RESEARCH/INVESTIGACIÓN

SECOND LIFE: A VIRTUAL ENVIRONMENT TO REDUCE STUDENTS' FOREIGN LANGUAGE ANXIETY

Second life: un entorno virtual para reducir la ansiedad de los estudiantes de lenguas extranjeras

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ABSTRACT

Second language acquisition (SLA) is a complex construct in which not only cognitive factors play a crucial role, but also affective ones. In the last decades, the analysis of affective factors in second (L2) and foreign language (FL) learning has gained prominence. Research has shown a strong correlation between language learning and aspects such as personality, motivation, attitude, or anxiety, to name but a few (e.g., Gardner, 2020; Hewitt & Stephenson, 2011; MacIntyre & Gardner, 1989). The purpose of this paper is to examine whether Foreign Language Anxiety (FLA) levels could be lessened using Virtual Worlds (VWs) such as Second Life (SL) for language teaching. This investigation compares the FLA levels of an Experimental Group (EG), which completed three activities through SL, with a Control Group (CG), which completed the same activities in the traditional classroom. Results indicate that the FLA levels of participants in the EG decreased as lessons went by in comparison with those participants in the CG. Moreover, findings suggest that the confidence of those participants working in SL increased as time went by. This boost in learners' confidence could be attributed to the crucial role played by anonymity in VWs.

KEY WORDS: anxiety – motivation - language learning - virtual worlds.

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Second life: a virtual environment to reduce students' foreign language anxiety

RESUMEN

La adquisición de un segundo idioma es un constructo complejo en el cual no sólo factores cognitivos juegan un papel crucial, sino también afectivos. En las últimas décadas, el análisis de los factores afectivos en el aprendizaje de segundas lenguas e idiomas extranjeros ha ganado prominencia. Diversas investigaciones han demostrado una fuerte correlación entre el aprendizaje de lenguas y aspectos como la personalidad, la motivación, la actitud o la ansiedad (p. ej., Gardner, 2020; Hewitt & Stephenson, 2011; MacIntyre & Gardner, 1989). El objetivo de este artículo es examinar si el nivel de ansiedad causado por el aprendizaje de lenguas extranjeras (FLA) podría disminuir usando mundos virtuales tales cómo Second Life (SL) para la enseñanza de idiomas. Esta investigación compara los niveles de FLA de un Grupo Experimental (EG), que completó tres actividades a través de SL, con un Grupo de Control (CG), que completó las mismas actividades en el aula tradicional. Los resultados indican que los niveles de FLA de los participantes en el EG disminuyeron a medida que las clases avanzaban en comparación con los participantes en el CG. Además, las conclusiones sugieren que la confianza de los participantes que trabajaban en SL aumentó con el paso del tiempo. Este incremento en la confianza de los alumnos podría atribuirse al papel crucial que desempeña el anonimato en los mundos virtuales.

PALABRAS CLAVE: ansiedad – motivación – aprendizaje de lenguas – mundos virtuales.

SECOND LIFE: UM ENTORNO VIRTUAL PARA REDUZIR A ANSIEDADE DOS ALUNOS DE LÍNGUAS ESTRANGEIRAS

RESUMO

A aquisição de uma segunda língua é um complexo emaranhado no qual não somente fatores cognitivos têm um papel crucial, mas também processos afetivos. Nas últimas décadas, a análise dos fatores afetivos do aprendizado nas segundas línguas e idiomas estrangeiros tem ganhado grande importância. Diversas pesquisas têm demonstrado uma forte correlação entre o aprendizado de línguas e aspectos como a personalidade, a motivação, a atitude e a ansiedade(por exemplo., Gardner 2020; Hewitt & Stephenson 2011;MacIntyre & Gardner, 1989). O objetivo deste artigo é pesquisar se o nível de ansiedade causada pelo aprendizado de línguas estrangeiras (FLA) poderia diminuir usando mundos virtuais tais como: Second Life (SL) para o ensino de línguas. Esta pesquisa comparou os níveis de FLA de um grupo experimental (GE) que terminou as mesmas 3 atividades através do SL, com um grupo controle (GC), que completou as mesmas três atividades na aula tradicional. Os resultados indicam que os níveis de FLA dos participantes no EG diminuíram à medida que as aulas avançavam em comparação com os participantes do GC. Além disso, as conclusões sugerem que a confiança dos participantes que trabalhavam no SL aumentou com o

2

Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

tempo. Este incremento na confiança dos alunos poderia atribuir se ao fator fundamental que desempenha o anonimato nos mundos virtuais.

