Investigating the possibilities of foreign language learning and teaching through video games (Research proposal)

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Introduction

Although video games have been an integral part of popular culture since the mid-1970s and have developed into a multibillion-dollar industry that according to some statistics has already surpassed film and music industry (Chatfield, 2009), it was only in the last decade that they have gained considerable currency in pedagogical research. Also, in light of the fact that recent large-sample surveys (Common Sense Media, 2015; Entertainment Software Association, 2015; Gametrack/Ipsos, 2016) have shown that gaming has become one of the most popular pastimes in the United States and the European Union, with teens playing games an average of 1.5 hours a day, it is deemed justifiable that the amount of research in language pedagogy should be commensurate with the degree of importance gaming has gained in the last decades.

An important milestone in this direction has been Reinders (2012), the first edited volume on the issue, which presented the state of the art in research into digital gaming for foreign language learning. A great number of studies investigating the use of educational, second language pedagogy-purposed games, which Reinhardt and Sykes (2012) have termed game-based learning/pedagogy (game-mediated being the overarching hypernym), have yielded convincing results and presented thought-provoking pedagogical implications; however, I would argue that (to some extent) these have overshadowed studies based in game-enhanced learning/pedagogy, i.e. the application of commercial, off-the-shelf (COTS) or ‘vernacular’ games in the learning and teaching process (Reinhardt & Sykes, 2012).
This latter branch of research, however, has produced significant findings pertaining to the affordances of playing COTS video games in relation to cognitive (Reichle, 2012) and affective (Chik, 2012; Reinders & Wattana, 2012) factors, and linguistic competence (Sundqvist & Sylvén, 2012) in general. Nevertheless, scientific deliberations concerned with how game-enhanced learning is informed by language learning theories and learning-related research of the past five decades have been relatively sparse, with Filsecker and Bündgens-Kosten (2012) and Reinhardt and Thorne (2016) being two notable exceptions.

Importantly, tapping into what language learners do in their free time has also become a prominent field of research, with numerous studies (Persson, 2011; Piirainen-Marsh & Tainio, 2009; Sundqvist, 2009; Sundqvist & Sylvén, 2012; Sylvén & Sundqvist, 2012) pointing out the importance of outside-the-classroom or extramural (Sundqvist, 2009) language learning. However, Sundqvist (2011), drawing on Higgins (2009), highlights that the connection between language learning and use in instructed contexts and extramural contexts (e.g. gaming) is largely undiscovered and under-theorized.

Such threads of investigation include the question of how exactly language learners acquire language from video games, and how this learning process may be positioned in relation to extant theories of second language acquisition and the implicit/explicit dichotomy of language learning. Besides, if we posit that in the case of gaming foreign language learners acquire language implicitly (or incidentally), the question of whether this implicit extramural learning can be harnessed or, alternatively, promoted in instructed settings arises.

The aim of study proposed in the present paper is firstly to investigate the potential of commercial off-the-shelf video games as a means of second language learning by exploring the characteristic features of video games in relation to second language learning theories and by examining teachers’ and students’ attitudes towards, beliefs about and experience with video games for language learning. Secondly, the study attempts to partially fill in a research gap by providing a more in-depth understanding of how and what language learners can learn from video games.

**Theoretical background**

In what follows I will provide an overview of studies related to game-enhanced learning with a focus on what affordances video games hold for learning and foreign
language learning in particular. Then, I will offer a theoretical justification based on cognitive psychological and psycho- and neurolinguistic evidence of how playing video games in a foreign language should be considered a manifestation of implicit (and incidental) learning, and then examine its limitations and how these limitations may be overcome via explicit learning and teaching methods.

**Video games and the scope of the study**

An important term that has to be defined beforehand is what a video game is. The *Encyclopaedia Britannica* (Lowood, 2017) defines a video game as "any interactive game operated by computer circuitry", with a distinction being made between the terms *video games* referring to the totality of platforms on which games can be played, including "computers, arcade consoles, video consoles connected to home television sets, handheld game machines, mobile devices such as cellular phones, and server-based networks", and *computer games*, which usually only refer to the narrower circle of games played on personal computers. The term *digital game* has also been applied in the field of educational research to refer to video games most probably as a way of distinguishing between video games that are played for entertainment purposes or *casual games* and digital games that are used as an umbrella term for all types of electronic games, including casual games, serious games (usually simulations played not exclusively for entertainment purposes) and educational games.

However, the present proposal uses the word *video game* to refer to its matter of investigation firstly due to the scope of the study covering commercial off-the-shelf video games (which includes casual games and serious games, but excludes educational ones), and secondly due to the fact that a considerable number of scholars (Benson & Chik, 2011; Sundqvist, 2011; Sundqvist & Sylvén, 2014; Sundqvist & Sylvén, 2012; Sylvén & Sundqvist, 2012) have preferred term *video game* in their studies.

Video games come in all shapes and sizes, and different game genres cater for a highly varied group of users, including men and women from as young as 6 years old to those in their 50s or 60s (Entertainment Software Association, 2015; Gametrack/Ipsos, 2016). This variety of casual game genres includes massively multiplayer online role-playing games or MMORPGs (like the well-known *World of Warcraft*, where thousands of players, assuming an in-game avatar, play together to accomplish their quests while in constant communication with other users; single-player role-playing games or RPGs (like the acclaimed *Fallout*, *Mass Effect*, or *The Elder*...
Scrolls series), in which players explore and interact with a vast world of non-player characters and where every single decision they make during the game has a direct consequence to the storyline; simulation games (most famously the Sims, but also including sports and business simulators) that engage players in real-world simulations; or most recently multiplayer online battle arenas or MOBAs (e.g. DoTA or League of Legends) where players in teams of varying sizes must co-operate to achieve victory, just to name a few relatively popular genres. In contrast to casual games, serious games are defined as pieces of software “that merge a non-entertaining purpose (serious) with a video game structure” (Djaouti, Alvarez, & Jessel, 2011). Examples of serious games include the long-running Microsoft Flight Simulator series and other training games (e.g. Pulse!!), the online virtual world Second Life and various serious board and card games such as chess, go or solitaire.

Importantly, however, for the sake of clarity and scientific rigour, a further distinction must be made between the video games: one based on the amount, density and difficulty of language encountered while playing them. A game like chess or solitaire does not involve any language other than the software’s basic commands (e.g. ‘Play’, ‘Options’, ‘Exit’) and potentially a gaming tips section, whereas numerous games (e.g. role-playing games due to their story-driven nature, or multiplayer games due to the necessity of communication between players) are heavily reliant on language use. As such, any research that attempts to investigate how learners may acquire a language from video games must take into account the nature of the games participants report to be playing according to the language used in the game.

