Max. Disconnection |

Apex Legends UI provides the player with 7 information. The map (1) ideal given, minimum, max. disconnection is having the same information value and purpose as the map in Valorant. This game also provides the player with compass (2) ideal, minimum, max. disconnection, by understanding the vocabulary used in telling directions, it is easier for the player's coordination with the team if the player is playing in multiplayer mode. The history (3) ideal real, minimum, max. disconnection in Apex Legends has Ideal New information.

The status bar (4) real given, minimum, max. disconnection in Apex Legends has Real Given information value which implies that it is one important information for the player and it shows not only the status bar of the player, but also the player's team. There are 3 different command prompts (5, 6, 7) provided in this game, each holds different purpose. The command prompt (5) real given, minimum, max. disconnection provides the player to use item that they obtained in the game. The command prompt (6) real, minimum, max. disconnection, allows the player to do an action if a certain condition is fulfilled. The command prompt (7) real new, minimum, max. disconnection allows the player to do a general action in the game.

## 4. Discussion

**Table 6.** Compositional Elements

| | Information Value | | Salience | | Framing | |
|---|---|---|---|---|---|---|
| | Centered | Polarized | Maximum | Minimum | Maximum Connection | Maximum Disconnection |
| RPG | 1 | 8 | 0 | 9 | 4 | 5 |
| MOBA | - | 16 | 1 | 15 | 4 | 11 |
| Shooter | - | 12 | 1 | 11 | 3 | 9 |
| Total | 1 | 36 | 2 | 35 | 11 | 25 |

The findings of the recurring types under study demonstrate that, in contrast to Centered, the Information Value is predominately Polarized (36) and is made up of Real Given, Ideal Given, Ideal Given, Real, Real New, and Ideal New (1). In contrast to the maximum salient, which occurs just twice, the salience shows the dominant minimum salient (35 times). The frequency of framing (35) is clearly present between Maximum Connection (11) and Maximum Disconnection in addition to the two types (25).

The table shows the arrangement of compositional elements produces informational value, with configuration (20) being the information value structure of "real-given, ideal, ideal-given, and real-new" followed by configuration (8) of "real, and ideal-new". Information that is "ideal-real, new, given, and focused" is found in the least arrangement. They display the character's position in the game that the user is currently engaged in.

Since the session is on vocabulary, most vocabularies are shown in the command prompt (4), it contains words that trigger an action performed by the character if the player pressed a corresponding button in his/her controller. The player comprehends the directions given in the command prompt, then soon they carry out an action that is provided by the game to continue or finish the game.

According to the table, the game players pay less attention to polarized information value for the information values, more attention to minimum salience for the salience, and maximum disconnection for the framing for those three have the various highest levels of achievement. The arrangement shows that, except for one student who choose Centred, most choices (36) use Polarized to highlight the significance of their information. Since the focus of the session is learning vocabulary, the majority of the vocabulary is displayed in the command prompt (4), which comprises words that cause the character to take a certain action if the player presses a certain controller button. The player reads and understands the instructions on the command prompt before quickly performing one of the game's assigned actions to advance or complete the game. Hawreliak, J. & Lemieux, A. (2020) admits that the high degree of multimodality choices in videogames enables users to engage with oppressive and privileged systems in ways that other media cannot. Examples from several video games dealing with difficulties of representation, either implicitly or explicitly, include CartLife, a retail simulator; Overwatch, a competitive First-Person Shooter; and Apex: Legends, a battle-royale First-Person Shooter.

As shown in the table above, Framing indicates 11 Maximum Connection and 25 Maximum Disconnection in those elements of a composition that can either be given separate identities or represented as belonging together. Some gamers choose Real New, minimum, and maximum disconnection to show the condition of the character that is played by the player. The Ideal- Given, is a minimum and maximum connection that is obtained by the player in the game. Proceed to a command prompt Real New, the minimum and maximum disconnection that let the player control the character with a controller.

In terms of Salience, the different degrees to which elements attract the viewers' attention, can be achieved through size, sharpness of focus, tonal contrast, color contrast, and perspective (Kress & van Leeuwen, 1996). There is a notification (2) ideal, maximum, max. Disconnection that shows the title that is obtained by the player in the game, it is similar to the notification in *Mobile Legends* in terms of salience and information value, but it has a different purpose where in *Mobile Legends* the notification works as an event notification, while in *Valorant* the purpose is to show the player of the title he/she obtained in the game.