PALAVRAS CHAVE: ansiedade – motivação – aprendizado de línguas – mundos virtuais.

1. INTRODUCTION

Learning a language does not only require a cognitive ability; other efforts are needed, and the affective component is essential in language acquisition. Aspects such as motivation, personality or anxiety play a crucial role in foreign language (FL) learning. As claimed by Scovel (1991), these affective traits are "factors that deal with the emotional reactions and motivations of the learners" (p. 16). It was Krashen (1981) the one who developed the Affective Filter Hypothesis to show that language learning is shaped by affective variables. Although this theory was really criticized, Krashen (1981) opened the door to a new area of research in which variables such as anxiety, motivation and self-confidence were considered. From that moment on, other authors have tried to classify these variables (e.g., Brown, 2000; Gardner, 1985; Skehan, 1989). Despite the differences in the existing taxonomies, all of them consider Foreign Language Anxiety (FLA) as an important affective factor in FL learning.

It is believed that this apprehension could be reduced when the suitable conditions for teaching and learning are met. In this regard, many investigations have recently examined the use of Information and Communication Technologies (ICTs) and especially Virtual Worlds (VWs) as considered low anxiety environments where students may feel more confident and protected behind their virtual representations or avatars (Dickey, 2005).

This paper aims at examining the FLA levels of an experimental group (EG) of 10 secondary education learners of English as a Foreign Language (EFL) who performed 3 different activities through the VW Second Life (SL) in comparison with a control group (CG) of 10 learners which completed the same activities using the traditional classroom as a learning context. Moreover, it analyses changes in participants' confidence after having worked in the virtual environment.

2. LITERATURE REVIEW

The first definitions of the term anxiety appeared in the field of psychology. Hilgard et al. (1971) defined anxiety as "a state of apprehension, a vague fear that is only indirectly associated with an object" (p. 605). Hence, anxiety is considered a subjective feeling which may appear in specific moments of people's lives due to a lack of self-confidence. It is "a type of cognitive response marked by self-doubt, feelings of inadequacy, and self-blame" (Sarason, 1978, p. 194). Although this concept can be misunderstood with stress, anxiety is usually related to a person's inability to face a challenge.

3

Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

Different types of anxiety can be found in the literature. A popular classification is the one offered by Spielberger (1983). This scholar classifies anxiety depending on the context in which is produced distinguishing between *state* and *trait anxiety*. As Spielberger (1966) claims, *state anxiety* is "a transitory state or condition of the organism that varies in intensity and fluctuates over time" (p. 12). This type of anxiety is a temporary feeling that appears in response to some perceived threat. On the contrary, *trait anxiety* refers to the stable tendency or disposition human beings must feel stress, fear or worry in the different situations of their daily lives. Thus, *trait anxiety* can be described as a personality feature. Although both types of anxiety emerge as a reaction to a threat, they vary in duration and intensity. After Spielberger et al.'s (1970) studies, research on anxiety became popular and another type of anxiety was defined: *situation-specific anxiety*. Within this group, it is possible to find FLA. As stated by Horwitz et al. (1986), FLA is "a distinct complex of self-perceptions, beliefs, feelings and behaviours related to classroom language learning arising from the uniqueness of the language learning process" (p. 128). Soon, the concept of FLA became popular, and many researchers focused on it (e.g., Hewitt & Stephenson, 2011; Kim, 2009; MacIntyre & Gardner, 1989; Young, 1990, 1991). FLA can appear in the different stages of language learning and can be triggered when learning any of the 4 skills (Melchor-Couto, 2017). However, it is believed that speaking is the most threatening skill as spontaneous conversations in class, oral activities, and the fear of committing mistakes are the aspects with the highest levels of FLA for FL learners (Young, 1990).

Considering the existing literature and the findings from her studies, Young (1991, p. 427) proposed 6 sources to classify language anxiety: (1) *Personal and interpersonal anxieties*; (2) *Learner beliefs about language learning*; (3) *Instructor beliefs about language teaching*; (4) *Instructor-learner interactions*; (5) *Classroom procedures,* and (6) *Language testing*.