**Video games and learning**

Pedagogical and psychological research has been concerned with video games since as early as the 1980s, that is often considered as a significant decade in terms of the proliferation of video games. Scholars at the time had already praised video games for creating an motivating form of play, where students are motivated to learn the rules and strategies of the game (Crawford, 1984), for being able to improve children’s motor skills (Greenfield, 1984), and for supporting learning through hypothesis formation and generalization (Silvern, 1986), the latter two being almost invariably considered to be important concepts in theoretical models of learning (Shaffer, 1995; Vapnik, 2013) and second language acquisition (Bley-Vroman, 1986; Corder, 1967; Schmidt, 1992).
Since then video games have been found to offer a plethora of benefits, for instance, improved adaptability (a cognitive-behavioural construct that affects how people perceive and adapt to different situations) and resourcefulness (being able to perform tasks independently through problem solving) (Barr, 2017), cognitive stimulation and systems thinking (understanding interdependent systems) (Tannahill, Tissington, & Senior, 2012), on-line feedback and freedom from fear of negative consequences (Schatz, 2015; Tannahill et al., 2012) that may enhance risk taking in actual language learning situations, which is also attested by the ‘willingness-to-communicate’ study of Reinders and Wattana (2012). In his seminal work, Gee (2007) identified a set of 36 key principles of the complex, self-directed learning ‘good’ video games engage players in. Although the present proposal does not allow for a thorough evaluation of all of these principles due to space constraints, I would highlight some of Gee’s insights that are highly relevant to the present investigation:

- Good games focus on problem-solving, often through the use and manipulation of facts and information, but never just the memorization and retention thereof.

- Games afford learning by doing, and also reduce the cost of failure, which encourages learners to reevaluate their actions and strategies.

- Good games offer transferable skills (e.g. problem solving) that may be applied in real-world situations and later gaming situations.

- Online games connect playing to social interaction either through collaboration or competition.

- Games allow for differentiated learning as players can often set the level of game difficulty, and are - in an optimal case - not pressured to do everything as fast and well as others.

- Games provide contextualized language and meaning as input, where words are not associated with definitions or translations, but images, actions, goals, stories, places, or dialogue.

**Video games and language learning**

Drawing on Reinhardt and Thorne (2016), three important qualities of video games have to be highlighted which make them not only suitable, but also conducive
to language learning: their interactivity, their motivating nature that is inherently based in personal (intrinsic, integrative) motivation and goal-oriented behaviour, and, as also aptly pointed out by (Gee, 2007), ample meaningful and contextualized input. Additionally, I would argue that video games allow for language learning that involves a naturalistic context supplemented with authentic language (Benson & Chik, 2011; Chik, 2012, 2013), they facilitate the development of learner autonomy (Benson, 2011; Chik, 2012; Gee & Hayes, 2011) and are underlain by the principles of task-based learning (Gros, 2007; Kiili, 2005).

**Interactivity and interaction.** Good games, as argued by (Reinhardt & Thorne, 2016), are interactive on a number of different levels: they are cognitively interactive as they engage learners in a multi-sensory fashion (graphics, sounds and music), they draw learners into the game by an engaging storyline. Also, video games have a major advantage over films or books as they allow players to interact with the objects, characters, and other elements of the game to manipulate their environment and to make an individual impact on the story (DeKanter, 2004).

Despite the fact that there is no scientific consensus on any ‘best’ model of second language acquisition, interaction is often considered to be a factor fundamental to the acquisition process (Sundqvist, 2011). The *Interaction Hypothesis* (Gass & Mackey, 2006, 2007; Long, 1981, 1983) states that exposure to language (input), production of language (output - cf. Swain & Lapkin, 1995) for interactive communication, intake stemming from the negotiation for meaning and feedback to the output are one of the key facilitators of the interlanguage development (R. Ellis, 1984; Gass, Mackey, & Ross-Feldman, 2005; Sylvén & Sundqvist, 2012).

Reinhardt and Thorne (2016) point out an interesting semantic contrast between interaction and interactivity. In their view, it is designed in-game “interactivity that affords interaction, and interaction and play are inseparable. In L2 pedagogy, inter-action is sometimes seen as a pre-condition for learning, rather than inseparable from the learning that emerges from interactive conditions" (p. 421).

However, a distinction should be made between video games depending on what sort of interaction different games afford (Reinhardt & Thorne, 2016). Multiplayer games, and especially large-scale MMORPGs, by definition, require collaboration and cooperation on the players’ side, which is facilitated by either in-game chat interfaces or an integrated voice-chat that allows for spoken online communication during the game. This is also corroborated by studies that have reported enhanced vocabulary learn-
ing (Sundqvist & Sylvén, 2012) or an increased higher willingness to communicate (Reinders & Wattana, 2012) in the second language.

I would argue that the linguistic interaction found in most other singleplayer video games does not provide enough possibilities for real interaction, where there is a negotiation for meaning or where the players have to draw upon their linguistic or communicative competence to formulate meaningful and well-formed output (Sylvén & Sundqvist, 2012). While most immersive role-playing games provide copious input (some popular games like Witcher 3: The Wild Hunt, Fallout 4 or The Elder Scrolls: Skyrim may take 50 or even 100 hours to complete) for language learning, real interaction between the player and the non-player characters (NPCs) never takes place, as today’s COTS games (almost) never require the player to form meaningful and/or well-formed sentences on their own, instead they are given a variety of pre-written responses to choose from. Thus, one might argue that the ‘language learning potential’ of video games in this respect is reduced to the that of a film or a book, that is, a source of implicit and/or incidental language learning. Nevertheless, it is justifiable to believe that interactivity is crucial to the question of whether any computer game may prove beneficial to learning. A number of studies in cognitive psychology (Evans & Gibbons, 2007; Sweller, 2010; Xu & Sundar, 2016) have found that learning new information interactively can enhance its rate of retention through deeper learning, however, the authors of the studies warn that the results are far from conclusive. Nevertheless, if we assume that interactivity does allow for enhanced retention, COTS games might prove to hold pedagogical value regardless of whether they are endowed with possibilities for social interaction.

**Meaningful and contextualized language.** According to Long (2014), most approaches employing analytical language teaching syllabi (ones that put the communicative purpose for language use as its starting point) have aimed to provide, on the one hand, meaningful input for learners from which they are expected to be able to infer rules of grammar and usage; on the other hand, contexts for naturalistic (i.e. closely resembling the natural process of first language acquisition) language learning process and authentic language use. Informed by such syllabi, communicative language teaching has also adopted a focus on meaning approach to language learning and teaching, thus, in CLT “language techniques are designed to engage learners in pragmatic, authentic, functional use of meaningful purposes” (Brown, 2000, p. 266). It must be noted, however, that this is only true for the ‘strong’ version of CLT
(Howatt, 1984), which, taking after Krashen and Terrell (1983), focuses on providing adequate contexts for students to acquire language through communication (R. Ellis, 2003).