The meanings of color demonstrate that the user interface of Apex Legends selects green and blue, *Valorant* add to the usage of brown, *DOTA 2* and *Final Fantasy VII Remake* evokes dominantly associated with the color blue, *Mobile Legends* has purple and blue and *Kingdom Hearts III* combines green and brown. According to Moya & Pinar (2008), the use of color is typical analysis of compositional meaning; they quoted Nodelman (1988) that claimed the conventional meanings of colors are culture-specific to concrete things and those with certain emotions and (Moebius, 1986) specific colors come to evoke certain attitudes in the picture books and, manage to convey mood more precisely than any other features. Green and blue both connote calmness and serenity and are traditionally thought of as the colors of growth and fertility. Red is associated with heat or danger, while yellow is associated with happiness. Likewise, Nodelman (1988:61), in our story, in fact, the majority of photos have blue strokes around the RPs, which add to the feeling of security that is furthered by the usage of brown. The combination of green and brown, the hues of the earth and vegetation (which make up the majority of the background in the book), frequently conjures up a sense of organic richness and safety.

The characteristics of the multimodal genre of videogame, are reflected when many modes interact with one another to accomplish the purpose of discourse (Zhang, 2015). The most preferred genre is the action-shooting genre with the theme of the origins of World War I or II, examples of games are, Call of Duty: WW II and Battlefield 1, where both games describe and adapt real events that occurred in the past and can add to their knowledge when World War I and

World War II took place, this can also tell both games are very appropriate to play in the condition that players can take advantage from which the gamers obtained more vocabularies. As Kaltman (2019) puts forward that the students could go beyond reading their texts in the game by actually exploring the story world. Using the keyboard, they controlled the main characters

Furthermore, these students played video games to learn their English literacy to develop critical thinking and social skills. They get to benefit from their social skills because they often work with a team. They share games knowledge all over the world. This made them encouraged to express their critical thinking. As Granic,I., Lobel,A. and Engels, R. C. M. E. (2014) found out that video game players are socially interacted with friends, family, and strangers, passing through geographical distances and affecting not only cultural boundaries but also age and generation gaps, socioeconomic differences, and language barriers.

This study succeeds to expose the multimodal composition elements to show distinction through the all different video games *Kingdom Hearts III, Final Fantasy VII Remake Apex Legends Valorant DOTA 2 Mobile Legends,* and the ten observed students learned more vocabularies from playing various genres games.

*4.1 Implications to Language and Vocabulary Teaching*

The composition analysis of the images as depicted in the video proves that the use of Information Value, Salience, and Framing of RPG, MOBA, and Shooter present the elements characterized by their visual representation. This analysis helps the teachers lead the instructional process in the classroom whereas video games can be one of the appropriate media for teaching the students' language skills. Kamelia (2019) suggests video games can make the students feel easy and actively engaged in understanding the language teaching indirectly because they are enjoying the games. Besides, the role of the teacher in the language learning process is also needed to make the instruction of the pre-, main, and last activities more conducted.

Based on the question asked to the students as gamers: Did you think playing video games will increase more on your vocabulary? Please list some of the vocabularies that can you find while playing video games.

The student gamers stated that video games have helped them enrich their English vocabulary. They think, from the time they have become a gamer, it does not only help them to enrich their vocabulary but also added that they have obtained skills like English idioms (see Table 1 idioms like *often used to deceive the enemy. revive the dead squad*) that they sometimes found when watching movies. This is true that digital game-based learning (DGBL) was found by Turner, P.E., Johnston, E., Kebritchi, M., Evans, S., and Heflich, D., (2018) to have a positive impact on the learning of a second language (L2), enhancing reading, writing, and speaking skills in addition to encouraging collaboration. It also contributes many benefits for adult learners and adult educators such as problem-solving, decision-making, and patterns of recognition.

The question among the vocabularies that have been learned from video games is used in everyday communication, most gamers provide at least 4 vocabularies that are actively used like 'assist', tummy', 'credits', and, 'chubby' and 4 vocabularies that never used in daily communication such as 'Rampart', 'Humongous', 'Turret' and 'Errand'. All gamers delivered these vocabularies. Although not all of the gamers in question have played the mentioned 6 games in 3 different genres, at least they all have played three of the mentioned games in the three genres.

Due to the question on the use of active and passive vocabulary they learned from video games, most of the gamers answered that all of the vocabularies that they have obtained from the game, mostly are familiar terms or vocabularies and actively used among gamers while playing and in discussion in voice chat features for example: Call of Duty: WW II, Grand Theft Auto Online, as well as Red Dead Online. In this case, players use the terms nationally or internationally with gamers everywhere else in the world who plays the same game, particularly with people from English-speaking countries like the United States, Canada, Mexico, North America. Most of the players of each of these video games can easily communicate with foreigners since the medium of communication is English. These students assumed that their interaction in English has become very active since involving as gamers of the video game described. They are sure that they can use these vocabularies in an authentic situation among or outside gamers.

