



DAILY VERBS: TEACHING ENGLISH VERB TENSES THROUGH A SIMPLE VIDEO GAME

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Abstract:

This study introduces an educational game called “Daily Verbs” which teaches verb tenses to second language learners. The mechanics of the game is simple. The player moves a sprite through daily tasks and to each task there is a sentence attached stating the relevant tense. In the game, the researcher made use of Stephen Krashen’s principles of second language acquisition, namely, the acquisition vs. learning hypothesis, the affective filter, and the monitor hypothesis. Their manifestation in the game is explained in this study. Besides, the researcher made extensive use of John Gee’s 13 principles of learning embedded in video games. Their evidence in the game is also explained in the study.

Keywords: ESL; educational games; language and video games; digital humanities

1. Introduction

The video game that is introduced here is called “Daily Verbs” and it aims to teach the verb tenses in English for non-native learners (beginners and intermediate). Let me start with an overview of the foundations of this project. The first one is related to the educational benefits of digital games and these, one can claim, have been theorized and the case for them is easily a convincing one. We can cite many studies in this regard such as the following: (Greenfield, 1986; Quinn, 1997; Amory, 2001; Rieber, 1996; Prensky, Gee, 2003; Charsky, 2010; Boyle, 201; Aleson-Carbonell, & Guillén-Nieto, 2012; Burke, 2016). Based on them and others, it seems that video games are good educational tools for the following reasons:

- 1) They help develop intellectual and psychomotor abilities
- 2) They are more fun (ironically, this is the simplest principle but the more powerful)
- 3) They can simulate reality.
- 4) They can tell engaging stories.

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5) They can teach implicitly or unconsciously on the part of the user / player / learner.

Of course, this is far from an exhaustive list albeit a useful one. However, translating those principles into game aspects is not an easy task.

To overcome that challenge, I thought of narrowing down the theories to the most applicable, taking into account that the game's subject matter primarily concerns two fields: language acquisition and game theory, or more specifically the educational uses of video game. From the first field I chose Krashen's theory of second language acquisition since it is the major one and for the game theory part, I will be working with John Gee's 13 principles, which lend them easily to application. The idea here is to ensure that the game has a sufficient number of these principles and, eventually, its learnability as opposed to traditional methods of teaching the Verb Tenses. After introducing the game, I will show briefly how each of these principles is evident in the game.

1.1 The Underlying Principles

Krashen (2009) specifies the following principles of second language learning:

- 1) The Acquisition-Learning hypothesis,
- 2) The Monitor hypothesis,
- 3) The Natural Order hypothesis,
- 4) The Input hypothesis,
- 5) The Affective Filter hypothesis (pp. 10-32).

The theories will be explained briefly when their manifestation in the game is discussed. As to Gee's principles, they can be listed in different ways, but I chose this listing of them in 4 categories and 13 principles adapted from (Martin et al):

A. Empowered learners

1. Co-design,
2. Customize,
3. Identity,
4. Manipulation.

B. Problem solving

5. Well-Ordered Problems,
6. Pleasantly Frustrating,
7. Cycles of Expertise,
8. Information "On Demand" and "Just in Time",
9. Fish tanks,
10. Sandboxes,
11. Skills as Strategies.

C. Understanding

12. System Thinking,
13. Meaning as action image.

Those (or most of them) will also be briefly explained below when they are discussed as underlying principles of the game.

1.2 Methods and Game Engine

The game engine I used is Construct 0.3 which is a 2D game engine that requires little programming experience. I experimented with different concepts and made up my mind on this one which ensures simplicity and usability as will be shown below.

1.3 The Game

The name I chose, "Daily Verbs", is meant to indicate the focus of the game: "Daily" points to performing daily tasks and "Verbs" points to the learning aspect which is verb tenses. The idea of the game is that the player performs a number of daily tasks by controlling a sprite / character assuming a first-person perspective. The game starts with a set of daily tasks (this can change creating different levels)ⁱⁱ (Figure 1).