Personal and interpersonal anxieties are the most popular source of anxiety. Elements such as competitiveness or low self-esteem are relevant aspects to consider within this source. *Learner's beliefs about language learning* include the different views regarding components such as pronunciation or accuracy in the language being studied. Findings in many studies suggest a negative correlation between FLA and self-perception of competence in the target language (Cheng, 2001). *Instructors' beliefs about language teaching* can determine and shape teachers' methodology and the way lessons, activities or tasks are designed. The interaction between teachers and students can also generate FLA if there is a mismatch between their beliefs. For example, if an instructor feels that every single student's mistake must be stressed, this might generate anxiety in learners due to the possibility of being constantly corrected if they are wrong. With regards to *classroom procedures*, aspects such as speaking in front of other students or making an oral presentation can also produce FLA. Finally, and as claimed by Young (1991), "in *language testing*, the greater the degree of student evaluation and the more unfamiliar and ambiguous the test tasks and formats, the more the learner anxiety produced" (p. 429).

4

Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

From the 6 previous FLA sources, it is essential to point out the key role played by teachers, as teaching methodology and teachers' beliefs and decisions appear in four of the aforementioned causes. So, teachers must be aware of the different FLA signs to try to mitigate them. According to Horwitz et al. (1986), *communication apprehension, test anxiety* and *fear of negative evaluation* are the three main types of manifestations of FLA. They define *communication apprehension* as "a type of shyness characterized by fear of or anxiety about communicating with people" (p. 127). This fear has several manifestations such as the difficulty of speaking in front of other people or understanding a spoken message. *Test anxiety* makes reference to the fear of failure. In this regard, test-anxious students usually feel they are a failure if their tests are not perfect. Finally, *fear of negative evaluation* can be defined as "apprehension about others' evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively" (Horwitz et al., 1986, p. 128). When learning a FL, this fear can relate to teachers, classmates or native speakers' comments or assessment. As can be inferred, *communication apprehension* and *the fear of negative evaluation* are closely connected with the image human beings project of themselves. According to Guiora (1983), language learning threatens the individual self-concept. This author claims that learners must be prepared to take risks and commit errors in language learning. However, when people want to communicate in a FL, they put their self-concept at risk as they cannot express themselves with the same accuracy and fluency as they do in their first language (L1). Thus, when someone speaks a FL, they offer a worse image of themselves.

Different instruments have been created to measure FLA. The *French Class Anxiety Scale* included in Gardner et al.'s (1979) Attitudes and Motivation Test Battery (AMTB) was the first FLA survey designed. This questionnaire was developed to measure different affective factors in language learning. Years later, Horwitz et al.'s (1986) *Foreign Language Classroom Anxiety Scale* (FLCAS) appeared and since then, it has been widely accepted and used. Its validity and efficacy have been shown in different studies, and consequently it has been translated into different languages. According to Pichette (2009), it is the most utilized tool to measure anxiety in FL learning containing 33 Likert-type items which range from strongly agree to strongly disagree. As Horwitz et al. (1986) claimed, the items presented in the questionnaire relate to the main sources of FLA: *test-anxiety, communication apprehension*, and *fear of negative evaluation in the FL classroom.*

It cannot be forgotten that FLA can affect language learners in different ways. Almost every single scholar agrees on the idea that high levels of FLA have negative effects on those learners experimenting it (e.g., Hewitt & Stephenson, 2011; Horwitz *et al.*, 1986; Steinberg & Horwitz, 1986; Young, 1986). However, it is believed that anxiety can have positive effects in language learning (Brown, 2000). It is necessary for learners to experiment a minimum level of FLA as they will be more encouraged and motivated.

Due to the paramount role FLA plays in language learning, it is key for teachers to create low anxiety environments. ICTs and technological tools offer many possibilities

