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DEVELOPING SELF-REGULATION IN ENGLISH PEDAGOGY STUDENTS WITH A FOCUS ON THE ORAL ABILITY DURING THE COVID-19 PANDEMIC

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Abstract: The main goal of this study was to promote the development of self-regulated learning by means of an intracurricular intervention through the English language class with a focus on the oral ability during Covid-19 pandemic. A pre-experimental design with pre and posttest, and intentional sampling, was carried out on a group of 60 English pedagogy students from a Chilean university. The 10-week innovation included the use of ICT tools and active methodologies. The pre and posttest evaluations assessed students' levels of engagement and self-regulation. The results showed statistically significant differences in self-regulated learning. No statistically significant differences were observed in engagement. Additionally, the results also showed an increase in students' oral command perception, in both the linguistic and socio-affective aspects of their performance. It was concluded that the use of these intracurricular strategies facilitated students' self-regulation and aspects of oral production over the course of an academic semester.

Keywords: self-regulation, engagement, oral skills, Covid-19 pandemic, English pedagogy.

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Desarrollo de la autorregulación en estudiantes de pedagogía inglesa con especial atención a la habilidad oral durante la pandemia de Covid-19

Resumen: *El objetivo principal de este estudio fue promover el desarrollo del aprendizaje autorregulado mediante una intervención intracurricular a través de la asignatura de lengua inglesa con enfoque en la habilidad oral durante la pandemia de Covid-19. Se realizó un diseño pre-experimental con pre y postest y muestreo intencional, en un grupo de 60 estudiantes de pedagogía en inglés de una universidad chilena. Esta innovación de 10 semanas incluyó el uso de TICs y metodologías activas. Las evaluaciones de pre y posttest midieron niveles de compromiso académico y autorregulación de los estudiantes. Los resultados mostraron diferencias estadísticamente significativas en aprendizaje autorregulado, no así en niveles de compromiso. Adicionalmente, los resultados mostraron un aumento en la percepción de la producción oral, tanto en el aspecto lingüístico como socio-afectivo. Se concluyó que el uso de estas estrategias intracurriculares facilitó la autorregulación y aspectos de la producción oral de los estudiantes en un semestre académico.*

Palabras clave: *autorregulación, compromiso académico, habilidad oral, Covid-19, pedagogía en inglés*

1. Introduction

One of the biggest obstacles English teacher trainers face is to engage students in their learning and make them be in control of it. Similarly, undergraduate programs at Chilean universities must face the challenge of retaining students in their majors, particularly during the initial years when dropout rates are highest. Key factors associated with these issues are students' lack of study habits and low levels of autonomy (Dharmananda, 2020), which were further exacerbated by the additional asynchronous workload that students had to undertake due to the Covid-19 pandemic. This situation led to drastic changes in the way lectures were traditionally handled, thereby amplifying the importance of the aforementioned elements in the new complex scenario. Through evaluation action via the Canvas platform course analytics, together with a needs analysis process, collected data confirmed students' low participation and attendance during online sessions, thus reducing their synchronous instances of L2 oral interaction.

The assessment above served as a diagnostic for the following academic period. It became necessary to devise and incorporate pedagogical practices to enhance the development of self-regulated learning strategies. These are understood as strategic skills that allow students to achieve the goals they set for themselves (Panadero & Alonso-Tapia, 2014). Empirical evidence suggests that self-regulated learners better adapt to university life (Cazan, 2012; Cazan & Anitei, 2010). Additionally, those strategies have also been identified as an important variable that relates to students' permanence in the formal university system (Bernardo e*t al.*, 2015; Durán-Aponte & Arias-Gómez, 2015; Meneses, Moraga & Puchi, 2016).

Another construct which has been increasingly employed to address academic problems, such as low achievement and high dropout rates, is student engagement (Fredricks, Blumenfeld & Paris, 2004). According to Skinner *et al*. (2009) this can be considered as actions or behavioral, emotional or cognitive manifestations of motivation which occur in the interaction individual-context, more than as a result of individual differences. The adverse Covid-19 learning context affecting all students in common might negatively affect students' engagement, which could explain their low participation, low attendance and low levels of autonomy.

English pedagogy students at the university where this study takes place are taught and required to reach and demonstrate a B1 level of English (Council of Europe, 2001) at minimum at the beginning of the second year. Because of this, as a regular practice most subjects are given fully in English, with students interacting and performing tasks in the foreign language during class sessions. Notwithstandingly, the Covid-19 pandemic in 2020 forced several changes that affected these academic aspects. Due to connectivity issues and particular situations affecting different students, there was an important number of students failing to attend online classes or watching the corresponding recorded video lessons on the default virtual platform (Cullinan *et al.*, 2021). Formal opportunities for teacher-student and student-student interaction were greatly reduced. As a consequence, evidence of negative effects on oral performance, mainly speaking skills and pronunciation, were soon felt and informed by teaching staff at the end of 2020. What can teachers do to motivate students to attain higher levels of satisfaction, to believe in themselves, to commit to their academic work and reach their objectives? And even more challenging, can this be done under the Covid-19 crisis?

In this context, it seemed that one possible way for professors to tackle their classes despite these limitations might originate from a previously successful activity sponsored by the university itself. Open intracurricular workshops on the areas of self-regulation and engagement had already been imparted to undergrad students in Spanish. These aimed in a dynamic way at helping attendants to develop awareness and skills to self-regulate their learning, and so become more competent learners (Pérez, 2019; Díaz-Mujica, 2020.)