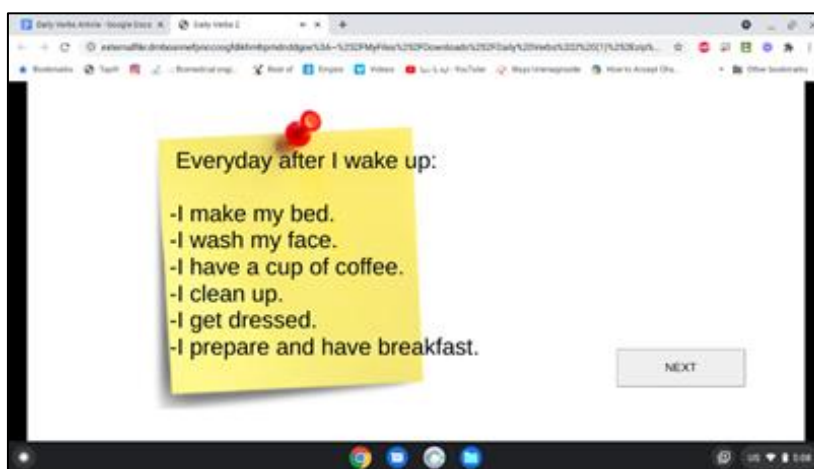


Figure 1: Screenshot 1

The setting is a typical house shown from a top view in order to enable the player to see the whole house design and have a sense of control besides the convenience in the design and keeping things simple:

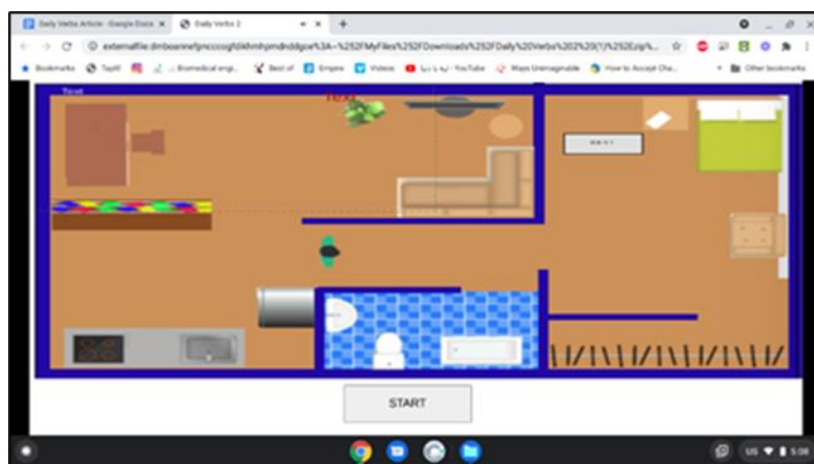


Figure 2: Screenshot 2

ⁱⁱ The screenshots provided below are adapted from the HTML version of the game, which is still unpublished.

During each task a textbox shows a sentence that describes the action and it is attached to the player sprite throughout the game. The actions of the play are always accompanied by sentences that describe them.

Let us take an example from the game. Each task follows this sequence in most cases: confirming the daily task, pronouncing the intention of doing the action, doing the action, doing some accompanying actions, and pronouncing the completion of the action. These tasks or stages of the action are expressed in a series of sentences as in the following example (Figure 4):

- Every day I wash my face after I wake up.
- Today I will wash my face.
- I am going to wash my face.
- I have washed my face.