5

as they aim at facilitating FL learning and teaching (Higgins, 1995). Research has investigated how FLA can be lessen through e-learning environments (e.g., JoohaeKim, 2005; Yuzer et al., 2009), mobile phones (e.g., Rahimi & Soleymani, 2015), computer-mediated communication environments (e.g., Arnold, 2007; Martin & Valdivia, 2017; Scida & Jones, 2016) and gamification through VWs (e.g., Balcikanli, 2012; Kruk, 2016; Melchor-Couto, 2017; Wehner et al., 2011). These last investigations have shown that VWs can be low-anxiety environments due to the affordances they offer in FL teaching. In her study, Melchor-Couto (2017) analysed the evolution of the FLA levels of 14 university students enrolled in a B1 Spanish course at the University of Roehampton (London). This scholar divided participants into a VW group and a Classroom group (CR). The 7 participants in the VW had to perform four oral tasks using SL and the 7 learners in the CR had to complete the same tasks using a traditional methodology. Through Horwitz et al.'s (1986) FLCA and interviews with participants, it was concluded that the FLA levels of the VW group decreased more than those of the CR as the investigation went by. In the same vein, Wehner et al. (2011) also compared the levels of FLA of a group of 40 learners enrolled in the subject of Spanish as a foreign language in an American university. 20 students were asked to perform three tasks using SL while the rest followed the traditional curriculum. Participants had to complete Gardner's (1985) Attitude/Motivation Test Battery (ATB) after finishing the tasks assigned. Results indicated that "the Second Life group reported having less anxiety in using Spanish and participating in the course than the students not using Second Life" (Wehner et al., 2011, p. 285).

Another aspect key to point out is the anonymity VWs offer learners. As claimed by Joinson (2001), thanks to this anonymity users are not so inhibited as in traditional classrooms as they are not so worried about others' opinions. The use of screens and avatars offer them a feeling of safety and protection (Melchor-Couto, 2017). What is more, their anonymity decreases their fear of negative evaluation (e.g., Carter & Click, 2006; Grant et al., 2013; Rosell-Aguilar, 2006; Wehner et al., 2011). In addition, learners' motivation increases as these virtual communities foster real communication exchanges (Kruk, 2015), and the possibility of sharing and telecollaborating, thus fostering constructivism (De Freitas, 2008). It is also crucial to highlight that they offer a new kind of inclusive learning space. All type of learners despite their personal traits or characteristics can actively participate during the lesson, especially in demanding tasks (Tudini, 2007). Moreover, it is believed that VWs improve learners' confidence. Henderson et al. (2009) conducted a quantitative study through SL at Monash University (Australia) with students enrolled in Chinese studies and found that thanks to the use of this VW, participants improved their self-efficacy beliefs and confidence.

Although research has explored how VWs like SL are used to reduce FLA, it seems, to the best of our knowledge, that most of the investigations have been conducted at the university level (e.g., Balcikanli, 2012; Kruk, 2016; Melchor-Couto, 2017; Wehner et al., 2011). Considering that context plays a key role in FL learning, very little is known about how VWs affect FLA levels in FL learning at secondary education. With the aim of contributing to this field of research, this investigation will be guided by the following research questions.

RQ1: Will participants' FLA levels in the EG be lower than the ones in the CG after their participation in SL?

RQ2: Will participants' confidence be higher in the EG after having worked through SL?

3. METHOD

3.1. Participants

The sample consisted of 20 students from 2nd year of Baccalaureate from a private secondary school in the Valencian Community, Spain. Participants, who were enrolled in the subject EFL, reported to have a B1-B2 level of English according to the Common European Framework of Reference (CEFR). Learners were divided into 2 groups. The CG was formed by 10 students who were asked to perform the activities designed for this investigation in the traditional classroom; and an EG also formed by 10 learners who had to use the VW SL to complete the same activities. This VW was selected as it offers authentic interaction and many opportunities for language learning. Participants ranged from 16 to 19 years old being a total of 12 females and 8 males.

3.2. Research instruments

A mixed-methods design with qualitative and quantitative data was used. A questionnaire to measure FLA was administered to participants before starting with the investigation and after they completed the proposed task in each of the three sessions of this study. Quantitative data was complemented with interviews to know participants' views.

The questionnaire selected was an adaptation of Horwitz et al.'s (1986) FLCAS due to its reliability and validity. A Spanish version of the FLCAS was used as it was thought that it would be easier for our participants to understand all the items (see Appendix 1). Moreover, it was used a reduced version with a total of 20 questions which had to be answered using a Likert scale ranging from agree to disagree. Although in the original FLCAS items must be answered using a scale ranging from 1 to 5, a simpler scale with 3 just possibilities was used due to our participants' profile.

It is also essential to mention that the Spanish version used in this investigation was also an adaptation of the one provided by Rodríguez and Abreu (2003), and Stephenson (2006). The final questionnaire used included items of the three main sources of FLA, i.e., *test-anxiety, communication apprehension*, and *fear of negative evaluation in the FL classroom*. However, repetitive or ambiguous items were deleted to facilitate the completion of the survey. All participants were asked to complete the questionnaire on paper. Then, to answer the RQ1, all answers in the 20 items of the questionnaire were coded to obtain a final FLA score to be analyzed and compared.