Considering the said workshop experiences at the university and the deficiencies enhanced by the pandemic - namely, nonattendance, low class participation, limited autonomy reflected in sporadic asynchronous work by students - all of which translated into reduced opportunities for students' oral practice; this research intended to implement an intervention to foster in second and third year English pedagogy students the capacity to self-regulate their learning and with this, create the conditions for students to practice and improve their oral skills during the Covid-19 crisis. The following research questions guided data collection and analysis stages: (1) How does an intra-curricular intervention focused on self-regulated learning foster the level of self-regulation and engagement in English pedagogy students? and (2) How does this intervention enhance English pedagogy students' oral productive skills?

It is hoped that this work can provide some insights on the impact on the levels of self-regulation and engagement deriving from intracurricular training on these areas during the second year of the COVID-19 pandemic, specifically in the first semester of 2021. Additionally, it is expected that we can gain some ideas about likely benefits in

English pedagogy students' oral skills and attitudes arising from this type of training focusing on the foreign language.

2. Literature review

2.1. Self-regulated learning

Self-regulation refers to self-generated thoughts, feelings, and behaviors that are oriented to attaining goals (Zimmerman, 2000). According to this definition, there is a set of actions mediated by cognitive and affective components that guides students' efforts into positive outcomes. These actions refer to the deployment of effective studying techniques and good study habits, such as, the capacity to set smart goals, manage time effectively, avoid procrastination, avoid distractions, among others. Students who display these behaviors believe in their capabilities to address tasks successfully and, hence, commit to their academic work with greater enthusiasm.

However, university students struggle with academic workload in the first years of their programs. They may not possess the tools and knowledge to face the new challenges and take control of their own learning. In addition, it is widely known that during the first two years students are at a higher risk of dropping out (Díaz-Mujica *et al.*, 2020), which is connected to motivation issues and low performance among other factors. One way to deal with problems related to poor disposition towards academic work is through the development of self-regulation in university students. Teachers can play a major role in students' success as self-regulation of learning can actually be trained. Successful interventions have been implemented in various academic fields; for example, in a study designed to help struggling college math learners, researchers could establish significant relations between students' achievement and processes of self-regulation (Zimmerman & Moylan, 2009).

2.2. Engagement

Engagement is considered an important variable in university students because of its positive relation with achievement (Gómez *et al.*, 2015; Pineda-Báez *et al.*, 2014; Maluenda-Albornoz *et al.*, 2020a) and social variables (Maluenda-Albornoz *et al.*, 2020b), and its negative relation with burnout (Schaufeli *et al.*, 2002a; Schaufeli *et al.*, 2002b), exhaustion (Salanova *et al.*, 2009) and university dropout (Chang *et al.*, 2014; Díaz-Mujica *et al.*, 2018; Maluenda Albornoz *et al.*, 2019). Additionally, a relation between engagement and student's involvement in the classroom has been observed, as well as a relation between engagement and social relationships established with teachers and peers (Maluenda-Albornoz *et al.*, 2020a). This concept has also been considered a dynamic variable since it is susceptible to modification through studies and, especially, with interventions designed for it (Maluenda-Albornoz *et al.*, 2022). For these reasons, engagement has become a key variable when planning effective interventions in the university context.

Engagement is understood as the set of manifestations of motivation for study in three main dimensions (Fredricks *et al.*, 2019). The behavioral dimension is understood as behaviors carried out by the student who is interested in learning. The cognitive dimension refers to the group of thoughts, beliefs, and perceptions about the importance of academic work and the effort that it entails; while the emotional dimension includes the feelings and attitudes that the student experiences around the institution (Antúnez *et al.*, 2017).

The engagement proposal is based on Self-determination Theory (SDT) (Ryan & Deci, 2018). From this perspective, engagement arises from the satisfaction of three basic psychological needs: autonomy, competence and relatedness. In the educational context, the need for autonomy is satisfied when the student feels that he or she makes choices and is motivated by intrinsic rather than external factors. The need for competence is favored when the structure of the class allows the desired results to be achieved. The need to be related is satisfied when the student establishes relationships with their teachers and peers based on support and concern (Fredricks *et al.*, 2019).

From 2020 to 2021, several studies showed that the current educational context negatively influences students' motivation and participation (Zaccoletti *et al.*, 2020; Oyedotun, 2020) and their engagement (Daniels *et al.*, 2021; Pasion *et al.*, 2020). For this reason, it is important to measure the effects of intervention strategies on engagement to know their effects on motivation, and to control the negative effect of intervention strategies during the COVID-19 pandemic on student's motivational states.

2.3. Flipgrid and the speaking skill

Speaking is a fundamental skill which is crucial for effective communication (Kathirvel & Hashim, 2020; Boonkit, 2010), but it is also the most difficult to acquire for learners, as it involves several linguistic aspects, such as a wide vocabulary repertoire, correct use of grammatical structures and correct pronunciation. It is common for instructors of ESL/EFL to see learners struggle to speak English confidently (Boonkit, 2010).

In this regard, Flipgrid lends itself perfectly, especially in these times of pandemic where distance learning has prevented students from oral interaction in the target language (Iglesias, 2021). Flipgrid is an asynchronous video-based online platform that can be used as an app on smartphones or tablets, or as an integrated application, on Microsoft Teams for example. It has varied uses, although in recent years, it has mainly been used for educational purposes as it has proven to be an effective means to engage students in oral tasks, like discussions, presentations, and reflections (Keiper *et al.*, 2020). To create a learning task on Flipgrid, the account administrator (educator) creates a new topic, where video and images can be included as part of the prompt, as well as external online resources (e.g. an article or document). As it was originally designed for young learners, the interface is very user friendly, simple and functional (Dettinger, 2018; Davis *et al.*, 2019; Lowenthal & Moore, 2020; Stoszkowski *et al.*, 2021). Some research studies have been conducted at primary (Dousay & Weible, 2019) and secondary school (Colton, 2020; Oliver *et al.*, 2021). However, an important

number of studies have lately examined the effects of using Flipgrid on learning at the tertiary level.

