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Promoviendo la autorregulación en la segunda lengua a través del uso de una herramienta digital de colaboración

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Trabajo de Fin de Máster

**Promoting self-regulation in
L2 through the use of an online
collaborative tool**

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ABSTRACT

Student's capacity to self-regulate is a critical factor in academic achievement and general well-being. Classroom practices, however, rarely look to actively promote relevant SRL strategies. In recent times, computer literacy also emerges as a pending subject, with students who are highly familiar with ICT devices, but who rarely know how to use them to benefit their learning.

This innovation proposal tries to address both these issues and creates an online learning environment that is expected to foster the development of self-regulatory strategies, while providing the language classroom with a much-needed context for student interaction and communication.

The proposal is structured as a 12-week intervention that revolves around differentiated blocks of strategies for L2 acquisition, and utilises Padlet.com as a means to foster student motivation and engagement. The use of this tool is also expected to elicit collaboration among students.

The intervention is expected to grant significant improvement on variables of self-regulation, computer literacy and motivation. More broadly, it is also expected to shed some light as to the viability of implementing self-regulation training in a secondary-school English classroom.

Key words: English as a Second Language (ESL), Self-regulated learning (SRL), collaborative learning, Padlet, motivation

RESUMEN

La capacidad de autorregulación es un factor predictivo del éxito académico y el bienestar general de los estudiantes. A nivel práctico, sin embargo, las metodologías docentes rara vez promueven explícitamente el uso de estrategias de aprendizaje. En tiempos recientes, además, la competencia digital emerge como otra asignatura pendiente en educación. Los estudiantes muestran alto grado de familiaridad con herramientas digitales, pero a menudo no saben cómo emplearlas para el aprendizaje.

Esta propuesta de innovación educativa contempla estos dos problemas e introduce un entorno digital en clase de inglés que fomente el uso de estrategias de autorregulación. Al mismo tiempo, crea un contexto de interacción y comunicación real.

La propuesta toma la forma de una intervención de 12 semanas de duración, estructuradas en bloques que introducen estrategias específicas a las distintas dimensiones de la segunda lengua (L2) a través de la herramienta Padlet.com. Se espera que el uso de esta herramienta influya positivamente sobre la motivación y participación por parte de los estudiantes, además de posibilitar una metodología de aprendizaje colaborativo.

Se espera que esta intervención tenga efectos positivos sobre las variables de autorregulación, competencia digital y motivación. De forma más amplia, también se espera derivar conclusiones sobre la viabilidad y efectividad de este tipo de intervenciones en el aula de inglés.

Palabras clave: inglés como segunda lengua, aprendizaje autorregulado, aprendizaje cooperativo, Padlet, motivación

1. INTRODUCTION

Self-regulation has been singled out as a key predictor of developmental outcomes such as long-term health and well-being, eating habits, school readiness and student achievement in adolescence (McClelland et al., 2018). So much so, that it has been suggested that “understanding self-regulation is the single most crucial goal for advancing the understanding of development” (Posner & Rothbart, 2000: 427).

Theories on self-regulated learning (SRL) recognise the active role of the individual in the construction of learning, as well as the capacity to control and orient certain aspects of their own cognition, motivation and behaviour (Pintrich, 2000).

Such is the importance of self-regulatory processes that a number of studies highlight SRL as a key determinant of student achievement and engagement across different levels, from preschool to university (Komarraju & Nadler, 2013; Morrison, Ponitz, & McClelland, 2010; Zimmerman, 1990). Importantly, studies have also found that promoting self-regulation of emotion and cognition is specially decisive for students at risk of academic failure (McClelland & Wanless, 2012; Ursache, Blair, & Raver, 2012). Beyond the academic scope, self-regulation is also considered a fundamental requisite towards life-long learning (Wirth & Leutner, 2008).

In the field of ELT, studies have also found a strong correlation between SRL and second language proficiency levels (Oxford, 1999). However, a recent study conducted by Seker (2016) indicated that teachers mostly did not consider SRL into classroom practices.

As a result, more and more education policies are pointing at the need for student-centredness and autonomy in secondary schools. “Learning how to learn” has become a central competency under the current legislation of LOMCE (Ley Orgánica 8/2013, 9 de diciembre) and The Common European Framework of Reference for Languages (Council of Europe, 2017) thoroughly promotes the use of learning strategies.

Concurrently, computer literacy emerges as a central competence in this day and age, where digital tools are omnipresent. Specifically, for an effective use of digital technology, students will need to be taught a series of skills such as

evaluating online sources, filtering and managing different types of information or synthesising online content (Hockly, 2011).

This innovation proposal tries to address both these issues by introducing an online environment in the English classroom that promotes students' development of and reflection on self-regulated learning strategies. Introducing technology that allows real-time communication outside the classroom, such as Padlet.com, is expected to also work towards improving motivation, which appears at the centre of self-initiated and self-regulated processes.

The programme will be structured over the span of 12-weeks, which in consonance with Zimmerman's (2000a) process model of SRL, have been designed as blocks that implicitly promote cycles of forethought, performance and self-reflection through the different proposed activities.

This intervention is also heavily based upon Oxford's (2011) Strategic Self-Regulation (S2R) Model of Language Learning, which transports Zimmerman's view into an ELT specific scenario. Each of these cyclic blocks will therefore address specific strategies in the domain of English as a Second Language (ESL). Students will then be expected to apply these strategies autonomously during different collaborative tasks.

The proposed programme is expected to elicit greater autonomy in students during language acquisition, promoting conscious use of strategic self-regulation. It is also expected that work through Padlet.com, both autonomous and guided by the teacher, will improve students' self-perceived computer literacy.

2. OBJECTIVES

The main goal of this innovation proposal is the promotion of self-regulatory strategies for language learning in the context of a secondary school classroom. This goal however has several implications. It specifically involves:

- Making students aware of their power to control and manage the variables involved in the learning process (motivational, cognitive and sociocultural).
- Helping students towards acquiring specific strategies that they can apply to L2 learning.
- Promoting autonomous use of these strategies.
- Creating a habit of self- and peer- evaluation.
- Encouraging self- and co-regulation of learning through collaborative work.

A secondary aim is also the promotion of computer literacy by using a specific online tool (Padlet.com) that supports the sharing of multimedia content and encourages real communication. This involves:

- Creating a connective learning experience.
- Providing students with online tools that are useful for L2 learning.
- Fostering students' research skills and capacity to critically analyse simple sources of information.
- Familiarising students with different types of multimedia content for language learning (audio, text, video, visual tools...).

Although not observed as a specific goal within this intervention, it would be specially interesting to learn whether this intervention improves self-regulatory strategies not only in English, but across the subjects. Should the programme be successful, it is possible and desirable that some level of generalisation will occur.

As mentioned in the introduction to this paper, a gap has been found between findings on the effects of self-regulation over academic achievement and actual implementation of programmes or interventions that look to foster this complex mechanism. An inherent goal of this proposal is to help fill in that gap with a programme that is realistic to students' needs and to the specific context of secondary education in Spain.

3. THEORETICAL FRAMEWORK

3.1 General definition and theories on self-regulated learning

Self-regulation is present in almost all aspects of human functioning to the extent that it has been defined as the quintessential human quality (Zimmerman, 2000a). As such, it has been studied from different perspectives and fields, ranging from cognitive psychology, to medicine or education.

In the past few decades self-regulated learning has received an increasing amount of attention from scholars, researchers and educators, and several models of SRL have been proposed that share a series of assumptions about the learning process. In general terms, self-regulation can be defined as:

[...] an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features in the environment (Pintrich, 2000: 453).

Among the number of theories that have been proposed over time, some have survived to date and still influence current research significantly. They are outlined below.