7

Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

However, only items related to *communication apprehension*, i.e., 1, 3, 4, 6, 8, 10, 11, 14, 16, 17 and 19, were considered to answer the RQ2.

After participants filled in the initial questionnaire, the following step was to perform the three tasks which had been exclusively designed for this study. For both the CG and EG, the first thing the researcher did was to group students into pairs to complete the tasks. This way, learners could work in teams to collaborate in order to perform the activities proposed. Participants of the EG did not know the classmate they had been assigned to with the aim of maintaining the positive effects of anonymity to lessen their FLA levels.

Once the EG had access to SL, learners were asked to create their own avatars, i.e., their virtual representation in SL (see Figure 1). They had the chance to customize their avatars the way they felt more comfortable as they were intended to show their identity. In this regard, those students with complexes in real life had the possibility of creating a new identity; thus, increasing their self-esteem.

Figure 1: Students' avatars
Source: secondlife.com

Diverse reasons led to the selection of SL as the platform to carry out this investigation. First of all, it is key to highlight its popularity. Nowadays, it is considered one of the most popular VWs with more than 900 million users. Moreover, SL offers authenticity as the real world is recreated within the virtual environment letting students the possibility of interacting with real users, visiting different places and doing the things they would do in their daily lives. All this is believed to enhance students' motivation and to decrease their levels of anxiety as they will feel a real need for using the target language.

After selecting SL as the platform to conduct this study, three activities were designed in the secondary school island bought in the marketplace section of SL (see Figure 2).

8

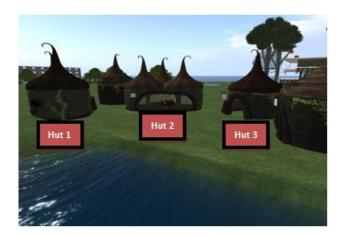Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

Figure 2: Island in SL
Source: secondlife.com

The themes of the three activities were carefully considered. The main criterion was the participants' familiarity with the subjects to facilitate interaction among learners in English; thus, reducing their FLA levels.

The first task, *meeting each other*, was designed for students to learn more about their new colleague. This activity was created to break the ice and as a warm-up to know more about each participant's hobbies and interests. In this activity, each pair of students had to use the voice application and chat to communicate. The duration of the activity was 40 minutes to meet each other. Learners were asked to go to a café in SL to be more comfortable (see Figure 3).

Figure 3: Café in SL
Source: secondlife.com

In the second session, *my ideal trip*, participants were asked to design the itinerary of their dreamt trip. In the SL Map Viewer, they could find all the possible destinations available for them in the VW (see Figure 4).

9

Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

Figure 4: SL Map Viewer
Source: secondlife.com

This activity was devised as it is possible to find faithful representations of the main touristic places in SL. For example, Figure 5 shows they city of New York.

Figure 5: City of New York in SL
Source: secondlife.com

Once learners had their itineraries created, each pair started their trips. The student acting as a guide had to explain the main landmarks and curiosities of the city they were visiting. Finally, both students had some minutes to ask things about the places they had visited.

Finally, in the last two sessions, learners had to complete the last and most demanding activity, *let's party together*, in which each tandem was asked to make a proposal of their ideal end of the school year party using all the available resources in SL. Different proposals such as a concert, a funfair, a scape room, or an obstacle course were offered by the researcher as examples to inspire learners (see Figure 6).

10

Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

Figure 6: Proposals for the end of the school year party
Source: secondlife.com

Learners were given a whole class to prepare the activity and design a presentation to explain their proposal to the rest of students in the following lesson (see Figure 7).

Figure 7: Students' oral presentations
Source: secondlife.com

Those students in the CG were asked to complete the same three activities but in the traditional classroom and face to face with the classmate they had been assigned to. They were also asked to complete the questionnaires at the beginning of this investigation and after they completed each one of the proposed tasks.

4. RESULTS

For obtaining the results of this study, data from the questionnaires were coded using a scale between 1 to 3. The number 3 was assigned to regular statements (e.g., item 1. *Nunca me siento del todo seguro/a de mí mismo/a cando hablo en clase de inglés*) to indicate agree while the number 1 was used for disagree. The opposite process was

11

used for reserve statements (e.g., item 7. *Normalmente me siento tranquilo/a durante los exámenes de inglés*).