To gamers, the benefits of learning from video games improve their communication ability in English. Besides vocabulary, they got the benefit of learning technical terms and broadening general knowledge such as historical situations and names of historical sites such as

- Valorant: Teamwork
- The Forest: Surviving in the wilds
- Minecraft: Geography and harvesting, mining

• Telltale's the Walking Dead: Decision Making
• Total War: SHOGUN 2: War Strategist

**Table 7.** Some Vocabularies Learned from Video Games

| No. | Vocabularies of frequent used | No. | Vocabularies of frequent used |
|---|---|---|---|
| 1 | Decoy: bait, often used to deceive the enemy | 31 | Resurrect: revive the dead squad |
| 2 | Site: location, place to put spikes or bombs | 32 | Vandal: one of the names of Rifle class weapons |
| 3 | Defenders: guards, who keep attackers from entering the site and planting bombs (spikes) | 33 | Phantom: one of names of Rifle class weapons |
| 4 | Attackers: attackers, teams who try to enter the site and plant bombs (spikes) | 34 | Specter: one of the names of the submachine gun class weapons |
| 5 | Assist: help, the person who helps shoot | 35 | Stinger: one of the names of the sub |
| 6 | Flash: lightning. (very bright light) to blind the enemy | 36 | Teleporter: a place to quickly move from one site to another |
| 7 | Transacting currency to buy weapons and skills | 37 | Shotgun: melee weapon class |
| 8 | Sniper: Class ranged weapon | 38 | Rifle: medium-range weapon class |
| 9 | Chubby | 39 | Heavy Machine Gun: medium |
| 10 | Tummy | 40 | Sideams: small weapons or reserves used by players |
| 11 | Puppeteer | 41 | Demi-God |
| 12 | Muscular | 42 | Errand key blades |
| 13 | Caliber | 43 | Fortity |
| 14 | Shells | 44 | Disintegrate |
| 15 | Magazine | 45 | Disintegration |
| 16 | Launch | 46 | Ally: squad ally |
| 17 | Horn | 47 | Turret |
| 18 | Dummy | 48 | Liger |
| 19 | Charge | 49 | Humongous |
| 20 | Cautiaus | 50 | Rampart |
| 21 | splite | 51 | Incendiary |
| 22 | Bullet | 52 | Maude |
| 23 | Impact | 53 | Primary Weapon: the main weapon used by the player |
| 24 | Headshot | 54 | Sub Machine Gun: melee weapon class |
| 25 | Chain | 55 | Gigantic |
| 26 | Suicide | 56 | Autonomous |
| 27 | Goes South | 57 | Inventory |
| 28 | Armor | 58 | Appendix |
| 29 | Emergence | | |
| 30 | Arena | | |

## 5. Conclusion

In conclusion, our study has succeeded in demonstrating the multimodal compositional elements that characterize several video game genres. The findings show that fighting games are the genres with strong minimum salience defined by information value since comparable element sizes were discovered and that most genres have maximum disconnection in framing. The RPG genre is the only one that has centered information value while the others have polarized information value.

The study's implications for students relate to their acquisition of interesting vocabulary from the narrative-driven video games Kingdom Hearts III, Final Fantasy VII Remake, Apex Legends Valorous, DOTA 2, and Mobile Legends. Additionally, they improved their social and critical thinking abilities. The implication is emphasized to

lecturers to encourage them to use these video games as an effective tool in their teaching medium, particularly in the current multimedia era of language learning.

In this multimedia era, the significance of this field of research has a major part in society as multimedia devices have become easier to access. The most applicable way to use this study is by recognizing what is the game that is being played on the screen right away, acknowledging the multimodal composition, in time when the parents should monitor the children for instance. The children or the students, however, take their problem solving and character indeed, while elaborating on the world in the games by reading and thinking about the images (Gee: 2003).

It has proven effective to combine multimodal compositional meaning analysis with online video games for literacy learning; nevertheless, the analysis did not focus on design representation and interaction. In regards to educating society about the content presented in video games, it is hoped that this study will inspire a large number of researchers to tackle the topic of a video game in their research through multimodality of representation and interaction. Correspondingly, it will hopefully enable students and readers to comprehend and/or observe the types of video games being played by their friends, children, or perhaps even themselves. Last but not least, a recent genuine study for language instruction involves students obtaining a free regular account like Roblox and producing or totally developing a game on platforms, where kids, teenagers, and adults can play in 3D surroundings.

**References**

Aleksandrov, E., & Levitskaya, A. (2018). Technology of Integrated Media Education. *Media Education (Mediaobrazovanie), 58*(4), 2018.

Alqahtani, M. (2015). The Importance of Vocabulary in Language Learning and How to be Taught. *IJTE, 3*(3), 2015.