3.1.1 Zimmermann's process theory

A particularly productive line of study within the field of self-regulation has been the social-cognitive perspective. Departing from Bandura's observations on the interaction between personal, behavioural and environmental factors (Bandura, 1986), this perspective defines SRL as self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals (Zimmerman, 1994, 2000a).

Zimmerman (2000a) proposes that changes in the three intervening factors will require the activation of self-regulatory processes that work cyclically in three distinct stages: forethought, performance and self-reflection. This is also known as the process model, which has been greatly influential in the field of education and will be widely revised in upcoming theories on SRL. Figure 1 illustrates this model.

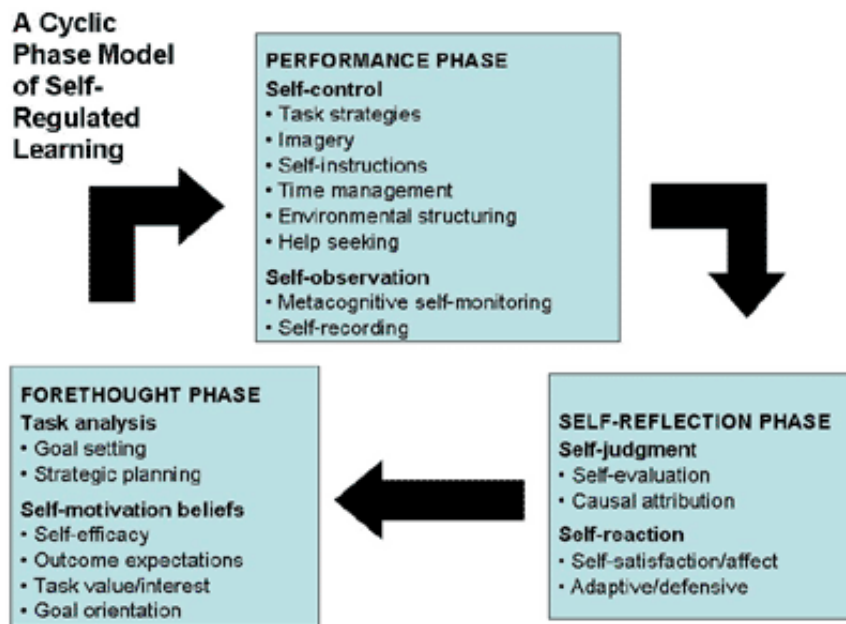


Figure 1. Zimmerman's process model of self-regulation (Zimmerman & Campillo, 2002).

According to Zimmerman (2000a), the forethought stage includes two linked categories: task analysis and self-motivational beliefs. Task analysis refers both to goal setting, or the capacity to decide specific aims for the learning process, and to strategic planning, or the capacity to choose appropriate strategies in order to achieve those outcomes. This requires the individual to achieve a certain level of self-awareness, since no strategy will work equally well for two different students.

However, even if the individual exhibits good-working knowledge of self-regulatory strategies, motivational factors will be key in the successful completion of any task, which is why self-motivational beliefs underly the whole process. These beliefs include outcome expectations, self-efficacy, intrinsic and extrinsic interests and goal valuing (Zimmerman, 2000a).

Out of these motivational beliefs, it is worth to highlight the role of self-efficacy as a predictor of general motivation and achievement. Bandura (1977) had already hypothesised on how self-efficacy influences the individual's choice of activities, effort and persistence during tasks. According to Bandura personal expectations of the self are derived from four main sources of information: performance accomplishments, vicarious experience, verbal persuasion and physiological states.

Zimmerman (2000b) further points at the specificity of self-efficacy beliefs versus other constructs such as outcome expectations or self-concept, in that they specifically refer to performance expectations. He also stresses the role of self-efficacy in providing students with a sense of agency that motivates their learning. A number of studies have proved the importance of this construct as a strong predictor of academic achievement (Brady-Amoon & Fuertes, 2011; Caprara, Vecchione, Alessandri, Gerbino, & Barbaranelli, 2011).

The second stage in the social cognitive perspective refers directly to performance, which includes processes of self-control and self-observation (Zimmerman, 2000a). Self-control involves processes such as self-instruction, imagery, attention focusing, and specific task strategies, while self-observation refers to the monitoring of performance and the conditions that surround it.

Finally, the third stage in social cognitive theory is self-reflection. Almost as a continuation of self-observation, this phase involves self-evaluation and self-reactions. Four criteria are used during self-evaluation, namely mastery, previous performance, normative and collaborative criteria.

Mastery criteria involve a hierarchical set of measures upon which the individual can self-evaluate their performance, while previous performance refers to comparisons of current achievement with earlier or baseline levels. In contrast to these two, normative criteria involve a social comparison. That is, individuals measure their performance against that of others. Normative criteria may be useful in a context of healthy competition, but also present some drawbacks, such as reducing self-observation in favour of attention to social factors. Lastly, collaborative criteria are useful in team activities, and help towards measuring the success in the given role within the team.

During the stage of self-reflection, attributional styles become very important. Following Weiner (1979), attributions of causality for success and failure have important psychological consequences. Thus, the attribution of errors to fixed abilities can be highly negative, while attribution of failure to erroneous learning styles or strategies can be positive and even motivating towards searching new and improved strategies (Zimmerman & Kitsantas, 1997).

A key assumption of the social-cognitive theory is the fact that goals and strategies change continuously based on self-evaluation. The self-regulatory process is understood as dynamic and involving both self and social influences.

3.1.2 Information processing theory

Information processing theory has also been an influential approach for researchers in the field of self-regulation. From this perspective, learning is viewed as the encoding of information in long-term memory (LTM), in such a way that learners relate new information to existing knowledge (Mayer, 1996).

As Schunk (2012) explains, within this framework self-regulation can be understood as equivalent to metacognition or metacognitive awareness. This includes deep knowledge of the task at hand, as well as self-knowledge in the form of personal qualities and strategies. It also includes procedural knowledge, as in monitoring the level of one's learning, deciding when to take a different approach, and assessing readiness. Metacognitive activities are therefore different forms of control processes.

This model was developed in numerous works by Winne & Hadwin (1998, 2008), who propose an SRL theory based on 4 linked phases: task definition, goal setting and planning, studying tactics (strategies) and adaptation. In contrast to previous models, task definition and goal setting are established as two clearly distinct stages, the former involving an understanding of the task to be performed, while the latter refers to the formulation of goals within a structured plan.

Within each of these phases, 5 elements need to be considered, these are given the acronym COPES, as in elements that the students need to cope with. They are: conditions (the resources available), operations (the tactics or strategies to be used), products (the information resulting from those operations), evaluation (comparison between the products and the expected standards), and finally standards (criteria against which we measure the products, which can be internally or externally given).

The main contribution of the information processing model by Winne and Hadwin (1998) is the importance placed on learning strategies, which are present throughout every stage of SRL, making the model highly applicable to educational contexts. Also important is the fact that they observe the role of motivational variables, even if they do not consider how to regulate them.

3.1.3 Constructivist theories

Lastly, constructivist theory with its emphasis on knowledge as a sociocultural construct has also been greatly influential in the field of SRL. Several lines of work can be identified within constructivist theory, among them cognitive-developmental accounts (Kopp, 1982) and the sociocultural model (Vygotsky, 1978) have been the most productive.

Vygotsky (1978) stated in his sociocultural model that learning is always mediated, and so behaviours are a consequence of the interacting social system. In this context, it is the “more capable other” who models desired “higher mental functions” within the Zone of Proximal Development (ZPD) of the student. The ZPD is understood as the area of learning that a particular student can achieve with the necessary assistance, thanks to modelling and language.

Within Vygotskian views, self-regulation involves mental processes such as planning, conceptualising, synthesis and evaluation, which are not independent of their context, but rather a direct consequence of what is valued and modelled in a specific context.