Flipgrid's usefulness to foster language learning in different contexts has been highlighted by Dettinger (2018), who claims this particular digital tool "can enhance exposure to the target language in authentic settings and has the potential to boost speaking time, pronunciation, collaboration, and student confidence" (p. 214). Flipgrid is cost-free and can promote group or individual communicative work among students of various proficiency levels. It can also be used to promote cooperative work and peer feedback, as it has the facility to easily reply to each other's videos, like threaded discussion forums, but in an oral fashion.

3. The study

The study is set in EFL teaching in higher education during the Covid-19 pandemic. Self-regulation training might foster English pedagogy students' levels of academic engagement and self-regulated learning processes, and if this training makes use of ICT tools, plus active methodologies, their oral performance might be benefitted. In order to find out about this, the main objective of this research is to promote the development of self-regulated learning by means of an intracurricular intervention with a focus on the oral ability in the English language or Applied Linguistics subjects. An academic intracurricular intervention implies that students take part in a series of activities integrated into the course syllabus, in line with its learning outcomes.

The specific objectives for this study are:

1. To compare English pedagogy students' levels of self-regulation and engagement before and after the intervention of self-regulated learning.
2. To explore the participants' perceptions resulting from the use of the online video recording platform Flipgrid on linguistic and affective aspects of their performance.

4. Methodology

4.1. Participants

The target population was defined by intentional sampling, which included 60 English pedagogy students from a Chilean university. Out of them, 41 students, whose linguistic level corresponds to B1,were taking the course of English Language in the third semester of the program and 19 students were enrolled in the Applied Linguistics course in the fifth semester, with a B2 level. Of the total number of students, 25% of them were men, 72% women and 3% did not indicate sex. Their ages ranged between 19 and 27 ($x = 20.31$; $SD = 1.56$).

4.2. Design and Instruments

A mixed design study was conducted where quantitative and qualitative measurement was carried out in parallel and not sequentially. This incorporated in its quantitative part a pre-experimental design of a single group with pre and post-test. The group was made up of the students enrolled in the course subjects involved, making it a natural group. The pre and post-test evaluation included the use of an ad hoc questionnaire made up of the following instruments:

An ad hoc questionnaire was developed based on three scales, the Scale on SRL Practices and the Self-Efficacy Questionnaire that measures the level of self-regulated learning; and the University Student Engagement Scale to evaluate engagement on students:

- The University Student Engagement Scale (15 items) was created by Maroco et al. (2016) and adapted to Chilean university students (Maluenda-Albornoz et al., 2020b). This instrument measures engagement as the result of high motivation for studies in the career context. The validation study showed a bifactorial structure with one general factor and three sub-factors: Interest (5 items), Effort (5 items), and Participation (5 items). In the adapted version the fit indices showed good performance of the bifactorial model ($\chi 2 = 210.276$, $p < 0.001$; RMSEA = 0.047 (95% IC: 0.040–0.055; CFI = 0.967; TLI = 0.954) as well as reliability ($\alpha = 0.841$; $\omega = 0.843$) and criterion validity.
- The Scale on SRL Practices assesses the level of self-regulation shown by students in their learning process. This instrument is made up of 11 items whose response scale is of the Likert type (1 = Never; 7 = Always). The instrument has been adapted for Chilean university students showing adequate psychometric properties for a one-factor model (Vergara et al., 2019).
- The Self-Efficacy Questionnaire for self-regulation of the study. This instrument measures the degree of self efficacy for being self regulated in the university context. It is composed of 9 items whose response scale is of the Likert type (1 = Never; 7 = Always). The instrument has been adapted for Chilean university students showing adequate psychometric properties for a one-factor model (Sáez, Bustos & Díaz, 2017).

The qualitative analysis was carried out with a phenomenological approach and incorporated propositional analysis that sought to collect the experiences of the participants in their video reflections comments.

4.3. Intervention Strategy

After signing the informed consent, before the intervention, students were given the pretest in order to assess the initial level of self-regulation and engagement. This was measured again at the end of the intervention with the posttest.

The intracurricular intervention consisted of 10 weeks of synchronous and asynchronous work. Self-regulation was taught explicitly over this period. Lessons

were planned with this objective in mind. Linguistic contents and lesson objectives (grammar, vocabulary, linguistic functions, etc.) were maintained as stated in the original course programs; however, some topics were replaced for self-regulation themes. Figure 1 shows how the activities were distributed and organized during the intervention. They are explained below.

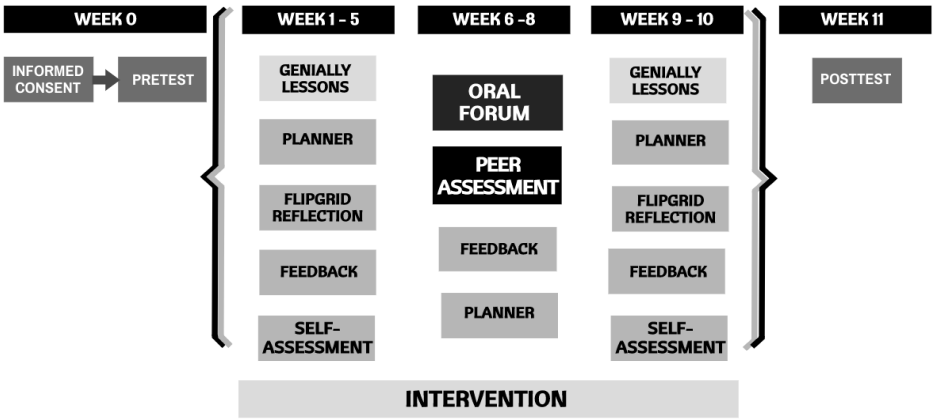

Figure 1. *Distribution of activities along the intervention*

From weeks 1 to 5 and weeks 9 and 10, the intervention included training on self-regulated learning. These included the following main elements: Genially lessons, the use of a planner, reflection on Flipgrid, self-assessment on Google Form, professors and assistants' feedback.