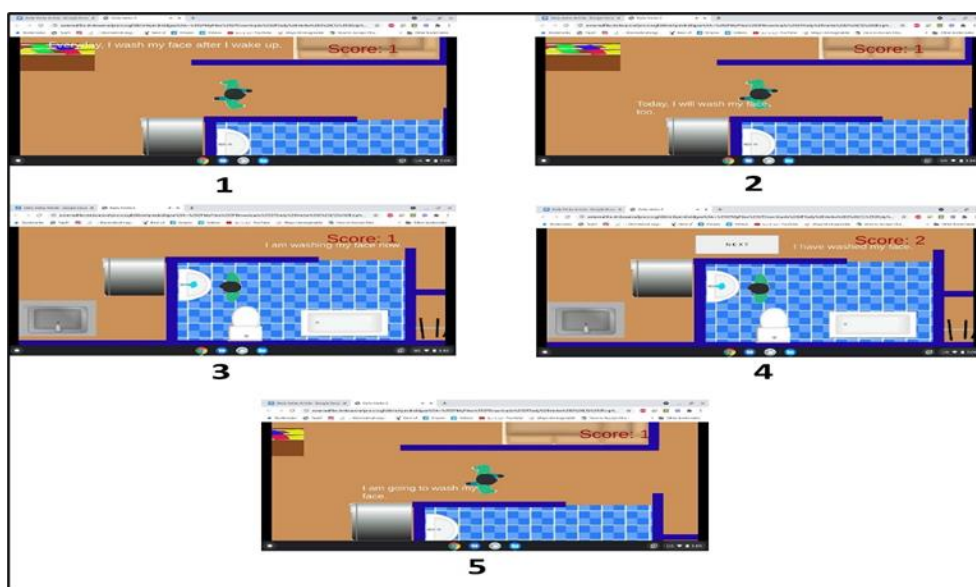


Figure 3: Screenshot 3

In other tasks, accompanying or parallel actions are included to show complex tenses like the past continuous (Figure 4):

- I am having my coffee and the phone is ringing.
- When I was having my coffee, the phone rang.

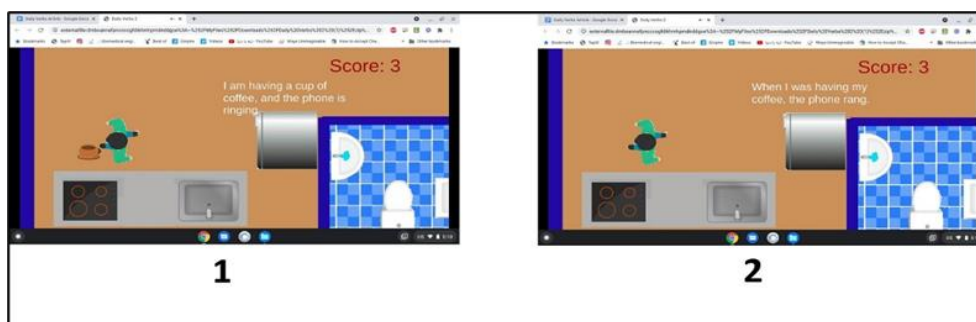


Figure 4: Screenshot 4

For other tenses like the future perfect, I used a timed action and a timer in order to create a situation in which an action will be finished by a certain time which reflects the use of the present perfect. Of course, if the payer fails to do the action in time, he has to repeat the sequence (Figure 5):

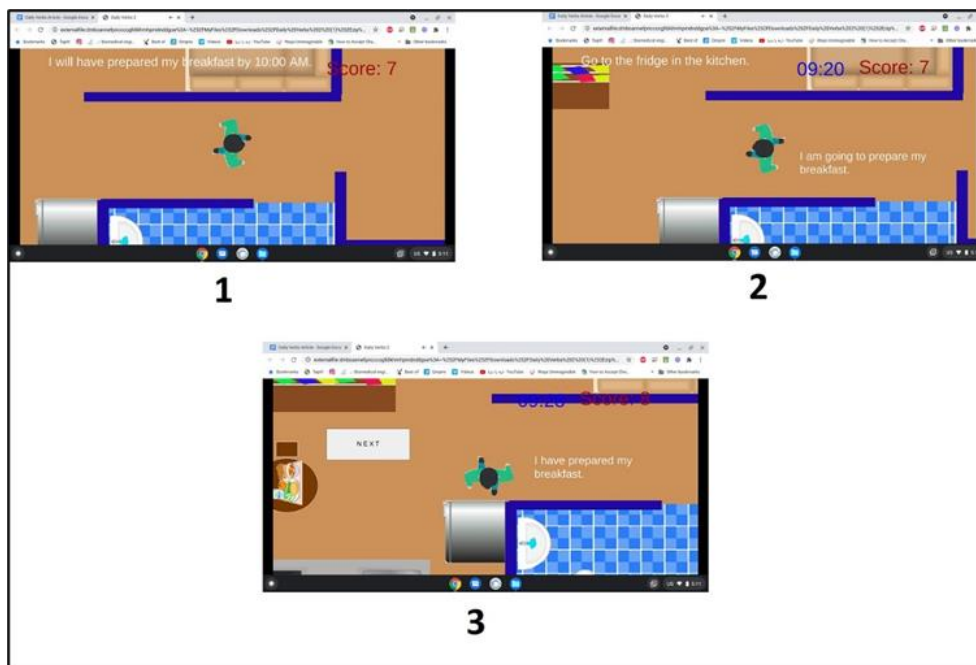


Figure 5: Screenshot 5

Another tense that required a special situation in the context of the game is the future continuous and the present perfect continuous. For the first one, I used a text message to link the two sequences and then in the text message, a friend of the player discusses arrangement in which the future continuous is used (Figure 6):