These are only four of the most influential SRL models that have been produced in decades of psychological and educational research and have been chosen on the basis that they are still largely used by researchers and educators. However it is important to bear in mind, as Panadero (2017) points out, that in many aspects these models tend to overlap. For this reason, most current research follows an eclectic approach to self-regulation.

3.2 Self-regulation in second language acquisition

Research on self-regulation within the field of second language acquisition seems somewhat scattered given the fact that self-regulatory processes have been conceptualised under different names since Rubin (1975) first wrote about the “good language learner”.

Since then, a number of terms have appeared in the literature including “learner self-management” (Rubin, 2001), “autonomous learning” (I. Lee, 1998; Littlewood, 1996), “learner self-direction” (Dickinson & Carver, 1980) or the well-known “language learning strategies” (Oxford, 1990; Yongqi & Johnson, 1996).

It was precisely Oxford (1990) who first put together a multi-faceted Strategy Inventory for Language Learning (SILL), marking a turning point in strategy

research within the field of ELT and generating a highly productive line of study (Rose, Briggs, Boggs, Sergio, & Ivanova-Slavianskaia, 2018).

Although deeply grounded in psychological research, self-regulation as a construct did not enter the field of ELT until Dörnyei (2005) criticised some of the limitations of strategy research. The main weakness attributed to learning strategies was that of definitional fuzziness, insofar as they had been indiscriminately used to describe cognitive, behavioural and affective phenomena (Tseng, Dörnyei, & Schmitt, 2006).

This would initiate considerable debate among scholars both in favour of adopting the well-established construct of self-regulation, and against abandoning the home-grown language learning strategy (LLS) research. Gao (2007) argues that, in fact, both perspectives may be complementary, with LLS providing valuable insight into the broader self-regulation theory. Indeed, Gao's paper recognises some of the limitations of language learning strategies, which cannot aim at explaining both external behaviour and mental processes. Self-regulation provides strategy research with a sound theoretical framework, while LLS can illustrate learners' regulatory mechanisms in specific contexts.

Regardless of whether a theoretical shift towards the concept of self-regulation is necessary, strategy research has advanced the field of ELT, providing it with a construct of its own. Current research echoes this debate and newer theories emerge as a hybrid, building on decades of LLS investigation while trying to incorporate the most notable findings of self-regulation frameworks.

3.2.1 The Strategic Self-Regulation Model

A notable hybrid example is the Strategic Self-Regulation (S2R) Model of language learning (Oxford, 2011). In this model strategies are defined as "deliberate, goal-directed attempts to manage and control efforts to learn the L2" (Oxford, 2011: 12). A key characteristic of these strategies is the fact that they are teachable and consciously chosen by the student, as opposed to skills which are automatic. This stresses the idea of the learner being in control and always at the centre of the learning process, very much in line with self-regulation theory.

The model's most innovative aspect lies in the fact that it observes three dimensions of L2 where these strategies operate, namely cognitive, affective and sociocultural-interactive dimensions, while it incorporates metastrategies as a

superordinate category which operates across all three dimensions. As a result, Oxford (2011) proposes the existence of meta-cognitive, meta-affective and meta-sociocultural strategies, and emphasises once more the idea that the learner has power to manage and regulate all three aspects of language learning. Figure 1 illustrates this classification, as seen in Oxford (2011: 24).

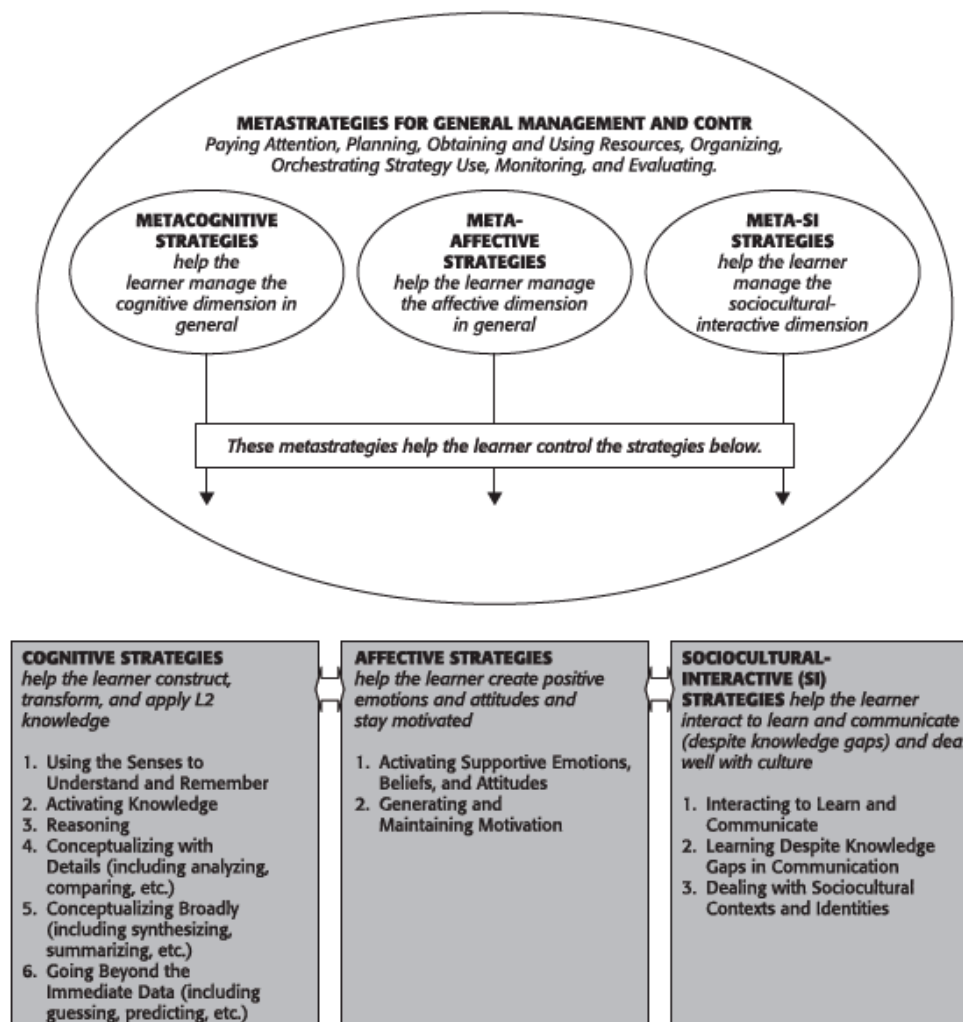


Figure 2. Strategies and metastrategies. Adapted from Oxford (2011: 24)

As mentioned above, Oxford’s model is characterised by its hybrid nature, in that it incorporates and draws upon several concepts and constructs from LLS and SRL theory. In doing so, Oxford (2011) creates what she calls a “heteroglossic model” which echoes different ideas and voices.

Firstly, the S2R model incorporates the idea of SRL as a process (Zimmerman, 2000a), differentiating between three distinct phases that apply to every task or problem-solving situation. These are: strategic forethought (analysing the demands of the task, setting goals, planning and activating existing knowledge),

strategic performance (implementing the plan, monitoring its effectiveness and controlling or deciding whether to carry on with the chosen strategy), and finally, strategic reflection and evaluation (generating judgements about outcomes, effectiveness of strategies and perceived self-efficacy).

As Zimmerman (2000a) had already remarked, these phases do not necessarily follow a linear or hierarchical order, and so we might find that different students follow different paths. Also, as Oxford (2011) points out, even if some strategies are more likely to appear in certain task phases, they could also be reactivated later on.