Weeks 1-5 and weeks 9 - 10.

a) Genially lessons. Six lessons were implemented on Genially (https://genial.ly/) and taught synchronously along these weeks: (1) Goals v/s Habits, (2) Smart Goals, (3) Forming Habits, (4) Procrastination, (5) How I address my tasks, and (6) Do you get enough sleep? Figure 2 illustrates an interactive lesson implemented on Genially.

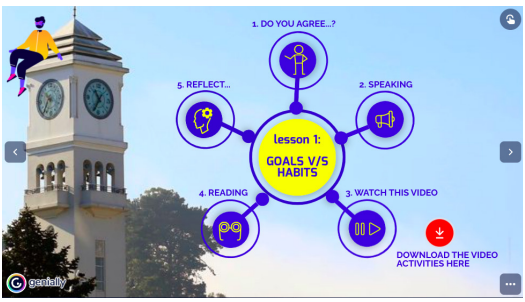

Figure 2. *Example of interactive lesson implemented on Genially*

b) Planner. Students used a daily/weekly planner to organize their tasks and time, these could be physical planners designed by themselves or digital planners available online. They were encouraged to use the planner for all their academic, or even personal, activities.

c) Flipgrid reflections. Students were given a weekly prompt in the form of questions to reflect on self-regulation contents. They were asked to record and submit asynchronously a video response on Flipgrid (https://info.flipgrid.com/). The list of prompts were:

- *Prompt 1: How important is planning in your life? What planner will you use to organize the activities of Lengua 3? Describe it and explain how you will use it.*
- *Prompt 2:* Procrastination is the act of delaying something that must be done, often because it is unpleasant or boring (Cambridge Dictionary). Is procrastination an issue in your study habits? What tips could you give to reduce procrastination?
- Prompt 3: Did you participate in classes this week? Asking questions? Giving opinions? Turning on the camera? Do you think that attending classes and participating affects how much you learn? (If you participated in other ways, or you have got other ideas, share them in your video)
- Prompt 4: Why is sleep important? What about your sleeping habits? Have you had any sleeping issues? Is there anything you need to change about them? Have you already started making some changes? or are you planning to make some changes?
- Prompt 5: What did you learn this week? How are you making progress? What area(s) do you think you will need to pay special attention to in the near future
- Prompt 6: Think of the upcoming final evaluations of the semester, what linguistic skill or content do you need to focus on more? Productive skills (speaking or writing), receptive skills (reading or listening), grammar, etc.? / How will you do it to prepare? Define short-term goals to achieve good preparation.
- Prompt 7: About the regulatory aspects/activities we have covered along the semester, which has been the most significant to you? Explain its impact at present and/or future? / About the video submissions on Flipgrid, in what way have they helped you to improve oral abilities?

d) Feedback. Students received weekly feedback from the professor and the assistant student on video submissions regarding two aspects: (1) self-regulation content and (2) linguistic aspects (oral performance). The following are examples of feedback given to students:

Example of feedback on self-regulation aspects: *congratulations on all your improvement, your growth and your commitment. I'm delighted to hear you say that the planner has been of great help as you have more time now. Make sure you keep doing what you've been doing and add any other strategy, method or tools that can help you grow even more.*

Example of feedback on linguistic aspects: *very good intonation and pronunciation! Also, great use of grammar and connected speech. The only thing I would recommend for you to do is to check the pronunciation of 'knowledge' (/ˈnɒlɪʤ/).*

e) Self-assessment. Questionnaires on Google Forms (https://docs.google.com/forms/u/0/) were responded to by students weekly. These forms contained multiple choice questions for them to register (1) weekly attendance (2) active participation in class (e.g. asked questions, made comments, did not participate, etc.), (3) planner use, and (4) an open question about perceptions on self-regulation issues changing every week. The questions in (1), (2) and (3) respectively were:

- How many classes did you attend this week in this subject?
- Type of participation (more than one option can be selected): made comments / asked questions / responded questions / participated through the chatbox / other type of participation / did not participate.
- About your planner this week (select all that apply): It helped me to learn some new thing(s) / It helped me to have some spare time (ex: time to rest) / It helped me to work more efficiently in this subject / It helped me to work more efficiently in other subjects / It helped me to organize my overall times better / It helped me to prioritize some activities over others / It did not help me in any significant way.

From weeks 6 to 8, an oral forum was conducted on Flipgrid.

f) Oral Forum. Students participated in a video forum on Flipgrid.

(1) They recorded an answer to the following prompt on self-regulation: watch this video on self-regulation (https://youtu.be/_NiPocra2Uw) and record your response including the following: What elements discussed in this video have we been applying through the different activities and tasks carried out in our classes? / What actions have you taken so far to become a more self-regulated learner? / What's your attitude towards learning?

(2) Students commented on their classmates' opinions

(3) Students assessed their peers' reflections and participation in the forum using a rubric. This rubric was designed by the group of researchers and checked three areas: elements about self-regulation, actions taken by peers to become more self-regulated learners, and peers' attitude towards learning

g) Feedback. Students received feedback as described above in (d)
h) Planner. Students used a planner as described above in (b)

It is necessary to add that three elements from above were assessed as part of the formal subject evaluation scheme: peer-assessment in the oral forum (f), flipgrid reflection (c), and self-assessment questionnaire submissions (e). This 3-mark average weighed 5% of the final mark.