The nature of language use in (social) context has also been underscored by the early architects of the study of communicative competence (Canale & Swain, 1980; Hymes, 1964, 1967; Savignon, 1983). A related subfield of linguistics and semiotics, pragmatics emerged, which is often defined as “the study of language from the point of view of the users, especially of the choices they make, the constraints they encounter in using language in social interaction, and the effects their use of language has on the other participants in an act of communication” (Crystal, 2011, p. 379). Additionally, pragmatics investigates these constraints, whether in production or comprehension, as an effect of context on linguistic events (Brown, 2000). More importantly, however, we have to note that pragmatic competence (the ability to use language in a way appropriate to the context of language use), as a counterpoint to organizational competence (the ability to organize morphemes, words, phrases, sentence correctly), accounts for half of Bachman’s model of communicative competence (1990), which is still the one of the most widely accepted models of communicative competence as of today.

Language use vis-à-vis video games is characterized by highly contextualized and meaningful language. Reinhardt and Thorne (2016) also highlight that there is twofold contextualization in gaming: ‘context in the game’ supplied by the narrative, and ‘context of the game’, which represents the cultural and situational context of the act of playing. As they argue, the “narrative schemata of the game (i.e. context- in-the-game) and framing help [learners] to situate cognition and learning” (p. 420), which, in turn, facilitates interlanguage development and helps the recall of language learned from the game.

In the foreword to Reinders (2012), Gee offers a fitting summary to the affordances of digital games in relation to meaningful and contextualized language use:

[...] The main thing games can do for language learning is to ‘situate meaning’. Games associate words with images, actions, goals and dialogue, not just with definitions or other words. Learners come to see how words attach to the world’s contexts or situations that they are about and help to create or manipulate. If learners can only ‘cash out’ words for words, they have a purely verbal understanding of talk and texts. This may be good for test passing but it is not good for deep understanding. If they
can 'cash out' words for images, experiences, actions, goals and dialogue – for a virtual theatre of motivated action in their minds – then they have deep understanding and real learning. (p. xiv)

Recent role-playing games like *Fallout 4* offer an abundant amount of contextualized and meaningful content for learners that can serve as written and often simultaneously auditory input: the game developers claimed to have recorded 111,000 lines of script for the game (which does not include written lore) (*Bethesda, 2015*), which, at more than 1 million words, puts it level with the *Bible* or the complete *Harry Potter* series. This ample amount of input can serve as a 'substrate' for implicit language learning from the input, whose viability will be discussed later in the proposal.

**Motivation.** As commercial off-the-shelf video games are mostly played as an outside-the-classroom or 'extramural' (*Sundqvist & Sylvén, 2012*) activity predominantly for personal entertainment, it is justifiable to assume that this outside-the-classroom exposure to second languages (in most cases, English) is motivated by personal, intrinsic or 'self-determined' (*Deci & Ryan, 2000*) factors. It may be considered reasonable to hypothesize (partly based on some of the findings of *Chik, 2012*) that, at least in the case of multiplayer games, players might be integratively (*Gardner, 1985*) motivated to learn the language as they might want to become active members of and get to know other members of the gaming community; however, instrumental motivation is also at play since in several instances, interactions performed in the common language (whether done via in-game text-based chat or voice chat), are indispensable for success in the game. Also, as pointed out by (*Sylvén & Sundqvist, 2012*), a player’s assuming of an in-game character who can perform all the necessary actions successfully while using English may be considered to be a manifestation of their *ideal L2 self* (*Dörnyei, 2010; Dörnyei & Ushioda, 2009*), which is a desired image of the learner’s future self after attaining L2 proficiency. Having a developed ideal L2 self can, as research shows (e.g. *Csizér & Kormos, 2009; Ueki & Takeuchi, 2013*), boost learner’s language learning motivation, which is widely accepted as one of the key predictors of language learning success (*Dörnyei & Skehan, 2003; Dörnyei & Ushioda, 2009*).

Motivation in game design also chimes in with the principles of the well-known Vygotskian zone of proximal development theory (*1978*). This theory states that learners should be provided experiences within their zone of proximal development,
i.e. experiences which are challenging but may be performed by advancing their skills and knowledge. This connects to game design in a way that developers’ main aim is to engage players by challenging them through tasks that are gradually increasing in difficulty but are always only slightly beyond their level, so as not to create frustratingly unfeasible challenges or ones so easy to accomplish that they evoke boredom (Reinhardt & Thorne, 2016).

It is this engagement, stemming from what Van Eck (2006), drawing on Piaget, refers to as a ‘continuous cycle of disequilibrium and resolution’ (p. 40), that is fundamental to Csíkszentmihályi’s theory of flow (2014), which encompasses an experience of intense concentration on the present moment, a sense of personal agency over the activity, a loss of reflective self-consciousness and sense of the elapsing of time in an overall rewarding activity Csíkszentmihályi, 2014; Nakamura & Csíkszentmihályi, 2009). Expanding on the notion of flow in relation to second language learning, a number of studies (Czimmermann & Piniel, 2016; Egbert, 2004; Piniel & Albert, 2017) have substantiated the potential of flow states to create an optimal context for L2 learning. The flow experience, thus, might be of key relevance to how motivation during gaming works and how the gaming experience is to be approached from a psychological-pedagogical perspective (Van Eck, 2006). It must, however, be noted here that this flow experience may easily interrupted by explicit intervention (Van Eck, 2006), a problem also considered by the proposed study.

In connection with flow, the problem of flow-interruption and the concept of anti-flow (Csíkszentmihályi, 1975, 2014; Nakamura & Csíkszentmihályi, 2009; Piniel & Albert, 2017) also have to be discussed. Van Eck (2006) states that any sort of explicit intervention from the teacher during the activity may interrupt the learner’s flow. Also, it may also be hypothesized that if in-class or outside-of-the-class gaming, an activity during which learners may experience flow, is given as an assignment, learners will probably feel less involved in playing the game as much as they would as a genuine leisure activity. This apathy, together with anxiety, is also considered to constitute the anti-flow construct, which is defined as a lack of engagement and interest stemming from a lack of challenge or, conversely, an excessive amount of challenge (Csíkszentmihályi, 1975, 2014; Piniel & Albert, 2017; Van Eck, 2006). It is thus important to highlight that despite the potential of games to evoke a flow experience, explicit intervention has to be wary of interrupting the flow or creating apathy, and also of the challenge games pose to the learners in order to prevent an
anti-flow experience stemming from anxiety. One of the aims of the proposed study is to investigate whether explicit intervention can, in any way, be used to further motivate learners to play games in English and promote implicit language learning.