The S2R model also draws upon Vygotsky's sociocultural model (Vygotsky, 1978), and assumes learning to be always mediated performance. Therefore, Vygotsky's "higher mental functions", which are here conceptualised as strategies, are understood as teachable within the ZPD of the student and thanks to the dialogic relationship between the learner and the more capable other. Oxford (2011) also agrees with sociocultural theories on the existence of communities of practice which shape specific practices, goals, beliefs and areas of learning, emphasising the fact that these may be local or electronically networked. The importance of online communities of practice has been remarked by a number of authors and will be further explored in the next section of this paper.

Within these communities, students participate of cognitive apprenticeship, meaning they will acquire, develop and use strategies in authentic situations thanks to interaction, scaffolding, modelling, learning from peers and self-reflection (Brown, Collins, & Duguid, 1989).

Lastly, Oxford (2011) also incorporates key notions from Information Processing Theory describing the cognitive and meta-cognitive strategies in her model as deep processing strategies which favour the retention of information in LTM.

3.3 Self-regulation in computer mediated environments

The omnipresent use of Information and Communication Technologies (ICT) and the Internet in the past few decades has resulted in the need for revised learning theories that observe the specifics of these new learning environments.

Siemens (2005) coins the term “connectivism” to refer to networked learning that goes well beyond the individual to include all the connected sources of information that surround us. Amid a rapidly moving flow of information, the capacity to learn, and the capacity to selectively decide what is worth learning, becomes more valuable than knowledge itself. The main principles of connectivism as outlined by Siemens (2005: 5) are:

- Learning and knowledge rest in diversity of opinions.
- Learning is a process of connecting specialized nodes or information sources.
- Learning may reside in non-human appliances.
- Capacity to know more is more critical than what is currently known.
- Nurturing and maintaining connections is needed to facilitate continual learning.
- Ability to see connections between fields, ideas, and concepts is a core skill.
- Currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities.
- Decision making is itself a learning process. Choosing what to learn and the meaning of incoming information is seen through the lens of a shifting reality. While there is a right answer now, it may be wrong tomorrow due to alterations in the information climate affecting the decision.

As noted by Downes (2012), an implication of this theory is that the amount of information available is too broad for the learner to internalise it, while also subject to constant reformulation, meaning it can quickly become obsolete. This necessarily implies a reformulation of priorities during the learning process.

Although connectivism stems from a need to go beyond current learning theories based on behaviourism, cognitivism and constructivism (Siemens, 2005), it does draw heavily upon the latter in assuming that students will construct their own systems of knowledge based on their social connected environments (Klement, Chráska, & Klementová, 2015). It seems only natural that, in practice, connectivism has been linked to diverse forms of online collaborative learning (Thota, 2015).

The necessity to adapt to changing demands and learning environments is also explored by those who investigate on the concept of “multiple literacies”. In

the era of communication, literacy can no longer be seen as a monolithic construct (Leu et al., 2011), meaning that what we consider to be a literate person changes in line with the social context we live in. Thus, a series of “new literacies” emerge, computer-literacy being a well-known example. More importantly, this brings about the implication that, in order to be literate, we must be able to successfully adapt not only to current forms of discourse, but to any newer developments the future might bring (Leu, Kinzer, Coiro, Castek, & Henry, 2013).

This need for effective forms of life-long learning in a fast-moving society with constant developments in technology and information calls for individuals with a higher degree of SRL (Carneiro, Lefrere, & Steffens, 2007). The almost unlimited access to expanded learning environments, resources and materials demands greater autonomy and initiative from learners (Timothy et al., 2010).

Azevedo (2005) seeing the self-regulatory potential of ICT coins the term metacognitive tool to refer to any computer environment that is “designed for instructional purposes and uses technology to support the learner in achieving the goals of instruction” (Azevedo, 2005: 193-194). He goes on to describe the different tools that might fall under this definition including intelligent tutoring systems, interactive learning environments, hypermedia, multimedia, simulations, microworlds and collaborative learning environments, among others.

The main characteristics of a computer environment under Azevedo’s (2005) conceptualisation are the following:

- They require students to make instructional decisions regarding instructional goals.
- They are embedded in particular learning contexts that may require students to make decisions regarding the context in ways that support successful learning.
- They model, prompt, and support learners’ self-regulatory processes, including cognitive, metacognitive, motivational, or behavioural processes.
- They must model, prompt, or support learners to engage or participate in using task-, domain-, or activity-specific learning skills.
- They contain specific learning contexts where peers, tutors, humans or artificial, act as models and serve as external regulating agents.

- They are environments where the learner's use and employment of a key metacognitive and self-regulatory process prior to, during, and following learning are critical for successful learning.

In the field of ETL numerous studies also highlight the potential of technology for language learning including access to instructional and authentic materials, life-like interaction, and exposure to engaging learning environments (Lai & Gu, 2011; Thorne, Black, & Sykes, 2009).

Studies in Computer Assisted Language Learning (CALL) investigate on the usefulness of technology towards language learning emphasizing the importance of choosing the right tool for the right learner and task (Chun, 2011).

4. STATE OF THE MATTER

4.1 Self-regulation as a predictor of academic achievement

A vast number of studies has investigated the correlation between self-regulation and academic achievement, and so it is nowadays widely accepted that the capacity to self-regulate is determinant over academic success.

In a series of now classic studies in the field of SRL, Zimmerman and Martinez-Pons (1986, 1988) found that the frequency in use of self-regulated learning strategies predicted significant variance in students' test scores. This correlation becomes obvious early on, and researchers have found that self-regulatory strategies influence academic achievement since infancy and during primary school. Kitsantas, Steen and Huie (2009) interviewed a group of 81 fifth graders and found that prior achievement and self-regulatory strategies accounted for most of the variance in students' results across math, science and language subjects. Similar results have been corroborated by a number of studies which found strong correlations between SRL and academic achievement over childhood and adolescence (Duckworth, Tsukayama, & May, 2010; McClelland et al., 2014; Stefansson, Gestsdottir, Birgisdottir, & Lerner, 2018).

In the field of ELT, research on the effects of self-regulation and self-efficacy is still somewhat limited (Kim, Wang, Ahn, & Bong, 2015). Research conducted on the field of LLS has produced evidence that students using strategies when facing reading and writing tasks obtained better results across different levels (Chien, 2012; Zhang, Gu, & Hu, 2008). However, compelling arguments are being made in the field about the necessity to teach not only strategies, but broader processes related to the self-regulation of language learning (C. C. Lee, 2002). Thus, studies emerge in recent times that try to fill in this gap.

Sentürk (2016) in a study with 150 undergraduates identifies strong correlations between self-regulated learning strategies and vocabulary size. His study included measures for commitment control, meta-cognitive control, satiation control, emotional control and also environmental control, by using the Self-Regulating Capacity in Vocabulary Learning Scale (SRCvoc), designed by Tseng et al. (2006), one of the first-ever scales to include specific measures for self-regulation in language learning.

4.2 Self-regulation enhancing interventions in the field of ELT

In a recent study, Seker (2016) interviewed 51 language teachers and found that although self-regulatory strategies are repeatedly reported as decisive towards the development of autonomous learners, teachers mostly do not consider SRL into classroom practices. A clear gap is identified in this sense, particularly within the field of English Language Teaching (ELT).

One of the few attempts to incorporate self-regulation theory into practice is that of Morshedian, Hemmati and Sotoudehnama (2017) who investigate on the possibility of instructing students on Zimmerman's (2000a) model of self-regulation, as applied to reading skills. They obtain empirical support of the applicability of the model to the English as a Foreign Language (EFL) context, and for the general teachability of academic self-regulation, showing how their experimental group outperformed the control group on the analysed measures.

Self-regulation in the field of ELT is still quite an unexplored path, partly due to the theoretical considerations and divide among scholars that was mentioned in chapter 3 of the present paper. There is, however, an agreement on the need to pursue practices that foster this mechanism, and so this innovation proposal will try to address this highly relevant issue.