4.4. Data analysis

Quantitative analysis was carried out by using descriptive statistics to examine the behavior of the study variables. In addition, the t-test was used for related samples in order to evaluate the differences obtained in the mean pre and posttest scores. Before evaluating the difference of means, the assumptions associated with the t test were tested. All the analyses were carried out with the statistical software JASP version 0.14.1.0.

For the qualitative analysis, the students' reflections from the last Flipgrid video (Prompt 7) were examined as it inquired about students' perceptions on the use of the said platform. The number of participants who effectively submitted their video was 54; hence, only 54 scripts were analyzed. For this, thematic content analysis with an inductive approach was used. Initial codes that emerged from the participants' responses were established. Next, axial coding was performed in order to establish relationships between codes and thus explore categories with a higher level of inclusion and representativeness. These categories were built and the body of content was checked again to review and provide feedback on the categories. It is important to highlight that the analysis was carried out by the four authors of this article, each of whom observed and analyzed the content of the corpus, generating triangulation of the results that allows greater rigor compared to when this is done by just one analyst. The software ATLAS.ti 9.1.3 was used as support for the analyses of emerging categories for the linguistic and affective effects of the use of the Flipgrid digital tool. This program was also used to identify co-occurring categories and to create networks for a graphical view of the categories and some of its corresponding quotations

5. Results

5.1. Self-regulated learning and study engagement measures

The results observed in the quantitative measurement showed higher average values in the posttest ($\bar{x}$ = 112.1; SD = 19.5) compared to the pretest ($\bar{x}$ = 103.85; SD = 18.5) in self-regulated learning. In addition, statistically significant differences were found favorable to the post-test (t (1.60) = - 2.888, p = .031; Cohen's d = .285) compared to the pre-test, with a small effect size. Regarding the measurement of engagement, a slightly higher score was observed in the post-test ($\bar{x}$ = 83.55; SD = 9.63) compared to the pre-test ($\bar{x}$ = 82.73; SD = 13.56). However, no statistically significant differences were observed between the pre and post-test (t (1.60) = 1.930, p = .623) for Engagement. Additionally, no statistically significant differences were found when both the teacher effect and the student sex variables were examined.

5.2. Students' perceptions on the use of Flipgrid

The categories that emerged from the content analysis regarding students' perceived benefits from the use of Flipgrid to improve oral abilities were classified into two areas: linguistic and affective, since these two groups had the highest frequency of occurrences revolving around English language improvement and the affective domain (aspects related with the social and/or emotional aspects of learning). As seen in Table 1, out of a total of 251 quotations, 151 (60,2%) of them were related to the affective domain and 100 (39,8%) to the linguistic domain.

Number of quotations per category Qs= 251; N= 54			
Linguistic domain		Affective domain	
• Content practice	26 (10,4%)	• confidence	44 (17,5%)
• Fluency	30 (12,0%)	• Enjoyment	33 (13,1%)
• Grammar	4 (1,6%)	• Mood	18 (7,2%)
• Linguistic feedback	10 (4,0%)	• Socio-affective	35 (13,9%)
• Pronunciation	19 (7,6%)	• Video anxiety	21 (8,4%)
• Vocabulary	11 (4,4%)		
Totals	100 (39,8%)		151 (60,2%)

Table 1. *Content analysis categories on the use of Flipgrid to practice the oral skill*

Note. Qs represents the total number of quotations.

In the linguistic domain, 6 categories were found. Fluency appeared as the most recurring benefit with 30 (12,0%) occurrences. 26 (10,4%) quotations reflected that

Flipgrid videos were an instance to practice content (speaking skills in general). 19 (7,6%) quotations expressed that pronunciation was improved. 11 (4,4%) occurrences reported advantages on an increase in vocabulary. 10 (4,0%) quotations reported advantages from the linguistic feedback given by teachers; and only 4 (1,6%) quotations mentioned that it had a positive effect on grammar.

In the affective domain, 5 categories were identified. The most recurring benefit mentioned was confidence, as 44 (17,5%) quotations expressed that Flipgrid significantly helped students to become more confident in their speaking skill. It was also reported in 35 (13,9%) quotations that Flipgrid was a space for getting to know classmates and establishing relationships. 33 (13,1%) quotations referred to the activity as an enjoyable or fun instance. It was also discovered that weekly videos posted on Flipgrid contributed to a reduction in anxiety or fear caused by the camera; this was shown in 21 (8,4%) quotations. Finally, in the mood category, 18 (7,2%) occurrences showed opinions related with positive feelings towards the activity.

The linguistic and affective domains were examined in terms of their co-occurrence coefficient, whose results are shown in Table 2. Here, it is possible to observe the co-occurrences of linguistic and affective categories on the usefulness of Flipgrid identified in the quotations expressed by the same participants. The most numerous co-occurrences correspond to confidence and fluency (12), confidence and content practice (8), confidence and practice (4), socio-affective and content practice (6), video anxiety and content practice (4), enjoyment and pronunciation (3), and video anxiety and fluency (3). All the other co-occurrences have a lower level rating a frequency of 2 or below 2.

	●Confidence Qs 44	●Enjoyment Qs=33	● Mood Qs=18	●Socio-affective Qs=35	●Video anxiety Qs=21
●Content practice Qs =26	8	2	0	6	4
●Fluency Qs =30	12	2	1	2	3
●Grammar Qs =4	0	0	0	1	0
●Linguistic feedback Qs =10	2	1	4	1	0
●Pronunciation Qs =19	4	3	4	0	0
●Vocabulary Qs=11	1	0	2	3	1

Table 2. *Co-occurrences of linguistic and affective categories on Flipgrid usefulness*

Note. Qs represents the number of quotations per category; N= 54.