Bal, M. (2019). Use of Digital Games in Writing Education: An Action Research on Gamification. *Contemporary Educational Technology, 3*(10), 246-271. https://doi.org/10.30935/cet.590005

Baszucki, D. (2015). United States Patent No. US9028330B2. Retrieved from https://patents.google.com/patent/US9028330B2/en

Bezzemer, J. (February 2012). What is Multimodality? Retrieved from https://mode.ioe.ac.uk/2012/02/16/what-is-multimodality/

Gee, J. P. (2003). *What Video Games have to Teach Us about Learning and Literacy*. Houndmills: Palgrave Macmillan.

Granic, I., Lobel, A., & Engels, R. C. M. E. (2014). The Benefits of Playing Video Games American Psychologist. *American Psychological Association, 69*(1), 66-78. https://doi.org/10.1037/a0034857

Hawreliak, J., & Lemieux, A. (2020). Discourse: Studies in the Cultural Politics of Education: Child and youth engagement: civic literacies and digital ecologies. *The semiotics of social justice: a multimodal approach to examining social justice issues in videogames, 41*(5), 723-739.

Hermawan, B. (2013). Multimodality: Menafsir Verbal, Membaca Gambar, Dan Memahami Teks bahasa & sastra. *JPBS, 13*(1), 2013.

Kamelia. (2019). Using Video as Media of Teaching in English Language Classroom: Expressing Congratulation and Hopes. *Utamax, 1*(1), 2019.

Kaltman, I. (2019). How Video Games Can Teach Reading Just as Well as Books. Retrieved from https://www.edsurge.com/news/2019-08-09-how-video-games-can-teach-reading-just-as-well-as-books

Kress, G. et.al. (2006). *Reading Image: The Grammar of Visual Design*. U.K.: Routledge.

Miles, M. B. et.al. (2014). *Qualitative data analysis: a methods sourcebook.* Thousand Oaks: Sage Publications.

Meier, C., Saorín, J. L., León, A. B. de, & Cobos, A. G. (2020). Using the Roblox Video Game Engine for Creating Virtual tours and Learning about the Sculptural Heritage. *International Journal of Emerging Technologies in Learning, 15*(20), 268-280. https://doi.org/10.3991/ijet.v15i20.16535

Moebius, W. (1986). Introduction to picturebooks codes. *Word and Image, 2*, 141-158.

Moya, J., & Pinar, M. J. (2008). Compositional, interpersonal and representational meanings in a children's narrative a multimodal discourse analysis. *Journal of Pragmatics, 40*(2008), 1601-1619.

Nordquist, R. (March 2017). *Systemic Functional Linguistics (SFL).* Retrieved January 2021 from

https://www.thoughtco.com/systemic-functional-linguistics-1692022

Nodelman, P. (1999). Decoding the images. How picture books work. In: Hunt, P. (Ed.), *Understanding Children's Literature.* Routledge, London/New York, 129-139.

O'Halloran K. L. (2008). "Systemic functional-multimodal discourse analysis (SF-MDA): constructing ideational meaning using language and visual imagery" in Visual Communication. *National University of Singapore, 7*(4), 2008.

Owen, P. (March 2016). *What Is A Video Game? A Short Explainer*. Retrieved January 2021 from http://www.thewrap.com/what-is-a-video-game-a-short-explainer/

Sinar, T. S., Putri, L. A., & Putri, D. M. (2021). The Argumentative Essay: An Evaluation of Indonesian University Learners' Writing in English. *Asian EFL Journal Research Articles, 28*(3), 2021.

Sinar, S., Zein, T., & Nurlela, N. (2021). Attitude Analysis in Courtroom Discourse by Using English Systemic Functional Linguistics. *Asian EFL Journal Research Articles, 28*(3), 2021.

Technopedia. (2020). *First Person Shooter (FPS).* Retrieved January 2021 from https://www.techopedia.com/definition/241/first-person-shooter-fps

Technopedia. (2020). *Role-Playing Game (RPG)*. Retrieved January 2021 from https://www.techopedia.com/definition/27052/role-playing-game-rpg

Toh, W. (2015). *Multimodal Discourse Analysis of Video Games: A Ludonarrative Model.* Doctor of Philosophy Thesis, Department of English Language and Literature, National University of Singapore.

Turner, P. E., Johnston, E., Kebritchi, M., Evans, S., & Heflich, D. (2018). *Influence of Online Computer Games on the Academic Achievement of Nontraditional Undergraduate Students*, Cogent Education. http://doi.org/10.1080/2331186X.2018.1437671

Vance, B. (2017). Video Games and Multimodality in First-Year Composition. *Johns Hopkins University Press, 79*(1), 120-134.

Wall, A. (1984). "Character in Bakhtin's Theory" in Studies in 20th Century Literature. *New Prairie Press, 9*(1).

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**Authors contributions**

T. Silvana Sinar, T. Thyrhaya Zein, and Balazs Huszka were responsible for collecting the data and revising. Muhammad Yusuf, Puan Maharani and Dedi Sanjaya were responsible for drafting the manuscript and revising. All authors read and approved the final manuscript.

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