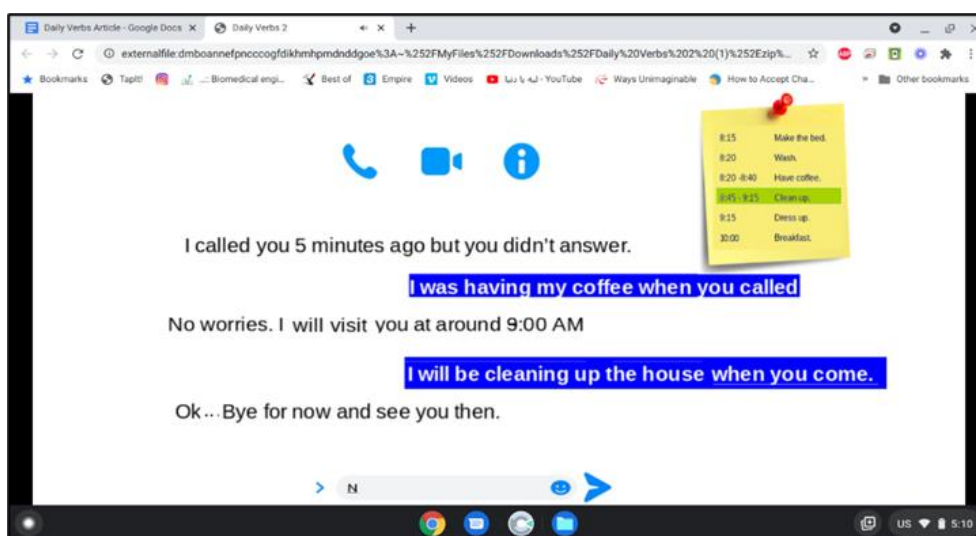


Figure 6: Screenshot 6

For example, the future perfect example enables the learner to see how the action is both future and complete. In other words, it refers to an action that is expected to be complete by a certain point in the future.

In the next sequence, while the player is doing one of the tasks (cleaning up), the friend rings the bell and asks the following question (Figure 7):

- What have you been doing?

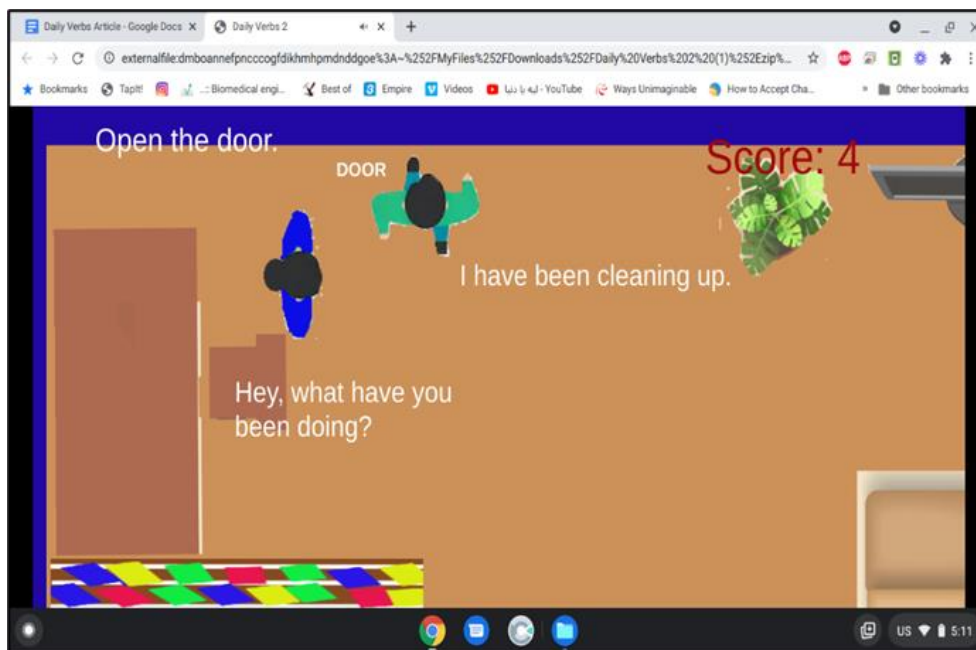


Figure 7: Screenshot 7

In the following part, I will show how specific principles both from Krashen and Gee are realized or used as guidelines.