4.3 Online environments and computer literacy

The potential of online environments to foster self-regulation has been pointed out by a number of studies since Azevedo (2005) theorised about technology as a metacognitive tool. McLoughlin & Lee (2010) argue that ICT tools shift control to the learner promoting autonomy, learner agency and engagement. They remark however, that for self-regulated use of technology to be successful, learners need to be provided with the necessary scaffolding to guide their learning. The authors thus advocate for pedagogies that are "more personal, social and participatory" (McLoughlin & Lee, 2010: 28).

A number of studies find that self-regulation and learning through online environments are intrinsically linked (Lynch & Dembo, 2004; Shea & Bidjerano, 2010; Winters, Greene, & Costich, 2008). However, for students to make full use of the possibilities that technology offers, computer literacy has to be taken into consideration.

In the field of ELT, studies have found mixed results regarding students' capacity to use technology for learning purposes. While students do seem to resort to technology to expand on their existing language knowledge and learning experience (Inozu, Sahinkarakas, & Yumru, 2010), this does not necessarily imply sophisticated uses. Thus, learners seem to mostly resort to rather conventional uses of ICT (Winke & Goertler, 2008).

This proposal sees the promotion of computer literacy as a secondary aim of this intervention, understanding computer literacy as uses of digital technology that benefit language learning.

5. INNOVATION PROPOSAL

5.1 Overview

This innovation proposal stems from an identified need for specific interventions that address self-regulatory capacity during language acquisition. While capacity to self-regulate and manage adequate strategies has been repeatedly reported as beneficial, interventions that address SRL are lacking, especially in the context of secondary ESL education, as shown in the state of the question.

The present proposal will try to address this issue by creating a supportive environment within the classroom that encourages use and reflection on self-regulatory strategies, while promoting autonomous student work. Since online environments have been singled out by research as a potentially useful tool in this regard (Azevedo, 2005), the intervention will be structured through the use of a particular online tool named Padlet.com, which has been described by educators as motivating and easy to use (Fuchs, 2014).

The intervention adopts Zimmerman's (2000a) process model of self-regulation to the specifics of a secondary education English classroom. The process model has been largely applied in the field of education to describe and promote SRL, with evidence supporting its effectiveness when specific training and modelling are provided (Cleary & Zimmerman, 2004). Importantly, it has also recently been introduced in the ELT context both at a theoretical level, through Oxford's (2011) S2R model, and through explicit interventions that have addressed self-regulation in specific L2 areas such as reading with promising results (Morshedian et al., 2017).

Self-regulation understood as a process involves three cyclical steps: (forethought, performance and self-reflection) that are activated when faced with different demands in three interconnected areas: cognitive, motivational and contextual (Zimmerman, 2000a). Oxford (2011), in her S2R model, goes on to describe the process of self-regulation in a more ELT-specific scenario where cognitive, affective and socio-cultural/interactional intervening strategies are necessary. This is the framework that the present proposal will adopt.

In order to foster self-regulation, a 12-week intervention programme is proposed that will be implemented during the 2nd term of the school year in a class of 4th of ESO. This term is considered ideal for the introduction of a new

methodology since the teacher should have a clear idea by now of the specifics of the group, in terms of differences in levels of achievement, motivation and engagement, allowing for more efficient planning.

The aim of the intervention is to introduce strategies to promote self-regulation in the different areas of language learning while encouraging students to think reflectively, as well as share their experiences with others (both online and in person, depending on time constraints).

5.2 General structure of the intervention

The intervention is structured in distinct blocks with specific objectives, creating implicit cycles of goal-setting, autonomous performance and finally self- or other- reflection (blocks always culminate in a session dedicated to group discussions). While the first weeks of the programme might require more in-class time and support from the teacher, it is expected that the use of Padlet.com will elicit a great deal of autonomous and collaborative work from the students, allowing the teacher to focus on specific aspects of SRL and strategic learning that will be introduced during day 1 of each block. Students will then be expected to work on these aspects autonomously through the proposed activities and share their impressions/findings briefly at the end of cycle presentation.

5.2.1 Introduction

Week 1 will be devoted to a general introduction of the programme, starting with a preliminary questionnaire on students' strategy use, the SILL (Oxford, 1989). Pre-intervention testing is considered essential in line with Oxford's (1996) findings that teachers are sometimes unaware of, or even mistaken about, their students' strategy use. Pre-testing is therefore expected to act as a diagnostic tool that can serve to adapt the intervention to the specifics of the classroom context, as well as inform the students themselves of their own strategic learning. For the purposes of this intervention, testing students' self-perceived computer literacy is also considered important and so they will also be administered the perceived ICT literacy scale by Lau & Yuen (2014), a short 17-item scale. Testing is expected to require one session.

A second session will, of course, be devoted to training students on the use and functions of Padlet.com. This will require a number of Internet-enabled

devices in the classroom. For the purposes of this introductory session either laptops, tablets or mobile phones are suitable depending on availability. The ease of use of Padlet.com and the possibilities for collaboration are expected to work in favour of student engagement. A 50 min session to explain the inner-workings of this tool is expected to be enough. The teacher will share a link to a “Greetings Padlet” to welcome students and they will be asked to participate in response to an initial prompt in order to become familiar with the tool.

5.2.2 The strategic English classroom

Week 2 will see during session 1 a “student-friendly” introduction to strategies for general and learning purposes. Cleary & Zimmerman (2004), propose in their Self-Regulation Empowerment Programme for Middle School Students (SREP), that a key step towards promoting self-regulation is helping students become aware of their agency over the learning process. In this sense, it is important that they realise that success or failure is dependant on correct/incorrect use of strategies rather than personal skill since this could contribute to frustration.

Students will be given an address to a whole-class padlet where they will be asked to solve some engaging/fun logic problems. The aim is that this will elicit a reflection over the nature and use of strategies for different purposes. The class discussion will serve as a means to translate the use of strategies into learning tools.

5.2.3 Metastrategies as sidekicks

In Oxford’s (2011) model metastrategies are understood as superordinate categories that intervene in every area of self-regulation coordinating the use of other more specific strategies. These are: paying attention, planning, obtaining and using resources, organising, implementing plans, orchestrating strategy use, monitoring, and evaluating.

For this reason, the present intervention addresses the use of metastrategies in the first place. The teacher will open this block (week 4) by creating awareness over the existence of the abovementioned metastrategies. Students will afterwards be asked to work collaboratively on their Padlets in the creation of a personification for the strategy/strategies they have been assigned, including what their strategies would look like, what their job would be, their hobbies, their

strengths and weaknesses, and most importantly when to give these strategies a call for help. Students will present their work in class in order to close the block, allowing for self- and peer-assessment. The personifications/characters they have created will be used throughout the remainder of the intervention in order to refer to the metastrategies and support their conscious use.

5.2.4 Self-regulation of motivation and affect

Weeks 5-6 will directly address self-regulation of emotion and affect during language learning. Starting by addressing the dimension of affect is, in itself, a strategic decision.

This block will start, as usual, with an introduction to the new cycle. By using a motivational prompt (in the form of a video or image) the teacher will encourage students to share their feelings/motivations when learning English. The teacher will then present/model some strategies to control affect and maintain motivation.

In groups, the students will then be asked to create a Padlet that they will use for the remainder of the two weeks autonomously. This will be the base for their second group task, the creation of “the perfect English classroom”.

In their Padlets, students will add tiles with strategies/tactics that they find motivating or positive when approaching an English task. The objective is to gather an extensive set of resources and select among their favourite to create the most motivational English classroom. At the end of this cycle, students will recreate their ideal study atmosphere in a short simulation for the whole class. This may include music effects, images, motivational messages... etc.