Lastly, an important aspect of games that has gained substantial attention in educational and business circles is the reward system they employ to motivate learners (Reinhardt & Thorne, 2016). These are almost invariably in-game rewards, thus material gains cannot serve as extrinsic motives for further engagement with the game. As such, we may state that the challenge-reward mechanism employed mostly invokes personal, self-determined motivation. This distinct quality of games has been taken up by educationalists, who have applied and called for the use of this principle in restructuring motivational processes in educational and commercial institutions under the term ‘gamification’ (Deterding, 2012; Deterding, Sicart, Nacke, O’Hara, & Dixon, 2011; Richter, Raban, & Rafaeli, 2015). However, this system bears an important connection to second language acquisition: the Resultative Hypothesis (R. Ellis, 1994; Hermann, 1980), i.e. language learning motivation stemming from success in language learning. An important question to be answered in the study is whether language learners gain additional motivation to play games in English and/to learn English from successfully playing games using their foreign language.

**Autonomous learning.** Autonomy in language learning may be broadly defined as learner’s capacity to take control over and responsibility for their own learning, which, research has consistently shown, is contributive to successful language learning (Benson, 2011; Holec, 1981). Juxtaposing language learning autonomy and gaming, Sundqvist (2011) states that whenever learners choose a linguistic activity outside of the classroom, they take control over their own learning, thereby exercising autonomous language learning.

Chik (2012), citing among others Leander, Phillips, and Taylor (2010), Benson (2011) and Gee and Hayes (2011), argues that new mobilities have emerged for language learning (i.e. learning that does not take place in fixed locales such as schools or classrooms) in the last decade, that also includes outside-the-classroom, purely interest- and entertainment-driven learning, a category which includes learning using digital games. Although Benson (2011) contends that these types of learning situations are mostly unstructured, the fact that they encourage learners to take action, take control of their learning, and use the target language “makes a prima facie case for its effectiveness in fostering autonomy and target language competence” (p. 140).
In line with his comments, Gee and Hayes (2011) also stress the ability of extracurricular learning to facilitate the development of learner autonomy by affording them to attend to the acquisition of new knowledge and skills at their own pace, according to their own needs, styles and preferences. A number of studies in the last decade years have further substantiated this type of affordance provided by gaming (e.g. Chik, 2012, 2014; Thorne, 2008), which, as such, may be of key interest for language learning and teaching by informing learners, teachers, educational policymakers and other stakeholders of this affective benefit of games for self-directed and autonomous language learning.

Task-based learning. Task-based language teaching (TBLT), as a subcategory or branch of communicative language teaching, is concerned with providing learners with authentic language to be used during the completion of meaningful pedagogical or real-world tasks (R. Ellis, 2003; Long, 2014; Thomas & Reinders, 2010). According to the specifications of R. Ellis (2003), tasks in TBLT involve language use with a focus on contextualized meaning, are based on an existing gap (e.g. information gap), linguistic choices are subordinated to the completion of the task, and have non-linguistic (real-world) outcomes. An early pioneer of task-based language teaching, Long (2014) offers strong criticism of the perceived current trend to label any type of task that practices a grammatical element, linguistic function or skill as ‘task-based’, which has led to the dilution of the notion of task-based language learning. Tasks in the original sense of TBLT, Long argues, focuses on the learner’s need to do something using second language; as such, the completion of the task using meaningful language has priority over actual well-formed language use. Consequently, TBLT is primarily based on real-world tasks, which then may be turned into complex pedagogical tasks, which may or may not involve explicit language learning and teaching.

The task-based learning in COTS video games has been recently evaluated by Thomas (2012), who mentioned that digital game-mediated language learning in some games may be amenable to TBLT, and that “digital game-based language learning can be seen as part of a necessary reorientation, to develop task-based language learning approaches by foregrounding learners’ communicative skills and abilities” (p. 26). video games, being inherently goal-oriented (Reinhardt & Thorne, 2016), engage learners by challenging them with a variety of in-game tasks, most of which may only be negotiated through language use: multiplayer games require cooperation and collaboration on the players’ part, role-playing games often necessitate the evaluation of linguistic/pragmatic options for the completion of tasks,
even relatively simple and straightforward shooter games compel learners to use the language to understand the task at hand.

**Naturalistic context for learning.** As has been noted by a number of researchers (Benson, 2011; Chik, 2012; Gee, 2007), game-mediated learning has provided learners with novel ways of finding naturalistic (i.e. close to or imitating the natural way of language acquisition) settings for learning. Taking into account the last decade’s technological advancements and their new affordances in relation to computer-assisted language learning (CALL), Chik (2013) even argues for viewing digital games as instruments of “naturalistic CALL” (p. 835), arguing that three domains are especially conducive to second and foreign language learning: online interaction with other players, in-game consumption of texts, and production of texts related to the game (e.g. advice, walkthroughs, tutorials or even fan fiction). I would argue that three qualities discussed in the section above make for viewing game-enhanced learning as a naturalistic setting: its interactivity, meaningful language use, task-based language use. These two features, in my view, make learning language through games more theoretically feasible than books and films, as players can use the language, although in different ways, to interact with the game (e.g. through NPCs in offline games) and with other players in-game in situations where this meaningful language is subordinated to the completion of a given task. This interactivity, I argued above, may contribute vastly to deeper learning and enhanced retention.

Thus, playing video games provides a context for language learning that is probably the closest to learning in a naturalistic setting, i.e. learning through social interaction (Long, 1981, 1983), which is especially valuable in countries like Hungary, where English is taught as a foreign language (cf. English as a second language) and thus, learners are not provided ample opportunities to use the language in out-of-classroom settings.

**Extramural learning**

A decade ago, Thorne (2008) had already suggested the existence of a “problematic school-world divide between the goals and processes of conventional institutionalized schooling on the one hand and students’ increasingly mediated personal, recreational, and professional lives on the other” (p. 305). Tapping into these two evermore separate worlds may justifiably be thought of a major area of
research in years to come. Research into what language learners do outside of the classroom and how those activities are connected to their performance in the foreign language classroom, however, has gained considerable momentum in the past 5–10 of years (Benson, 2011; Sundqvist, 2011; Thorne, 2008).