1.4 How Do the Underlying Principles Manifest in the "Daily Verbs"?

The first principle among Krashen's is the acquisition versus the learning differentiation. For acquisition, he defines it as the "conscious knowledge of a second language, knowing the rules, being aware of them, and being able to talk about them" (Krashen, 2009, p.10). While learning "has only one function, and that is as a Monitor, or editor. Learning comes into play only to make changes in the form of our utterance, after it has been "produced" by the acquired system (p.15). In short, when someone starts learning a second language, they acquire things unconsciously or pick the language up. If they receive formal learning or in a way convert their unconscious knowledge to a conscious one, they engage in a monitoring process. Their use of language is "checked" by the pre-defined rules (that have been learned).

How can this help in the design of the game? The player/learner's use of the language is automatic and natural since it takes place in a virtual situation that simulates natural communication. This facilitates an acquisition type of language learning. For the monitor principle, although there is no obvious monitoring in the traditional sense and because the learning is a direct one without the mediation of a teacher, the cycle of

acquisition / learning / acquisition somehow exists if we consider the cumulative result of playing the game which is learning about the use of a certain tense. Now, with the repetition of similar tasks targeting the same tense, the player is likely to start checking or monitoring his language use. For example, when a player finishes one sequence that includes present continuous tense, they would notice how it is attached to what is going on at the moment. In the next sequences of the game when the same is repeated, the use is acquired and then learned.

Another one of Krashen's principles is "The Affective Filter hypothesis" and here he refers to "*the relationship between affective variables and the process of second language acquisition by positing that acquirers vary with respect to the strength or level of their Affective Filters*" (p. 31). In simple terms, we learn more when we associate, or filter in, more of the positive feeling. This is the basis of asking teachers to always make sure to create a no-threatening and non-judgmental atmosphere for their students. It goes without saying that this is already part of the video games context, and unlike formal learning contexts, making mistakes here is less stressful and has less to no grave consequences. The only consequence might be not winning or not advancing to the next level and this can be motivating.

Let's move to Gee's principles and explain how some of them underline the mechanics of the game. As the short list above shows, they are grouped into four major categories. The first one is empowered learners. Games empower learners by providing opportunities of participation in the design and manipulation of the game in addition to the possibility of assuming different identities, both real and fictional. By default, using a video game entails empowered users / learners. More specifically in "Daily Verbs", the learner controls a player and consequently assumes their identity. Furthermore and in regards to co-designing, the player of the game can reorder the tasks to be finished according to his/her real lifestyle. More learner-empowering features will be added in the development level and I will talk about them in the last part of this study. In terms of allowing opportunities for manipulation, besides controlling the player, within the daily tasks required, the player is supposed to manipulate some household devices like a TV, a Vacuum cleaner...etc. They also get to choose the music they like to listen to while doing the different tasks.

Another subcategory is the "well-ordered problems" this means that "*we should be sure to sequence problems such that the solutions to early problems lead to solutions that work for harder problems*" (Martin et al "5 5: Well-Ordered Problems – Scaffold their learning"). The game, as it is, presents simple problems related to performing daily tasks. However, some of these problems are ordered to indirectly signal the use of the tense by attaching it to a specific action. The user needs to finish a task sometimes within a time limit. However, with certain verb tenses that are a little advanced like future perfect and present perfect continuous. For the future perfect there is an ordered problem that depends on They watch a timer and then see that they complete a certain task by a certain time. For the present perfect continuous, I introduced a subsequence in the part about cleaning the living room. While the player is using the vacuum cleaner, the doorbell rings and they have to stop and open the door. Another character sprite comes in and they ask

a question about recent activity, the answer is “I have been cleaning ...” The well-ordered problem here is organizing the action of the player to contextualize the use of the tense so that they ...The problems are ordered in a timely manner and orchestrated to reflect this hierarchy of time/tense.