Students will then vote for the most motivating group and discuss on why those specific strategies resonated with them in particular. This is expected to raise awareness over the fact that motivational and emotional aspects can also be controlled and regulated.

5.2.5 Self-regulation of cognition

Self-regulation of cognition understood under the SR2 model as “strategies for remembering and processing language” (Oxford 2011: 43), is too broad a dimension to tackle it in an intervention of this kind. Addressing cognitive strategies during each separate linguistic skill would require of an intervention of its own. This cycle, therefore, will try to create awareness over a series of general

cognitive learning strategies for L2, and will mainly focus on the creation of a student-led strategy training.

Again, the cycle will start with an in-class introduction by the teacher, who will present the main areas of the cognitive dimension: using the senses to understand and remember, activating knowledge, reasoning, conceptualizing with details, conceptualizing broadly and going beyond the immediate data. In groups, students will be assigned a Padlet with instructions and resources covering one of these areas and will be asked to apply it during a simple L2 task. For instance, in a didactic unit for 4th ESO entitled “It’s a mystery”, which is rich in new vocabulary, using the senses to understand and remember could be a useful strategy by associating new words to meaningful images or sounds that evoke that mysterious atmosphere. It could also involve writing new words several times in a creative font or pronouncing them repeatedly with different intonations. The number of tactics associated to a specific strategy is unlimited (Oxford, 2011), the purpose of this task is to allow students to come up with ways of applying the strategies to simple English tasks, and record all of these ideas in their Padlets.

As the end of cycle activity, groups will present their work by enacting a mini-lesson on their assigned strategy. Students will then be asked to share their Padlet links with other groups and make contributions, adding further tactics.

5.2.6 Self-regulation in the socio-cultural/interactive dimension

Following Oxford (2011) self-regulation in this dimension involves three related strategies: interacting to learn and communicate, overcoming knowledge gaps in communication and dealing with sociocultural contexts and identities.

This block will start with an in-class brainstorming of useful strategies when trying to communicate in a different language. Since it is likely that studies have, at some point, experienced communicating with an English-speaking person it is expected that sharing of experiences will be possible. The teacher will then introduce further strategies and present the activity for this block.

Each group will be assigned a Padlet where they will be given a different prompt, a class trip to another country. Students will be given some resources and useful websites, and will be asked to generate useful tips for communication in that country, including what to say/what to avoid saying, gestures that might be

appropriate or inappropriate, what do people usually do in that country and why is it important etc.

5.2.7 Closing the cycle

Weeks 10 and 11 will see a change in the dynamics of the intervention. The teacher will introduce a “student-friendly” version of the cyclic model of Zimmerman (2000a). This is reserved until this point in the intervention since training on the cyclic model comes after teaching specific strategies in line with Cleary & Zimmerman (2004). The teacher will introduce the cyclic model in the context of everyday L2 tasks and students will be encouraged to think of how this model has been implicitly applied every week since they started to work with Padlet.com.

During this block students will be asked to work independently in the elaboration of their own personal padlets, which will work mostly as self-reflective tools. The aim of this activity is to enable students to configure their own online learning spaces where they gather the most useful tips and materials that they have encountered during the whole term. The configuration, layout and materials that they include in this padlet is completely free, with the only condition that comments must be enabled, in order to allow for some peer-assessment and interaction after the work is submitted.

5.2.8 Final week

The last week of the intervention will see students presenting their padlets very briefly to the class and sharing impressions on the effectiveness of what they have learned during a group discussion. Students will also be encouraged to comment/share on their peers’ padlets.

Another session will be devoted to take post-intervention measures by applying the SILL questionnaire again.

| | OBJECTIVES | INSTRUMENTS | DESCRIPTION |
|---|--|---|---|
| WEEK 1: GENERAL INTRODUCTION | <ul style="list-style-type: none"> Introducing Padlet Analysing the students' strategy use through pre-intervention testing | SILL (Oxford, 1989) Self-perceived digital literacy (Lau & Yuen, 2014) Padlet.com | <ul style="list-style-type: none"> Day 1: Pre-intervention testing (50') Day 2: Introduction to Padlet.com (50') Homework: individually students respond to the prompt on the whole-class padlet. Day 4: Students share impressions on the tool (20') |
| WEEK 2: INTRODUCING STRATEGIES | <ul style="list-style-type: none"> Introducing the concept of strategies. Helping students to reflect on the use of strategies for different purposes. | Padlet.com | <ul style="list-style-type: none"> Day 1: In-class direct instruction (30') Homework: individually students work on some engaging logic problems on the whole-class padlet, providing strategies and solutions. Day 4: In-class review of padlet contributions. Reflection on the role of strategies and their connection to learning (20'). |
| WEEK 3-4: META-STRATEGIES | <ul style="list-style-type: none"> Introducing the concept of metastrategies Creating awareness on their power through the creation of student metaphors | Padlet.com | <ul style="list-style-type: none"> Day 1: In-class direct instruction (50') Homework: in groups students autonomously work on the creation of personifications for each metastrategy. Day 8: In-class presentation. Students show their characters/personifications to the class (30'). |
| WEEK 5-6: AFFECTIVE STRATEGIES | <ul style="list-style-type: none"> Learning how to generate & maintain motivation Learning how to use positive emotions & language | Padlet.com | <ul style="list-style-type: none"> Day 1: In-class direct instruction (50') Homework: in groups students create in groups their ideal English classroom. Day 8: In-class simulation of students' ideal classroom. Students compare strategies, they choose the most motivational presentation (30') |

| | | | |
|--|---|---------------------|---|
| WEEK 7-8: COGNITIVE STRATEGIES | <ul style="list-style-type: none"> • Learning how to use the senses to understand & remember • Learning to connect new and previous knowledge • Learning to conceptualise with details vs broadly | Padlet.com | <ul style="list-style-type: none"> • Day 1: In-class direct instruction (50') • Homework: in groups students learn about the assigned strategy by applying it to an L2 task. They then create a presentation on how to use the given strategy. • Day 8: Simulation. In groups students teach their peers how to use their assigned strategy (50'). |
| WEEK 9-10: INTERACTIVE AND SOCIOCULTURAL STRATEGIES | <ul style="list-style-type: none"> • Interacting to learn and communicate • Overcoming knowledge gaps in communication • Dealing with sociocultural contexts and identities | Padlet.com | <ul style="list-style-type: none"> • Day 1: In-class direct instruction (50') • Homework: in groups students find out about their assigned culture, and carry out research that will be useful to communicate and interact. • Day 8: In-class presentation of findings. Reflection on the role of sociocultural strategies (50'). |
| WEEK 10-11: CLOSING THE CYCLE | <ul style="list-style-type: none"> • Introducing self-regulation as a process or cycle in a “student-friendly” manner • Promoting the application of this process model to specific language tasks • Promoting self-reflection over the usefulness of the intervention | Padlet.com | <ul style="list-style-type: none"> • Day 1: In-class direct instruction (30') • Homework: students individually create their personal padlet, as a compilation of the most useful strategies and resources that they have encountered during the term • Day 8: In-class presentation of findings. Reflection on the usefulness of the intervention and self- and peer- evaluation (50'). |
| WEEK 12: | Post-intervention questionnaire | SILL (Oxford, 1989) | <ul style="list-style-type: none"> • The post-intervention application of the SILL (Oxford, 1989) is expected to provide information regarding the effectiveness of the programme. |

Table 1. Weekly structure of the intervention

5.3 Target group

This intervention has been designed for a pilot group of 4th of ESO students who receive four 50-min sessions a week of ESL lessons. The group should be working towards a pre-intermediate level of proficiency in English, although some intragroup variation is expected, and will be considered when planning activities or forming groups.