An important conceptualization of outside-of-school learning comes from Sundqvist (2009, 2011), who uses the term *extramural English* to refer to learners’ contact with the English language outside of the classroom environment. In Sundqvist’s (2011) view, this term functions as an umbrella term for ‘out-of-school’, ‘out-of-class’ or even ‘naturalistic’ learning; however, she makes a distinction between ‘self-directed naturalistic’ learning (Benson, 2011) and extramural learning: the former meaning that learners are driven by a desire to learn the language and thus actively seek or create naturalistic contexts for learning, whereas in extramural learning learners may come into contact with the English language completely unintentionally.

Research into extramural English from Sweden shows a positive correlation between learners’ out-of-school contact with the English language and their English as a foreign language proficiency (Olsson, 2011; Persson, 2011; Piirainen-Marsh & Tainio, 2009; Sundqvist, 2009; Sundqvist & Sylvén, 2014); additionally, a report by The Swedish National Agency of Education (as cited by Sundqvist & Sylvén, 2014) shows that 5th-year elementary school learners reported to have learnt more English from extramural activities than from classroom activities. However, Sundqvist and Sylvén (2014) (citing Hyltenstam, 2002 and Viberg, 2000) highlights the fact that it might be reasonable to consider English as a genuine L2 in Sweden due to its wide proliferation and status in Swedish society. It is important to point out here that there is, as of 2017, no Hungarian study considering the impact of extramural activities (or specifically gaming) on foreign language proficiency.

Based on the above points, several questions arise in connection with extramural English: firstly the question of how much English language extramural activity learners engage in; secondly; what influences their choices of extramural activities; thirdly, whether English language is an important factor in their choice of extramural activities; and lastly, the extent to what learners think their proficiency stems from extramural contact with English.
Implicit and incidental learning

Sylvén and Sundqvist (2012) mention that due to the fact that while gaming L2 (usually English) input must be comprehended, it is not far-fetched to hypothesize “that successful and frequent players of such games who do not have English as their mother tongue acquire some of their English L2 proficiency in the activity of gaming’ (pp. 3–4). They also claim, drawing on research also presented in this proposal, that video games provide a “linguistically rich and cognitively challenging [context for learning] as learners receive ample L2 input, and in online games, scaffolded L2 interaction” (p. 2). Recent research into how L2 competence might be gained from extramural activities and specifically gaming has also found gaming to be feasible method of L2 vocabulary acquisition (Rankin, Gold, & Gooch, 2006; Sundqvist, 2011; Sylvén & Sundqvist, 2012; Turgut & İrgin, 2009) and improvement of oral (Sundqvist, 2011) and morphosyntactic (Reichle, 2012) proficiency. However, only relatively few studies (Miller & Hegelheimer, 2006; Ranalli, 2008) examine the exact nature of how such learning happens, how this implicit and incidental learning is theoretically feasible from gaming, what its limitations are, and what explicit methods can be used to counter these limitations.

Models of second language acquisition of the last 40-50 years, although to varying degrees, have all underscored the importance of implicit learning in second language acquisition (see Brown, 2000 for a summary), however, in a summary of the role of implicit learning in second language acquisition, Leow (2015) states that despite decade-long efforts there is still no firm consensus on what role implicit learning exactly plays in second language acquisition.

Implicit learning is usually defined in cognitive psychology as learning that “proceeds without making demands on central attention”, in which “learners remain unaware of the learning that has taken place” and “cannot verbalize what they have learnt” (R. Ellis et al., 2009, p. 3). Nevertheless, implicit learning cannot be considered as one happening without consciousness, but rather, as Schmidt (1994) explains, one without hypothesis-formation and hypothesis-testing. This language processing is underlain by statistical learning based on frequencies and probabilistic knowledge (N. C. Ellis, 2015; Rebuschat, 2015) is fundamental to the language learning process; however, does ‘not deny the importance of noticing [or] explicit instruction’. In fact, as we know from Swain’s (1988) evaluation of learning in immersion settings and Day, Bamford, Renandya, Jacobs, and Yu’s (1998) findings about the practicality of extensive reading, even massive amounts of exposure
cannot guarantee implicit learning of some features of the language (for a summary, see N. C. Ellis, 2015), as opposed to explicit instruction, which are more effective and durable.

The intentional-incidental dimension of learning processes (as opposed to the implicit-explicit dichotomy) (Dóczi & Kormos, 2015) is also important to discuss. We may talk about intentional learning when the learner consciously intends to learn either implicitly from language input or explicitly from instruction. In contrast, incidental learning is characterized by a lack of intention to learn and thus all learning happens unconsciously, by ‘picking up’ language. (Hulstijn, 2003; Richards & Schmidt, 2013). These are, as opposed to the implicit-explicit dichotomy that is often considered as being in a non-interface position (N. C. Ellis, 2005), not mutually exclusive categories. When transposed to the implicit-explicit dimension, we may say that incidental learning is almost exclusively implicit in its nature, whereas intentional learning may happen with or without consciousness in implicit or explicit ways (Bruton, Lopez, & Mesa, 2011; Hulstijn, 2003). Robinson (1997) in his seminal work was one of the first to prove that explicit instructed input and enhanced (raised salience) input are slightly superior in its success to implicit learning, while completely random, incidental learning is significantly inferior from the other three types.

It is uncontentious that the optimal conditions for any kind of implicit language learning can only be created if there is sufficient input (Krashen & Terrell, 1983) available to learners to notice grammatical features (Robinson, 1997; Schmidt, 1990, 1992), pragmatic elements (Bardovi-Harlig, 1999) or lexis (Laufer, 1998; Laufer & Hulstijn, 2001) and subsequently infer their rules or meanings (Reinders & Ellis, 2009). Games, as presented above, supply ample input for learning although their the problem of the comprehensibility of their language is a question that requires further research to answer.

Thus, while computer games provide adequate settings for implicit language learning, it would be unjustified to hypothesize that playing COTS computer games serve as standalone instruments of language learning without any explicit instruction or modification of input through ‘input enhancement’ and ‘enrichment’ (Reinders & Ellis, 2009), thereby increasing the salience of the item. Enhancement, in terms of vocabulary acquisition, means that lexical items that are to be learned are visually enhanced (e.g. bolded, underlined or highlighted in colour), whereas enrichment
entails an artificial increase in the number of occurrences of the item (Bruton et al., 2011; Reinders & R. Ellis, 2009). However, as Dóczi and Kormos (2015) comment salience alone cannot facilitate acquisition without the presence of intentionality (a conscious intention to learn) for learning on the learner’s part. Also, in terms of game-enhanced learning, as English language teachers almost definitely do not have the means to enhance or enrich the input in games, this approach is deemed impracticable. Nevertheless, Miller and Hegelheimer (2006) and Ranalli (2008) have successfully demonstrated that a different approach, that is, creating tasks or word lists for gamers may be successful in enhancing the conditions for implicit and incidental language learning from the ample input provided by video games. Also, metacognition (awareness of one’s thought processes) and metalinguistic awareness (the ability of analyzing and reflecting on language) have been found to be conducive to the implicit language acquisition and awareness (Cubukcu, 2008; N. C. Ellis, 2005; Reder, 2014- cf. Paradis, 2004 for a contrasting argument). Thus, it may be hypothesized that through developing learners’ metacognition and metalinguistic awareness, teachers may be able to enhance the rate and depth of implicit learning from extramural activities such as video gaming.