6. Discussion

In this study a pedagogical intervention promoting self-regulation strategies in English pedagogy students was implemented with a twofold objective: firstly, to compare the students' level of self-regulation and engagement before and after the intervention; and secondly, to explore the participants' perceptions on the use of the digital tool Flipgrid.

The data regarding students' self-regulation indicates that the use of intracurricular strategies is useful to promote students' self-regulation over the course of an academic semester. There was a statistically significant difference in the level of students' self-regulation before and after the intervention. The set of elements included in the intervention seemed to be effective in promoting self-regulated learning strategies: (1) class reflection on the importance of the use of self-regulated learning strategies for academic success; (2) implementation of the following activities: setting specific, measurable, attainable, relevant and time-bound goals (Moeller *et al.*, 2012), planning and prioritizing tasks by means of a planner, creating positive (e.g. adequate sleep schedule) and reducing negative (e.g. procrastination) habits for academic work, weekly self-monitoring, adjusting study strategies and weekly self-reflection on learning processes; (3) the inclusion of active methodologies to engage students actively in their own learning (Crisol-Moya *et al.*, 2020) (e.g. self-assessment, peer-assessment, collaborative work, self-reflection, self-monitoring, immediate feedback); and (4) the incorporation of ICT tools to support students' active learning (e.g. Flipgrid, Google forms, Genially).

The operationalization of the above elements considered several tools that students made use of which could help explain the increase in students' self-regulation level. One of the main resources was a planner, which was introduced during the first lessons and then kept all along the intervention. Students chose the best and most appealing way to organize their tasks and timetable in order to achieve their goals, with a stated aim to reduce or eliminate detrimental habits to their learning and so heightening the possibility of reaching their objectives. Complementary to this, self-assessment google forms were answered and submitted by students on a weekly basis as a way to help them monitor their progress and reflect on the usefulness of the planner.

Additionally, the online video platform Flipgrid was also used weekly by students to record their reflections to questions or prompts related to self-regulation. By doing so, not only did they review explicit self-regulation content, but they also reflected on their learning and progress. This could also have contributed to making students more aware of the relevance of self-regulation in order to become more autonomous and responsible for their learning. In addition, a video forum was carried out between weeks 6 and 8 using Flipgrid since this is an ideal platform to interact orally on the virtual world, it enhances communication and allows collaborative learning. This activity was peer-assessed, so as to promote even greater insights on the topic of self-regulated learning and create opportunities to share perceptions about its impact among students.

Regarding engagement, the pedagogical intervention did not show a statistical gain in the posttest compared to the pretest. This could be explained by the high level of initial engagement of the English pedagogy students who were the focus of

the study (pre-test $\bar{x}$=82,73; post-test $\bar{x}$= 83,55). However, even though the strategy did not show an effect on engagement, it did not decrease it either. This suggests that training in self-regulation, with the consequent additional academic workload, does not hinder students' motivation and dedication throughout the course. It could be argued that all these systematic and varied activities may have been motivating in themselves as students kept engaged during the whole process. Besides the numeric measures, the high initial intrinsic motivation can also be evidenced in the collected qualitative data; this sheds light on the benefits that students themselves attributed to the tasks, which may elucidate why high engagement levels were sustained over time. On the other hand, it is pertinent to highlight that students may have persevered and completed most of the tasks due to an external motivator - the mark they would obtain; nonetheless, students were informed at the beginning of the whole process that it would account for only a 5% of the final mark. According to experience, such a small percentage is not normally a strong incentive for completion of numerous time-consuming tasks, as some students would rather invest their time and energy on tests or quizzes that have a higher weighting in the evaluation scheme.

In a qualitative aspect, although specific measures were not developed for this purpose, it is possible to hypothesize a link between the motivational state and linguistic ability, in terms of language production, based on the experience gathered by the research team. The high initial levels of engagement in students' behavior facilitated active participation in the activities. While participation does not guarantee the presence of the aforementioned linguistic conditions, it is also true that the probability of improvement through systematic practice increases with greater exposure to feedback from classmates and teachers, which could have an impact on their oral ability.

Furthermore, it is possible, at a hypothesis level, that increased linguistic production has contributed to the maintenance of a high motivational state due to the reinforcement of self-efficacy in language skills resulting from observed concrete improvements. This finding is not only connected to the increased involvement and participation driven by engagement but also to the regulated and supportive work environment reported by students, based on a collaborative climate.

About the participants' perceptions on the use of the digital tool Flipgrid (see Table 1 above), most benefits of its use during the online modality concentrated within the five themes which were classified as part of the affective category, with 60,2% of the annotated quotations. Out of the total number of students (54) who submitted their last reflection on the use of Flipgrid in the last video recording, 44 of them highlighted that confidence was a main benefit. This undoubtedly relates to Krashen's claim that learners with high self-confidence, among other positive feelings or emotions, are better equipped for second language acquisition (Krashen, 1981). This increase in confidence may have helped them to reduce anxiety when recording their video reflections, an emotion that they felt was diminishing as the intervention progressed. They underscored this effect as an element that might help them in the future when they have to face a real class audience of their own students during their pedagogical practice. Figure 3 presents some examples of quotations which reflect the idea of increase in students' confidence and the decrease of video anxiety as they perceived it during the intervention.