Another important principle is the so-called “cycles of expertise”:

“The Cycle of Expertise principle begins with a simple challenge and the introduction of the skill needed to solve that challenge. Then learners practice the skill until they understand the underlying systems of the challenge and skills, and master it. The cycle is then repeated with a new challenge that mastered skills fail to overcome — prompting the need to learn new skills.” (Martin et al “7 7: Cycle of Expertise — Make them practice”)

In the game, we can say that each level is a cycle, especially that there are a number of basic tenses that are repeated (simple present, simple future, present continuous, and present perfect). They indicate a semantic cycle of habit, intention / decision, doing, and achieving. The repetition would interconnect these two cycles and therefore, “teach” the player / learner about their uses. Another idea from Gee is that the information we provide to learners, as the case is in games, should be provided “on demand” and “just in time”. Gee justifies the importance of this principle by the fact that *“in order to make information valuable as opposed to overwhelming”* (Martin et al “8 8: Just-in-Time and On-Demand — Let them learn when ready”). In broader terms, playing the game itself ensures this since advancing in it depends on achieving cumulative goals. Information or the relevant techniques is provided when needed. In “Daily Verbs”, this principle is more specifically realized by attaching the sentences to the actions. The “need” for this information is the doing of the action or task in question. “Fish tanks” is another concept that refers to the fact that *“complex tasks and interactions (systems) should be simplified when first learned”* (Martin et al “9 9: Fish tank — Simplify complex systems”). As illustrated above, the game tries to simplify the uses of verb tenses through presenting them in an everyday situation.

To move to another principle, Gee’s idea of sandboxes is similar to Krashen’s affective principle in the sense that games provide safe venues for learning through experimenting and making mistakes. Gee also talks about presenting “Skills as Strategies”. By default, video games link the skills to achieving goals and advancing to the next level. No skill is targeted for its own sake but rather as a lever in order to propel the player ahead in the game. In other words, all skills are strategically significant and useful. Of course, this does not have to be conscious. The point here is that by linking any skill to a larger goal, the learner would be motivated since acquiring the skill is both meaningful and useful. From the last category in Gee’s principles, I will talk about “Meaning as action image”. This principle is basic in the game since the idea is to link the actions in the game to a sentence that contains the relevant the verb tense(s).

So, in the previous discussion, I hope it is made clear how the game is true to most of the principles of Krashen and Gee. I had the best of two worlds: second language

acquisition and video games educational theory. It is also a reminder of the increasing overlap between these two fields and between education in general and video games.

1.5 The Learning Aspects

Almost all tenses are included and each is linked to at least one action in the context of the game with the exception of the past perfect at this stage. The following table shows how each tense is integrated in the game and which task it is connected to (Table 1):

Table 1: Learning Aspects

Tense	Task	Learning Aspects
Simple Present	At the beginning of each task, a stance declares the habit that needs to be repeated.	The link between this tense and repeated, habitual action.
Present Continuous	When the action is being done, such as washing the hands	The link between this tense and the NOW.
Present Perfect	At the end of each task, for example "I have made the bed"	The link between this tense and the instant completion of the action.
Simple Past	In combination with past continuous	The link between this tense and finished actions in the past AND the contrast with the past continuous.
Past Continuous	When two actions overlap and then they are referred to at the end of the task	The link between this tense and incomplete actions in the past (in relation to another action in the past).
Simple Future	Before the start of the task to show intention	The link between this tense and decisions about the future.
Future Continuous	Dialogue, when the player is arranging a visit	The link between this tense and incomplete action in the future (in relation to another action in the future) repeated, habitual action.
Future Perfect	Having to finish preparing the breakfast before a certain time	The link between this tense and an action to be finished by a certain time in the future.
Present Perfect Continuous	When the friend arrives and asks about recent activity	The link between this tense and recent, incomplete activities.

1.6 Developing the Game Further

The game is still open to development or additions. This is made easy by the fact that the general mechanics is well-established now. More levels with different choices and customizable elements can be added. In addition, instead of merely performing house chores, different goals and missions can be introduced while keeping the verb tenses theme, along with new types of situations and setting such as the school, the park, the bus, the restaurant. ..etc. It is supposed to fill in a significant gap for the ESL learner and that of practice in real-life interaction. Hopefully, this game will help meet this need in addition to the benefits explained in this study.

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Conflict of Interest Statement

The authors declare no conflicts of interests.

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Mohammad Aljayyousi is professor of English at Philadelphia University, Jordan. He has a PhD in Digital Literary Studies from IUP. His research interests include Digital Humanities, Computer Science, postmodern theory and new media. He was awarded a DAAD research award, and a Fulbright 9-month research stay to work on projects related to computers and education. He also has a number of published articles.

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