Summary of the affordances of video gaming for foreign language learning

As I have presented in the above pages, there is a vast array of features in the game mechanism of the most popular COTS video games that not only allows for, but may facilitate the implicit learning of the language, regardless of whether it results in the acquisition of grammatical rules or lexis, or ‘just’ an increased grammatical/pragmatic awareness. The interactive, playful nature of video games might also enhance the retention of such items by making them more memorable for the learner through an increased cognitive load. Video games, with their elaborate reward system, motivate learners to play, and thus to engage in more out-of-classroom activity that involves the use of English language in an authentic, meaningful and contextualized fashion. This naturalistic and authentic learning experience may be conducive to the intake of L2 rules and lexis, and may be especially valuable in EFL countries, where learners are not afforded by most public education ample opportunity to encounter and use the language in authentic contexts. An even more important affective facet of digital games vis-à-vis language learning is their perceived role in facilitating the development of learner autonomy, i.e. gaming may drive learners to
engage in more out-of-classroom learning by allowing them to choose an interactive environment for learning, or to immerse themselves to a greater extent in the target language. Lastly, some well-designed games allow for comparisons to task-based language learning/teaching due the priority of task completion and the use of meaningful language in the process.

The important questions to address are, then, how learners actually learn implicitly and/or incidentally from video games, which of the above mentioned characteristics of video games influence learning while gaming, how teachers of English as a foreign language do or can use these benefits to facilitate language learning, and whether teachers of English as a foreign language can support implicit learning from video games by in- or out-of-class activities and metalinguistic awareness-raising.

**Research design**

**Research niche**

Based on the review of literature presented above, three important gaps in research have been identified which this proposed study will attempt to fill. Firstly, there has been relatively little research (for a summary, see Peterson, 2016) on what language learning potentials computer games might hold in relation to implicit language learning and how exactly this implicit learning comes to pass. Secondly, most extant studies in the topic have been exploratory in their nature with relatively small samples and almost invariably used quantitative methods (Chik 2012; Sundqvist, 2011; Sylvén & Sundqvist, 2012) with little observational data on what and how gamers learn while playing video games. Thirdly, literature in the topic is virtually non-existent in the Hungarian academic context, but also relatively scarce in English as a foreign language contexts in general with the majority of studies having been conducted in English as a second language countries like the United States of America, Hong Kong, or in Sweden, where English is often regarded as a second language instead of a foreign one.

**Research questions**

In line with the aims stated at the end of the Introduction section and the above mentioned research gapes, two main research questions have been drawn up with three sub-questions for each.
1. What views do teachers and students hold in relation to the potentials of commercial off-the-shelf video games for language learning purposes in Hungary?

1.1 What do Hungarian students think about the potential of computer gaming as a means of language learning?

1.2 What do Hungarian teachers of English as a foreign language teachers think about the potential of computer gaming as a means of language learning?

1.3 How do English language learners who, by their own admission, have learnt English from video games describe their language learning experience?

2. In what ways can commercial off-the-shelf video games be used in the practice of English language teaching in Hungary?

2.1 In what ways do Hungarian teachers of English as a foreign language incorporate video games in their language teaching practice to facilitate language learning?

2.2 In what ways do Hungarian teachers of English as a foreign language encourage the use of video games to facilitate language learning as an extracurricular activity?

2.3 What teaching practices may be beneficial for exploiting the potential of video gaming as a means of language learning?

The first set of questions are, thus, concerned with investigating the potentials of COTS video games for language learning. Hungarian learners of English may firstly provide information (attitudinal and behavioural data) about their extramural activities and contact with English, and then the gamers may provide insight into the extent to which they learn language from gaming and how the constructs outlined in the Theoretical framework section influence their language learning processes (RQ 1.1). This, in turn, will be compared to teachers’ beliefs, attitudes and practices in relation to video games and the possibility of learning English from video games (RQ 1.2). Thirdly, an important source of information are gamers who claim to have
gained considerable English proficiency from video games, whose language learning experience, cognitive and metacognitive strategies may be pivotal to understanding how implicit learning from computer games happens (RQ 1.3).

Next, the second set of questions attempt to shed light on how Hungarian EFL teachers, if in any way, incorporate video games in their teaching practice, which might generate important considerations for game-enhanced language teaching and language teaching in Hungary in general (RQ 2.1). Also, it was deemed crucial to learn not only what in-class teaching techniques Hungarian EFL teachers use to exploit the potential of video games for language learning, but also whether they encourage the use of video games for language learning in extramural contexts and how they do so (RQ 2.2). Lastly, the last subquestion of the second main research question is concerned with evaluating the teaching practices that may prove useful in capitalizing on video games for language learning using the teachers’ judgements.

In what follows, I will describe the participants, instruments, procedures and methods of data analysis in the proposed study, for which I draw upon suggestions from Dörnyei (2007) and Mackey and Gass (2011).

Participants

Research question 1.1. The sample for RQ 1.1 is proposed to be a large sample comprising more than 300 participants, with quota sampling (Dörnyei, 2007) being used as the sampling method. The important two segments that need to be represented are students from public schools in the capital city and students outside the capital city, as their answer may significantly vary due to the importance of English pertaining to their everyday contact with the language. As students will not be pre-selected for the questionnaire, a large enough sample has to be attained so that - even provided that only 10% of the participants play games regularly - an ample sample size will remain that provides sufficient statistical power for the subsequent analyses. The participants in the sample are going to be students from ages 12 to 16, as reports suggest this stratum to be the most frequent gamers (Gametrack/Ipsos, 2016, 2017). The schools and classes that will be approached to fill out the questionnaire will be chosen using convenience sampling, i.e. ones where the researcher has close contact with the teachers and through him/her the students as well.