For answering the RQ1, descriptive statistics were calculated to obtain the quantitative results of this investigation. Table 1 shows the initial and the final FLA mean for both groups of participants.

Table 1: Initial and final FLA levels

FLA	Initial FLCAS CG	Final FLCAS EG
General (N=20)	39.4	36.95
EG (N= 10)	39.5	34.9
CG (N= 10)	39.3	39

Source: own work

As can be seen, the initial FLA is quite similar for participants in both groups. There is just a difference of 0.2 points. However, after the completion of the different tasks, participants in the EG decrease their FLA level in 4.6 points, while those participants in the CG keep their levels of FLA quite stable, just reducing them in 0.3 points.

The FLA scores per session were also calculated for each participant of the EG (see Table 2) and the means per sessions and the tendency was also estimated (see Figure 8).

Table 2: FLA levels per session in the EG

Participant's FLA	FLA initial session	FLA session 1	FLA session 2	FLA session 3
EG 1	57	52	50	52
EG 2	53	50	48	47
EG 3	50	48	48	50
EG 4	42	38	35	33
EG 5	40	40	38	35
EG 6	40	39	35	37
EG 7	32	29	27	24
EG 8	29	27	27	28
EG 9	27	25	22	20
EG 10	25	24	23	23

Source: own work

12

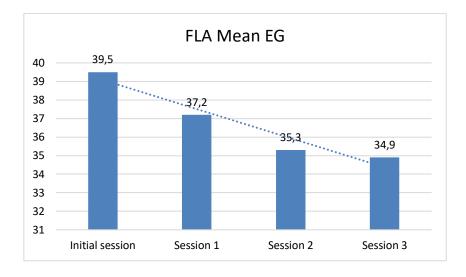Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

Figure 8: Mean FLA scores EG
Source: own work

As can be observed in the previous results, the FLA levels decrease after the completion of each task. From the initial 39.5 points, there is a decline in more than 2 points after session 1 and session 2 respectively. In the last session, nevertheless, there is a drop of just 0.4 points.

For participants in the CG, the same figures were obtained. Table 3 shows their individual FLA scores per session and Figure 9 the average FLA means.

Table 3: FLA levels per session in the CG

Participant's FLA	FLA initial session	FLA session 1	FLA session 2	FLA session 3
CG 1	55	55	56	57
CG 2	51	51	52	53
CG 3	48	49	47	48
CG 4	44	43	40	44
CG 5	41	41	42	40
CG 6	40	39	39	40
CG 7	37	35	33	33
CG 8	30	27	26	26
CG 9	25	24	25	27
CG 10	22	22	21	22

Source: own work

13

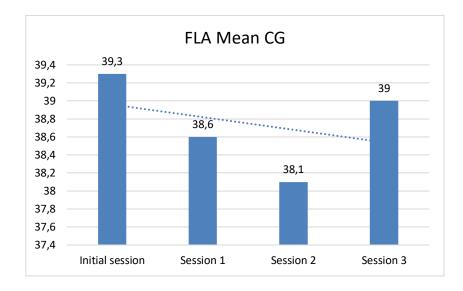Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

Figure 9: Mean FLA scores CG
Source: own work

In this case, it is possible to observe a decline in the first two sessions but an increase in the last one. From an initial 39.3 points, the levels of FLA move to 38.6 and 38.1 showing a progressive decrease. However, in the last session there is an important growth keeping the level in the initial 39 points.

Figure 10 shows a visual evolution of the mean FLA scores per sessions in both groups.
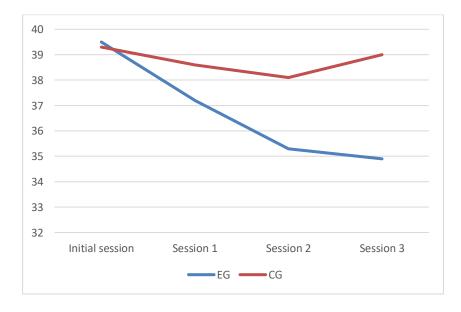

Figure 10: Evolution of the mean FLA scores
Source: own work

As can be perceived, initially participants in the EG and CG present similar FLA levels, however, although there is decrease in both groups, a higher decline is seen in