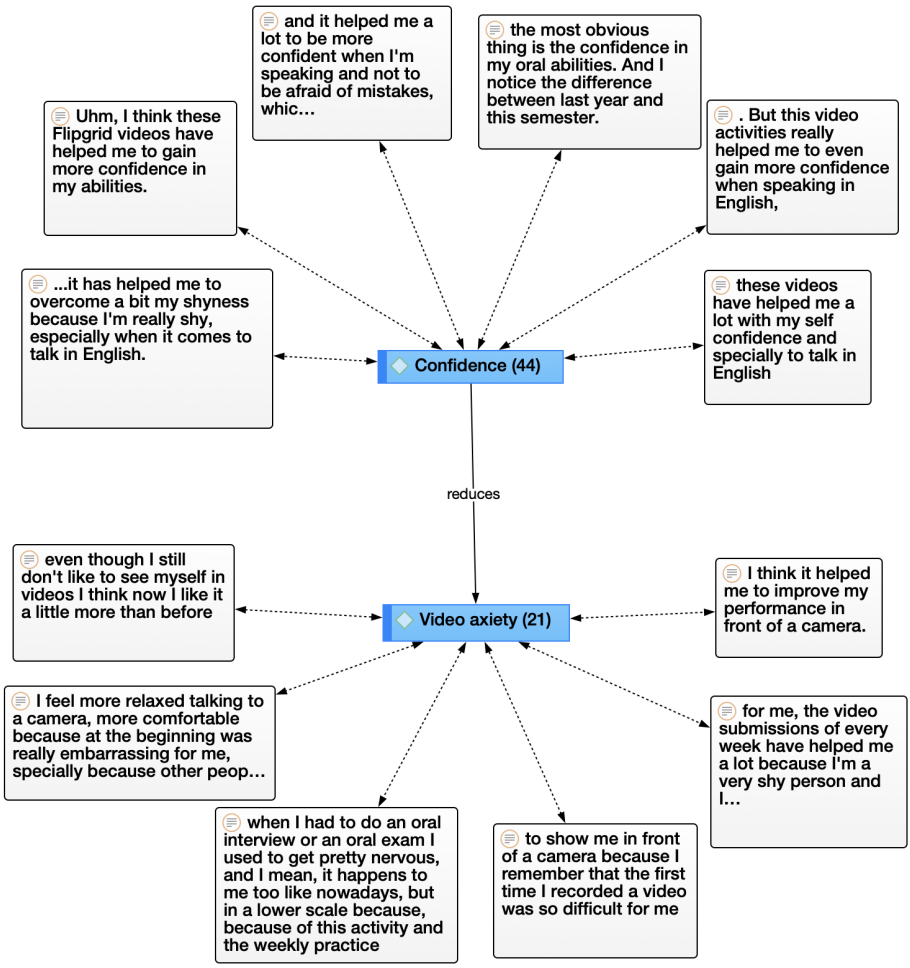

Figure 3. *Examples of quotations around the themes of confidence and video-anxiety*

The themes of enjoyment (Qs= 33) and mood (Qs= 18) were also identified as part of the perceptions in students' quotations; they expressed that using Flipgrid constituted an area that was fun and entertaining. Students also stated that recording the videos made them shift their current mood to a more positive one. These themes can well be thought of as aspects that would all seem to be helpful in the way of reducing the affective filter, thus fostering language acquisition. Additionally, another theme that was expressed in the students' comments were the socio-affective (Qs= 35) benefits. This had to do with Flipgrid being a tool that facilitated a channel to be in touch with the other members of the class. This was highly valued by students due to the conditions of lockdown restrictions and limitations present in the online modality during the Covid-19 crisis.

Regarding the linguistic benefits from the Flipgrid recordings, students' perceptions reached 100 quotations in that field. Out of the 6 themes included in the linguistic category, the one which got the highest number was fluency with 30 mentions. Students stated that the main linguistic benefit was that this enabled them to develop the linguistic mechanisms to produce language more fluently. A second linguistic benefit was the theme of content practice with 26 quotations. Students felt that the recording of videos on Flipgrid constituted a virtual space where they could put into practice the course content involving the different levels of the language. This is evidenced as well in the number quotations in the themes of pronunciation (Qs= 19), vocabulary (Qs= 11), and grammar (Qs= 4). This suggests that Flipgrid under the conditions of the online modality and the pandemic became a formal opportunity for students to practice and observe their and other classmates' linguistic performance and progress. In addition to these benefits, 10 students expressed that the immediate feedback on language and content they received from professors represented valuable information for them to spot mistakes and correct themselves. In this context, feedback became a mechanism for them to focus on form (Long, 1991), and so become more competent, linguistically speaking. Figure 4 is a network of some quotations that reflect the usefulness of Flipgrid to practice linguistic contents and, hence, improve fluency and pronunciation.