Research question 1.2. The proposed sample for RQ 1.2 will consist of 100 Hungarian teachers of English as a foreign language. Participants will be asked to
complete the questionnaire on their experience of, beliefs about and attitudes towards gaming as a means of language learning. Convenience and snowball sampling will be used as a method of selection by approaching the members of a Facebook English teachers’ community to fill out the questionnaire and to relay the questionnaire to others. Due to the size of this community, it is feasible that all ages, school types and locations will be represented; however, this may later be rectified through quota sampling.

**Research question 1.3.** The case-study proposed for Research Question 1.3 will involve 5 participants (students aged 12-16) from the questionnaire used for RQ 1.1. The number of participants was chosen based on Dörnyei’s recommendation (2007) as even if there is attrition among the participants, three cases will likely remain for the whole length of the study. The participants for this stage of data collection will be chosen using critical case sampling focus on five cases which most comprehensively represent the investigated phenomenon, which is implicit English language learning from video games.

**Research questions 2.1 and 2.2.** Research Questions 2.1 and 2.2 will involve a sample of 8 Hungarian EFL teachers. Sampling will be based on these teachers answers in the questionnaire used for RQ 1.2, and participants will be chosen using maximum variation sampling to cover for the differences in how teachers incorporate game in their teaching practice. It is deemed crucial that teachers who do not use or have considered using games as a means of language learning and teaching also provide insight into why they do not use these methods.

**Research question 2.3.** Lastly, the answers for Research Question 2.3 will be supplied by a focus group consisting of 8–10 Hungarian EFL teachers. Preferably, the focus group will consist of ELT practitioners who have had varying degrees of experience with using video games in their teaching practice.

**Instrument and procedure**

**Research question 1.1.** The instrument proposed for RQ 1.1 is a questionnaire eliciting factual, attitudinal and behavioural information from the participants. The first section of the questionnaire will focus on background data on the participants (sex, age, school, location, computers/gaming consoles at home, parents'/siblings'/peers’ gaming habits) and behavioural information on extracurricular activities and extramural contact with English. Then, participants who play video games on a regular basis will have to complete a second section, which elicits attitudinal information about their attitudes towards learning English, playing games
in English and the possibility of learning English from computer games; behavioural information about how much they play and what games they prefer; and also behavioural data about using English in computer games; whose items will be based on the constructs elaborated on in the theoretical review (interactivity, interaction, motivation, task-based learning, meaningful and contextualized language, learning autonomy).

Piloting of the questionnaire will commence in early February, with 30 participants, then after refining the questionnaire based on the statistical data (Cronbach’s reliability and principal component analysis) and comments collected for the pilot, the validated paper-based questionnaires will be handed to the teachers of the classes, who will administer the test in an English lesson.

In order to find participants for RQ 1.3, the last page of the questionnaire will have a perforated part, on which students who are willing to participate in further studies can write their initials and the name of their teacher for further contact purposes. Other than this, the questionnaire will be completely anonymous.

**Research question 1.2.** The instrument to be used in RQ 1.2 will be an online questionnaire using Google Forms. The participant teachers will be asked to provide factual background information (sex, age, location of school, computers/games consoles at home, relatives'/friends' gaming habits), attitudinal information about their beliefs about and attitudes toward video games and their potential for language learning (which will be identical to those of the student questionnaire for the sake of comparability); and behavioural data about their experiences with gaming and the extent to which they incorporate video games in their in-class teaching and/or recommend them as an extracurricular activity.

Piloting of the questionnaire will commence in late February, with 10 participants, and then the validated online forms will be sent to the members of the Facebook EFL teachers’ community. As per ethical conventions, the questionnaire will be completely anonymous. Teachers who would be willing to volunteer to take part in further research (for RQs 2.1–2.3) will be asked to provide their e-mail address for contact purposes.

**Research question 1.3.** The case-study proposed for RQ 1.3. will be a so-called multiple case study, which means that the investigation will focus on a number of related cases to examine a common phenomenon. The case study method was chosen as it can provide a thick description of the question at hand, especially with 5
cases. The case study may shed further light on the findings of the survey and might provide useful implications for further research. Also, a case study approach is generally considered useful in fields of second language acquisition where only incomplete or fragmentary knowledge exists (Punch, as cited by Dörnyei, 2007). The present case study will use a triangulated approach: firstly, a short, 30-minute interview will be conducted with the participants; then later the participants will be observed by the researcher while playing a video game in the English language; and then lastly, at least a month later a think-aloud protocol will be implemented to elicit further, in-depth insights about what sort of language learning, language and strategy usage happens when the participant is playing a video game.

The preliminary procedures (e.g. sampling) and preparation for the case studies will be carried out in April 2018, while the actual case studies will be conducted in May to July 2018.

**Research questions 2.1 and 2.2.** The instrument for research questions 2.1 and 2.2 will be a single-session, semi-structured interview with 8 ELT practitioners. The interview is planned to take about 30-45 minutes and will elicit responses on teachers’ interest in, beliefs about, attitudes toward and experience with video games as a means of English language learning. The interview protocol will be completed and piloted by September 2018, with the actual interviews planned to take place in September and November 2018. The interviews will be recorded using recorded using a dictaphone and later transcribed and imported into ATLAS.ti computer-aided qualitative data analysis (CAQDAS) software.

**Research question 2.3.** Research question 2.3 will be answered using a focus group interview, which is an economically viable way of collecting a large amount of data; however, the reason why it is used here is that it is based on the “collective experience of group brainstorming” (Dörnyei, 2007), which may result in the collection of high-quality data from an insightful discussion. The role of the moderator will be assumed by the researcher, and the interview will be based on a semi-structured protocol with maximum 10 close-ended questions to keep to a time limit of about 1,5-2 hours (as suggested by Dörnyei, 2007). Due to the nature of the focus group interview, it is relatively difficult and time-consuming to organize; thus the interview is likely to take place at or following a well-known Hungarian continued professional development event. Provided that all participants give permission, the interview will be recorded on video in order to avoid problems in the transcription process.
Methods of data analysis

Research question 1.1 and 1.2. The data collected for Research questions 1.1 and 1.2 using the questionnaires will be analyzed using statistical procedures with the *IBM SPSS Statistics* software package. Statistical analyses will be performed using the background information as independent variables to find whether there are statistically significant differences between groups (e.g. men-women, capital city-town-countryside, number of gaming consoles, etc). Also, in the case of the student questionnaire simple linear regression and multiple regression analyses will be performed to find relationships between the different constructs. To compare the attitudinal data gathered from students and teachers, an independent-samples T-test will be performed to reveal statistically significant differences. Besides, the data analysis will mainly include descriptive statistical analysis of the dependent variables.