14

Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

the EG. Finally, after the completion of the last session, participants in the EG maintain their FLA levels low but there is an increase in the CG.
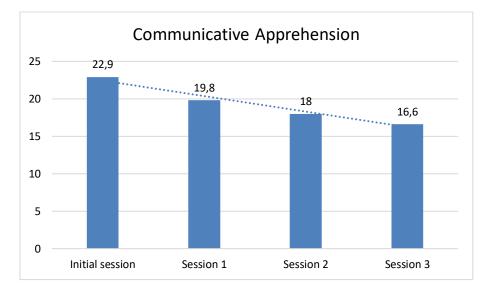
In order to answer the RQ2, those items related to *communication apprehension* in the questionnaire were analysed together with the answers provided by participants in the interviews. In particular, items 1, 3, 4, 6, 8, 10, 11, 14, 16, 17 and 19 were examined. With these 11 questions, participants' level of communication apprehension in the EG was calculated per session (see Table 4).
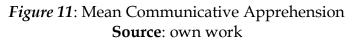
Table 4: Communicative apprehension per session in the EG

Participant	Communitive apprehension Initial session	Communitive apprehension Session 1	Communitive apprehension Session 2	Communitive apprehension Session 3
EG 1	30	26	25	24
EG 2	28	25	23	20
EG 3	27	23	21	18
EG 4	27	25	24	21
EG 5	23	20	19	18
EG 6	21	18	17	16
EG 7	20	17	15	13
EG 8	20	16	13	15
EG 9	18	15	13	12
EG 10	15	13	10	9

Source: own work

Then, the mean was also obtained (see Figure 11). As can be observed, participants in the EG decreased their levels of communicative apprehension after each session. Moving from the initial 22.9 to the final 16.6.

Figure 11: Mean Communicative Apprehension
Source: own work

This information could be also complemented with participants' answers in the interviews. Some of their comments were:

"I don't feel so nervous speaking through SL as I don't know who my classmate is and he/she doesn't know who I am"

"In my English lessons I was usually trembling when I knew I could be asked. However, I have felt really confident working in SL"

"It has been a great experience; I have enjoyed, and I have not been so nervous as I am usually in English class".

5. DISCUSSION

The analysis of the data examined reveals that although participants in both groups presented similar FLA levels initially (39.5 for the EG and 39.3 for the CG), the FLA levels decreased considerably in the EG as sessions went by. The tendency in the EG is really clear, there is a decline throughout the 3 sessions moving from the initial 39.5 to 37.2 in the first session, 35.3 in the second session and 34.9 in the last session. One aspect which could explain this little decline between session 2 and 3 is the activity proposed. While activity 1 and 2 where non-focused oral exchanges which had to be performed in the tandems assigned, activity 3 was more demanding as it included an oral presentation in front of all the group of participants. This may explain why although the figures are lower, the decrease is not so notable. In the case of the CG, there is a decline in FLA levels during session 1 and 2, but an increase in the last session. From the initial 39.3, participants moved to 38.6 in session 1, 38.1 in session 2 and 39 in session 3. Obviously, this may be explained by the threaten an oral presentation may suppose to students in traditional classrooms. It is also surprising that in session 1, the EG presented a drop in their FLA levels of 2.3 points as they were immersed in a new interaction context where they had to face new challenges. This may be explained by several factors such as an increase in motivation when changing the dynamics of the class (Kruk, 2015), the possibility of tellecolaborating (De Freitas, 2008), and obviously the sense of protection felt behind avatars (Melchor-Couto, 2017).

Therefore, considering all this information, it is possible to answer the RQ1. In this regard, participants' levels of FLA in the EG were lower than the ones in the CG after their participation in SL. As figures indicate, participants performing their tasks in the VW SL experienced how their levels of FLA decreased as sessions went by. These results are in line with Melchor-Couto (2017) and Wehner et al. (2011) who obtained similar results in their investigations through the VW SL using anxiety questionnaires and interviews as research instruments.

Regarding the RQ2, 11 items in the questionnaire related to communicative apprehension, and interviews with participants in the EG were analysed. Starting with an initial level of 22.9 points in those aspects connected with fear to communication, participants moved to 19.8 points in session 1, 18 points in session 2 and 16.6 points in session 3 showing a clear tendency. This quantitative data was complemented with participants' comments in their interviews. A general impression was that they did not feel so nervous working through a VW. Moreover, the fact of not knowing their

16

Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

classmate and not being known also seemed positive for participants. Learners stated having enjoyed the experience. Taking all this into account, it is possible to answer the RQ2. Participants' confidence seemed to be higher in those learners belonging to the EG after having worked through SL. The main reason attributed to this finding seems to be the anonymity provided in VWs. These results are in line with Henderson et al. (2009), Joinson (2001) and Melchor-Couto (2017). Thanks to the anonymity provided in these environments, learners were not so inhibited, and their preoccupations and concerns decreased letting them enjoy the experience and learn. As Henderson et al. (2009) claimed, "virtual presence can result in reduced apprehension and embarrassment" (p. 466).