The age of this students (15 and 16-year olds) is considered appropriate for an intervention of this kind in terms of cognitive maturity. During middle adolescence students will have reached adult-like levels in executive functions (Best & Miller, 2010) which elicit higher levels of inhibition, working memory and shifting, the ability to switch mental states or activities.

5.4 Duration

A 12-week term during which students will be weekly/fortnightly introduced to different strategies and given explicit SRL training.

The length of the intervention is expected to be sufficient to produce some meaningful data on the expected improvement on students' capacity to self-regulate.

Duration could, of course, be subject to adjustments should the intervention prove satisfactory, in which case the methodology could be extended and recurrently included during the following term.

5.5 Methodology

This proposal will address direct SRL instruction embedded into a regular English course of 4th of ESO. In order to surpass time constraints, and because the use of online environments has been pointed out as beneficial towards developing self-regulation, work will be conducted through the use of the tool Padlet.com, creating opportunities for collaborative learning.

The importance of collaboration and interaction in the development of self-regulation is currently a productive line of study within the SRL field, where a number of authors are pointing at the necessity to acknowledge the effects of co-regulated learning (Hadwin, Järvelä, & Miller, 2011). This goes beyond including

a social dimension of self-regulation as an individual process, but rather implies considering the effects of shared goals and outcomes in collaborative tasks.

Since collaborative learning has also been proved to foster student engagement and naturally elicit communication (Roschelle & Teasley, 1995), activities have been planned in such a way that interaction is central towards the completion of tasks.

The general context is that of a communicative language classroom, where the acquisition of the L2 is assumed to happen as a consequence of having to communicate real meaning (Spada, 2007).

5.6 Materials and resources

The intervention has been structured around the use of Padlet.com, an online tool described by its creators as a virtual multimedia bulletin board, where ideas and resources can be shared. It allows for most types of files to be easily embedded on the wall including images, video, audio, documents... just to name a few.

Getting started is quite simple, by accessing <https://padlet.com/>, users are taken to a homepage. There is no need to create a specific account, facebook or google accounts will grant access to all its functions.

Once logged in, the next step is to click on “make a Padlet”. An interesting feature of the tool is its simple and flexible nature, users can work with blank designs and customise their preferences. This will allow to choose from an array of layouts for information to be displayed, including wall, canvas, information stream, grid, shelf and backchannel (a chat-like display).

These layout options provide students with interesting organizational choices, and also elicit different ways to collaborate. For instance, a stream display could be a good option for a diary-like or report activity, where information is best presented chronologically, whereas the shelf layout could be useful for collaboration, allowing to organise the wall in differentiated to-do tasks. Uses for the tool and its features are varied and potentially endless. Figure 4 shows the array of options that Padlet.com offers.

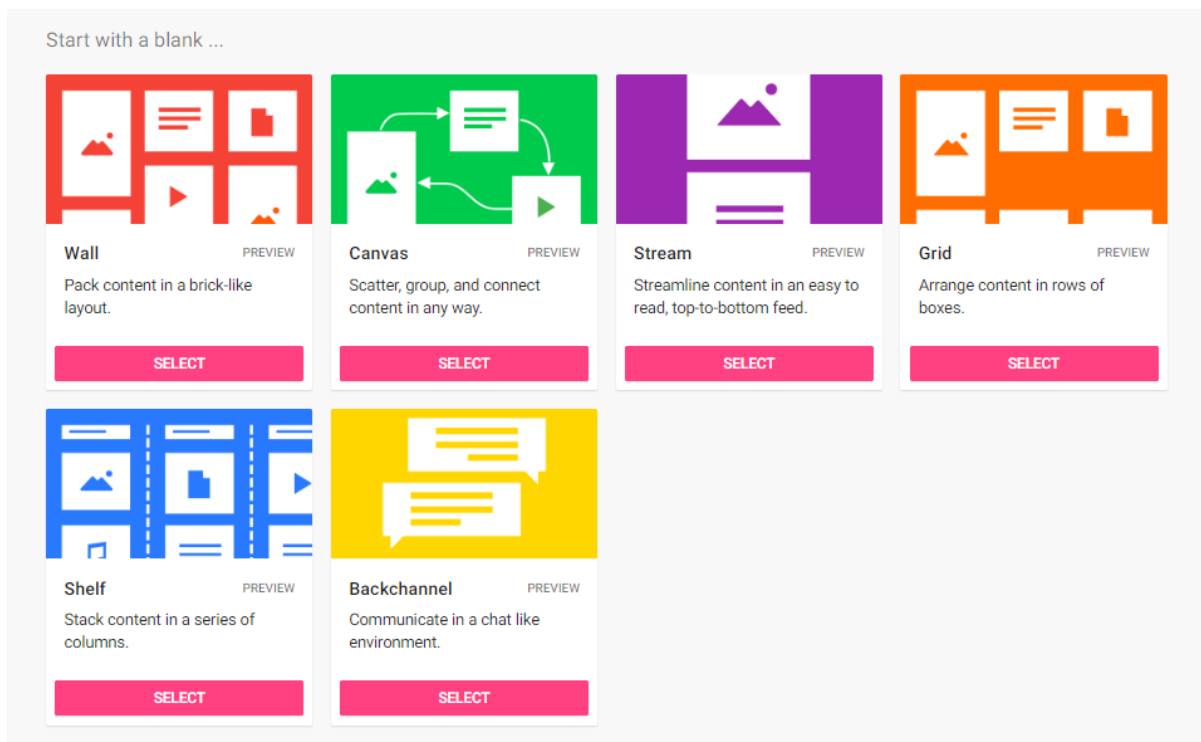


Figure 3. Padlet layout options.

Apart from these layouts, free templates are also available. These could prove useful for new users who might benefit from some guidance, as opposed to a completely blank wall.

Beyond content display, Padlet.com also allows users to customise wallpapers, font, privacy options, comments, reactions to posts etc. Padlets can also be given unique titles and internet addresses. Most importantly, sharing a padlet is as simple as sharing its http address, which will allow a person to immediately view and edit, as long as this function has been enabled by the creator.

As part of the free version, users can create 10 completely free padlets, which should be more than enough for the purposes of this intervention.

This tool has been carefully chosen for several reasons:

- It is an online free tool that can be accessed from almost any kind of device (PC, Mac, mobile devices).
- It does not necessarily require a student log-in or creation of specific accounts. Anyone can access it if they have a facebook or google account.
- It supports the sharing of diverse types of files (video, direct links, audio, images...).

- It encourages collaborative learning by allowing unlimited students to interact on the same padlet.
- It promotes active engagement and creativity, by providing an open space where students can clip their findings and ideas.

5.7 Assessment and evaluation

Assessment in the field of SRL has evolved recently towards more context-specific attempts to see self-regulation in action (Boekaerts & Corno, 2005).

For the purposes of this programme, pre- intervention measures on context-specific strategy use in L2 have been considered important. For this reason, students will be asked to complete the SILL (Oxford, 1989) prior to SRL training.

Since this intervention will require a great deal of collaboration among students it is expected that this will elicit multiple opportunities for group strategy assessment or discussions, both pre, during and after tasks. These discussions will be encouraged by the teacher who will ask students to think about what they need to do, what they are doing and why, as well as how well it worked in line with (Pinter, 2006). As the intervention progresses, it is expected that students will automatise these self-reflective loops, requiring less and less prompts from the teacher. As mentioned in the overview of this intervention, every block will finish with a group discussion.

After great consideration, student work and participation will be assigned a graded mark. Lai, Shum, & Tian (2016) in a study that tried to enhance undergraduate students' self-directed use of technology, found that their programme failed to induce voluntary intensive involvement which they attributed to the ungraded nature of their weekly assignments. Participation in this intervention will therefore be attributed a 10% of the final mark for the term.