Research question 1.3. The analysis of the qualitative data will be performed using the constant-comparative method of qualitative data analysis as described by Maykut and Morehouse (1994). The method states that responses should not be pre-grouped according to a given category, but the salient categories and relationships should be allowed to emerge from the data. As units in the responses are constantly coded, compared and categorized, the emerging categories and relationships are constantly shaped, broadened, contracted, added to or removed to accommodate the new information.

To avoid personal bias and to alleviate the amount of burden on the researcher, a co-coder will be potentially required for the qualitative phases of the study. The coding and analysis will be performed in the *ATLAS.ii CAQDAS* software.

Research questions 2.1, 2.2, and 2.3. Similarly to RQ 1.3, the analysis of the qualitative data will be performed using the constant-comparative method (Maykut & Morehouse, 1994) as described at RQ 1.3.

Remaining tasks

Tasks that have to be completed before beginning the data collection phase include getting a deeper insight into the most recent cognitive research on implicit learning, incorporating Bandura’s social learning and sociocultural theory and Bernstein’s visible-invisible pedagogy theories into the theoretical framework, contacting teachers who can administer the paper-based questionnaire, and obtaining an ethical clearance letter for the studies.
Expected problems and limitations

One of the most salient problems in the study is defining what different games may offer for language learning. Reviewing games in terms of the quality and quantity of their linguistic input will most likely be a meticulous and time-consuming task to complete.

As Dörnyei (2007) suggests, it is likely that the focus group interview may have to be repeated in case the first group does not manage to provide ample response to the questions which might be due to the researcher’s inexperience in moderating focus group interviews or the group’s inability to cooperate because of interpersonal distance.

Also, I suspect that one of the basic findings will be that girls do not play video games nearly as often as boys despite the fact that several market reports did not indicate such a marked difference between girls and boys. In this case, the ways how video games can be used for language learning may be limited to only half of the population.

Although the proposed study might shed light on how language may be learnt from computer games, the fact that genuine implicit learning actually happens while gaming can only be substantiated in experimental settings, which is infeasible at this point.

Finally, video games have gained a somewhat bad reputation in the last decade either for being addictive or for promoting violent behaviour. Although research on both topics are far from conclusive, it will be important to address in great length whether encouraging children to play more video games in order to facilitate language learning is morally justifiable in light of their perceived caveats.

Possible outcomes and implications

My hypothesis is that a number of participants will substantiate that they did actually acquire a part of their English proficiency from playing video games; however, even with a three-stage multiple case study it may be difficult to pinpoint how this learning actually happens. I also presume that there will be a significant disparity in terms of what students and teachers think of the potential of video games as a means of language learning, which may be explained by teachers’ lack of first-hand experience with playing modern video games. Hopefully though, the data gathered
from the learner participants may provide a clearer understanding of what elements of video games are conducive to implicit language learning. Also, learners in the case studies and teachers in the focus group interview might recommend potential self-regulatory strategies, activities raising metalinguistic awareness and other in-class activities that may maximize language acquisition from gaming. Furthermore, I hope that the proposed study may serve as a stepping stone for further research in the field, especially in the Hungarian context.
Table 1  
*Table of research questions, methods of data collection and analysis*

<table>
<thead>
<tr>
<th>Research question</th>
<th>Method of data collection</th>
<th>Method of data analysis</th>
</tr>
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<tbody>
<tr>
<td>1. What views do teachers and students hold in relation to the potentials of commercial off-the-shelf video games for language learning purposes in Hungary?</td>
<td>Large sample (300+ participants – not pre-selected) questionnaire for students about their extramural English contact and gaming habits</td>
<td>Statistical analysis of data (mainly descriptive statistical analysis cross-tabulated with independent variables and regression analyses)</td>
</tr>
<tr>
<td>1.1 What do Hungarian students think about computer gaming as a means of language learning?</td>
<td>Questionnaire with a sample of 100 Hungarian English language teachers</td>
<td>Statistical analysis of data (mainly descriptive statistical analysis cross-tabulated with independent variables, regression analyses and independent-samples T-tests)</td>
</tr>
<tr>
<td>1.2 What do Hungarian English teachers think about computer gaming as a means of language learning?</td>
<td>Multiple-case study with 5 focal students using critical case sampling (based on the answers from the questionnaire): Interview, observation, think-aloud protocol</td>
<td>Thematic analysis of the interviews and the think-aloud protocol with the constant-comparative method</td>
</tr>
<tr>
<td>1.3 How do English language learners who, by their own admission, have learnt English from computer games describe their language learning experience?</td>
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<tr>
<td>2. In what ways can commercial off-the-shelf video games be used in the practice of English language teaching in Hungary?</td>
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<tr>
<td>2.1 In what ways do Hungarian English teachers incorporate computer games in their classroom teaching practice to facilitate language learning?</td>
<td>Small sample (8 participants) interview study with teachers</td>
<td>Thematic analysis of the interviews with the constant-comparative method</td>
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<tr>
<td>2.2 In what ways do Hungarian English teachers encourage the use of computer games to facilitate language learning as an extracurricular activity?</td>
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<td></td>
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<tr>
<td>2.3 What teaching practices may be beneficial in exploiting the potential of computer gaming as a means of language learning?</td>
<td>Focus group interview with 10 teachers to evaluate the potential of possible in-class and extracurricular activities proposed based on answers for RQ1 and RQ2.1-2.2</td>
<td>Thematic analysis of the interview with the constant-comparative method</td>
</tr>
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</table>
Timeline

February–August 2018 - Expanding and refining the theoretical framework
February 2018 - Piloting and administering the student questionnaire, and piloting the online teacher questionnaire
March 2018 - Administering the online teacher questionnaire, Entering and cleaning data from the student questionnaire
April 2018 - Data analysis of student questionnaire and teacher questionnaire, Writing up the results, Preparation for the case studies
May 2018 - Writing up a paper with the quantitative results, Case study with 1-2 participants
June–July 2018 - Conducting the case study with the remaining 3 participants
August 2018 - Transcribing and analyzing the qualitative data from the case studies, Contacting the teachers for the interviews
September 2018 - Preparing the interview protocol for the interviews with teachers
October–November 2018 - Conducting the interviews, Transcription and data analysis
December 2018–January 2019 - Writing up a paper with the qualitative results from the teacher interviews
January–February 2019 - Review of data collected from RQs 1.1–2.2
February 2019 - Preparing for and conducting the focus group interview
March 2019 - Transcribing and analyzing the data from the focus group interview
April–May 2019 - Reviewing data and theory
May 2019–2020 - Writing up dissertation
References


FOREIGN LANGUAGE LEARNING AND TEACHING THROUGH VIDEO GAMES

Multilingual Matters.