6. CONCLUSION

In this paper, we have deeply analysed how VWs contribute to a decrease of language learners' FLA levels. We have started by explaining the main sources and manifestations of FLA, and the FLCAS as the main instrument to measure it. Moreover, an overview of the affordances provided by VWs to lessen FLA levels has been examined. This investigation was conducted in a secondary education centre in the Valencian Community with a total of 20 participants divided in an EG and a CG. The results obtained for the RQ1 indicated that there was a higher decrease in the FLA levels of those participants who used SL as their learning context, in comparison with those who followed traditional methodologies. Moreover, this study has also confirmed that participants' confidence seemed to be higher as time went by in those participants working in SL.

The conclusions obtained from the quantitative and qualitative analysis contribute to this research area offering new perspectives from secondary education. These results support findings from other investigations indicating that VWs help learners reduce their FLA levels in comparison with traditional classrooms (e.g., Melchor-Couto, 2017; Wehner et al., 2011). And it reinforces the idea of the effect played by anonymity in increasing students' confidence and thus decreasing their anxiety when learning EFL.

This investigation also presented some limitations. First of all, many technical difficulties were found to design the activities in SL. Moreover, the sample used was quite small. Only the views of 10 participants per group were analysed. Further research should include larger samples of participants to confirm the results obtained in this study. What is more, future research dividing participants in specific FLA profiles (high, average and low FLA) would be desirable to examine their behaviour in VWs.

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17

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18

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19

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20

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21

Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

8. APPENDIX

Foreign Language Classroom Anxiety Scale

Lea cada una de las siguientes oraciones y conteste con sinceridad marcando la alternativa más apropiada.

A (3): De Acuerdo
N (2): Ni de Acuerdo Ni en Desacuerdo
D (1): En Desacuerdo

1. Nunca me siento del todo seguro/a de mí mismo/a cando hablo en clase de inglés.
           A   N   D

2. No me preocupa cometer errores en clase de inglés.
           A   N   D

3. Tiemblo cuando sé que me van a pedir que intervenga en clase de inglés.
           A   N   D

4. Me asusto cuando no entiendo lo que está diciendo en inglés el/la profesor/a.
           A   N   D

5. Durante la clase de inglés, me doy cuenta de que estoy pensando en cosas que no tienen nada que ver con la asignatura.
           A   N   D

6. Siempre pienso que los otros estudiantes son mejores que yo estudiando idiomas.
           A   N   D

7. Normalmente me siento tranquilo/a durante los exámenes de inglés.
           A   N   D

8. Me entra el pánico cuando tengo que hablar en clase de inglés sin haberme preparado nada con antelación.
           A   N   D

9. Me preocupa suspender inglés.
           A   N   D

10. En clase de inglés puedo llegar a ponerme tan nervioso/a que olvido cosas que sé.
           A   N   D

11. En clase de inglés, me da vergüenza ser voluntario/a.
           A   N   D

22

Vivat Academia. Revista de Comunicación. 2021, nº 154, 1-24

12. Me incomoda no entender lo que el profesor/a está diciendo.

           A   N   D

13. Incluso cuando he estudiado y lo sé todo, tengo nervios.

           A   N   D

14. A menudo siento ganas de no ir a clase de inglés.

           A   N   D

15. Me da miedo que mi profesor/a esté dispuesto a corregir cada uno de mis errores.

           A   N   D

16. Siempre pienso que mis compañeros/as hablan inglés mejor que yo.

           A   N   D

17. Me da miedo que se rían de mi cuando hablo inglés.

           A   N   D

18. Las clases de inglés van tan rápido que me preocupa quedarme atrás.

           A   N   D

19. Me siento más nervioso/a en clase de inglés que en el resto de las asignaturas.

           A   N   D

20. Me pongo nervioso/a cuando no entiendo cada una de las palabras que dice el profesor/a.

           A   N   D

Adapted from Horwitz et al. (1986); Rodríguez & Abreu (2003); Stephenson (2006)