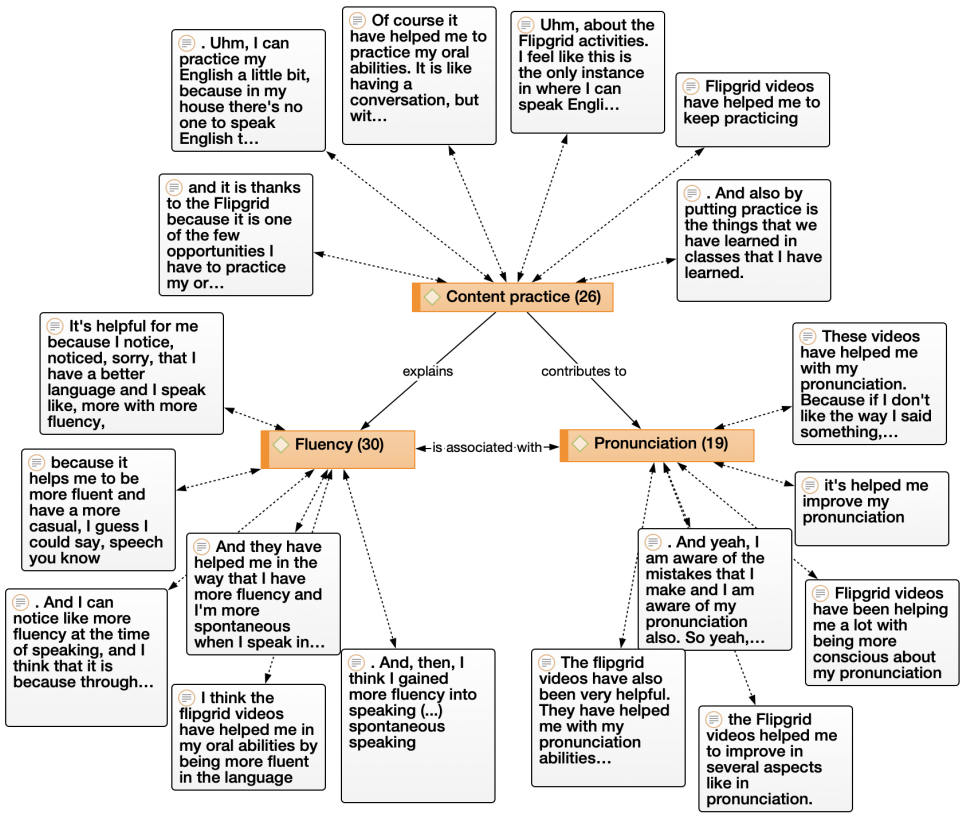

Figure 4. *Examples of quotations around the themes of content practice, fluency and pronunciation*

The content analysis on students' perception on Flipgrid also included the identification of instances of themes from the linguistic and the affective categories that co-occurred in the quotations by the same student, in table 2 above. This might suggest the way in which these themes operate together; notwithstandingly, no causal attribution is hinted at here rather than the idea of the likely relationship between these constructs following the students' reflections. The themes of fluency and confidence co-occurred 12 times. The coincidence of these themes in the quotations of the same number of students seems to underscore the relevance of the construct of confidence and its importance when they assess their level of fluency. Somehow, this data seems to reveal that this group of students feels unsure about how linguistically competent they are, which in turn negatively affects their performance of fluency, a sort of vicious cycle. In this sense, Flipgrip, or some other similar tool, might help reduce this process and foster fluency improvement. Besides the link with fluency, confidence also co-occurred with pronunciation in 4 students. Similarly, as with fluency, a reduced level of confidence might make these students feel that they perform poorly regarding

pronunciation; a chain of thought that can be broken if confidence is raised in some way, for example, with the use of the tool Flipgrid.

Another important number (8) of co-occurrences comes from the pair of themes: content practice and confidence. Once more, confidence seems to be a key variable in English pedagogy students. However, the mechanism here might operate a little differently, as students expressed that they are aware that they need to interact and put language content into practice for them to internalize and acquire it. In this way, Flipgrip became an open door to a virtual space where students put explicit knowledge and active practice together, which in turn, as the result of needed practice, helped them to become confident about their linguistic competence. Moreover, the theme content practice also co-occurred 6 times with the theme socio-affective. This adds another element that seems to encapsulate the feelings deriving from the Covid-19 context. As classes are given online, opportunities for real interaction with real people, with whom social bonds are created, are importantly reduced. So Flipgrid seems to come handy to counteract this situation and create virtual space to meet the need for relatedness that we humans have (Fredricks *et al.*, 2019).

7. Conclusion

This study reported the implementation of an intracurricular intervention aiming at the development of strategies of self-regulated learning in English pedagogy students. As a result of its application in a period of 10 weeks, students raised their self-regulation level with statistical significance. Students' engagement did not show statistical change after it, which would be accounted for by the relatively high initial level rather than the intervention's failure to increase it.

Students recognized the need to take up actions that help them manage their time more effectively, as it was the case of the use of a planner. Active methodologies and technology-based activities are key to support self-regulation processes and engage students in their own learning. In this regard, Flipgrid stands out as a tool that not only guided students' self-monitoring and self-reflection processes, but also offered them opportunities to practice and develop their speaking skill, which had been badly damaged by the lack of practice during the first year of the Covid-19 pandemic. It is paramount to implement activities that make use of technologies and digital resources to promote students' autonomy and support their oral skills development especially in order to compensate for the conditions of lockdown and forced online instruction.

All things considered, it is suggested that teachers plan their course programs based on self-regulation theories, so that they can implement activities that promote self-regulated learning strategies in students through the use of engaging technological resources and supported by active learning methodologies. Giving students the tools to become more autonomous and motivated with their learning should be part of every teacher's practice. It is usually taken for granted that learners possess the necessary study strategies to cope with the new responsibilities and workload before coming to university, which is not always the case in the formal educational system.

As a reflection, it can be indicated that virtuality had a subtle but not decisive influence on the development of the intervention. It was observed that the conditions of virtual education facilitated the students' appropriation of the offered technological resources. It is possible that these resources may have also facilitated practice sessions prior to recordings, allowing for rehearsals without an audience or group exhibition. However, on the other hand, opportunities for direct interaction were reduced, although the dynamics inherent to this virtual context and the non-verbal communication associated with it were leveraged. The research team tentatively proposes that the control and guidance enabled by an appropriate methodological design played a role in utilizing virtual spaces effectively and minimizing unexpected effects, as suggested in previous research (Maluenda-Albornoz *et al.*, 2022; Elsalem *et al.*, 2021; Basilaia *et al.*, 2020). Given the absence of specific control over this variable, it is suggested as a future line of research that the optimal use of virtual tools be clarified compared to face-to-face activities and the extent to which they are advantageous.

Regarding the measure of engagement and self-regulation, the findings from this study are based on the comparison of participants' performance in the pre and posttest. As a control group was not included, its results are not extensive to other groups or populations.

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