Post-intervention assessment is also considered crucial and the SILL (Oxford, 1989) will be applied again post- intervention. This will allow to derive some conclusions on the effectiveness of the training programme.

6. DISCUSSION

This intervention, structured through the span of 12 weeks (a term), departs with the realistic aim of explicitly teaching concrete L2 learning strategies to students within a general framework of SRL. It is based upon evidence that explicit teaching can improve students' awareness of their power to control the learning process and utilises an online environment that is expected to foster student autonomy and motivation. Importantly, collaborative work through this online platform is also expected to create a need for real communication in the L2. However, the proposal is not without its limitations.

Research on the use and effectiveness of Computer Assisted Language Learning (CALL) has identified several issues that require attention when introducing technology in the language classroom, namely students' computer access and literacy (Winke & Goertler, 2008). Studies have found a gap between personal versus academic computer literacy in students (Foster, 2006), which requires teacher attention when planning technology enhanced lessons. Students' readiness for a computer-based intervention cannot therefore be assumed on the basis that they are a tech-savvy generation (Zimic, 2009).

This proposal tries to address this issue by conducting a diagnostic test for students perceived computer literacy (Lau & Yuen, 2014), and by providing explicit instruction on the use of the chosen online platform. Collaborative learning in the form of group tasks and presentations is also expected to provide scaffolding to those students who feel weaker regarding their ICT skills. The fact that the teacher can access students' padlets anytime should also be helpful towards following students' progress and engagement with the tool.

Another issue that emerges in relation to the use of an online platform is that of motivation. While Padlet.com has been described as engaging and motivating (England, 2017), there is a chance that the sustained use of the tool over the span of 12 weeks will produce an effect of satiation. Effects on motivation could be high initially and drop due to fading interest and newness.

The most interesting aspects of Padlet.com is the fact that it allows users to create multimedia collections of files and resources while allowing for interaction. Careful selection of materials and activities is therefore expected to limit the effects of satiation. However, it is possible that those students who find the tasks

more demanding will see in the use of Padlet an added effort. Again, a careful design of the working groups should limit these effects.

Lastly, time constraints are always a central concern for secondary school teachers. The introduction of a new dynamic in the classroom with the added necessity of training students in the use of a new tool could be regarded as time consuming. The benefits that are expected from the intervention, however, should outweigh the costs in time. The first few weeks of implementation should require a more prominent role from the teacher, who will have to conduct a series of diagnostic tests and provide in-class training and support in the use of the tool. As the sessions go by however, most of the work will be conducted as autonomous tasks for the students. In-class presentations and group assessment in the forms of discussions is expected to elicit real communication in the L2, as well as work towards students' self-regulation.

The implementation of this proposal is seen therefore as altogether realistic, and above all beneficial to students. Although not observed as part of this intervention it would be of special interest to see if use and reflection on self-regulatory strategies becomes internalised and is sustained after the 12-week period is over. This would be proof of the effectiveness of this programme towards creating self-regulatory habits in students.

7. CONCLUSIONS

Adolescents are demanded greater student autonomy outside the classroom, are expected to complete assignments independently for multiple teachers, are given greater amounts of homework and will be involved in more independent study time (Zimmerman, 2002). Paradoxically, interventions addressing specific self-regulatory strategies are lacking.

With this issue at its centre, this innovation proposal has offered a programme that addresses the teaching of specific self-regulatory strategies under a framework of SRL within the English classroom. The programme is constructed around the use of Padlet.com, which works not only as a collaborative and motivational tool but elicits a blended methodology that allows the intervention to run in parallel to the general contents of the course.

The intervention, structured in different blocks, has addressed all the key aims that motivated this proposal. Self-regulation is broken down in the form of specific learning strategies that are teachable (Oxford, 2011) and are expected to have a positive effect over students' level of proficiency in the English language. Also, over their capacity to conduct more autonomous language learning.

Team work and specifically collaborative learning have also been a key component of this intervention. The effects of co-regulation of learning are currently a very productive yet relatively new line of study, where everything seems to indicate that capacity to regulate is positively related to group performance (Saab, 2012). Collaborative online environments demand that students self-regulate their own work, co-regulate others, and vice versa (Chan, 2012). This methodology therefore creates the ideal environment to put self-regulation into practice.

Also, collaborative learning should help towards a higher goal, that of educating students into essential civic values such as respect and justice, equality, tolerance, democracy and responsibility in line with LOMCE (Ley Orgánica 8/2013, 9 de diciembre).

Lifelong learning is also transversally present in this intervention, to the extent that self-directed learning is closely linked to self-regulation, an essential prerequisite. Moreover, the creation of an online environment through Padlet.com is expected to improve students' perception and confidence on their digital skills, thus addressing the important issue of computer literacy.

Linguistic competence in the L2, as the ultimate goal of any intervention in an ESL classroom, is also expected to be positively affected. Explicit instruction in self-regulation and strategies should create more autonomous, confident students, who are able to identify their problems while learning the language and monitor and modify their strategies.

Designing this proposal has also proved useful towards developing a series of competences as an educator. A programme of this kind needs to be based on a sound theoretical framework while recognising the realities of a secondary school classroom. Much thought has been given to developing activities that promote self-regulation while encouraging student engagement and use of the L2.

As mentioned above, collaborative learning was considered an ideal methodology for this kind of intervention. This implies a series of considerations on part of the teacher. As Hernández-Sellés, González-Sanmamed and Muñoz-Carril (2014) indicate, collaborative learning in online spaces requires an important phase of planning in terms of key components of the design and, specially, in terms of the creation of well-balanced groups. This implies careful examination of students' needs in order to guarantee a more inclusive and fair learning environment, where teams are understood as communities that value the differences in every student (Pujolàs, Riere, Pedragosa, & Soldevila, 2005).

The skills acquired during the practicum of this master have also been especially useful towards developing this proposal. Putting different lesson plans into action has elicited a more careful consideration of time constraints and viability of certain options. Previous success in the use of online tools in the classroom has motivated this proposal to include technology with the confidence that students will find it motivating and enriching. Also, this intervention departs with the knowledge that, with appropriate scaffolding, technology will facilitate the smooth-running of the programme.

The implementation of this programme would, of course, also be subject to an analysis of its viability within the specific teaching context and school where it is implemented. In this sense, it would imply analysing students' access to technology at home and/or school, obtaining permission of the school and/or department, and informing the parents whenever information is going to be collected. This proposal includes standardised testing of a series of variables,

and so the appropriate permissions would be necessary. Also, this sensitive information would have to be treated appropriately.

The creation of this proposal has also entailed pondering assessment and evaluation options. Within the field of self-regulation, assessment becomes an extremely valuable tool, to the extent that it allows students to control their own learning and generate their own feedback (Nicol & Macfarlane-Dick, 2006).

This project is therefore the culmination of all the skills and knowledge acquired through this master's degree. Its development would not have been possible without an understanding of language acquisition theories, specific approaches to L2 instruction or skills in lesson planning and materials design. More generally, it is also a reflection of the knowledge gained regarding the complexity of educational settings and the variables that influence student achievement and engagement in school.

8. REFERENCES

- Azevedo, R. (2005). Using hypermedia as a metacognitive tool for enhancing student learning? The role of self-regulated learning. *Educational Psychologist*, 40(4), 199–209. <https://doi.org/10.1207/s15326985ep4004>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.315.4567&rep=rep1&type=pdf>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Best, J. R., & Miller, P. H. (2010). A Developmental Perspective on Executive Function. *Child Development*. NIH Public Access. <https://doi.org/10.1111/j.1467-8624.2010.01499.x>
- Boekaerts, M., & Corno, L. (2005). Self regulation in the classroom: A perspective on assessment and intervention. *Applied Psychology*, 54(2), 199–231. <https://doi.org/10.1111/j.1464-0597.2005.00205.x>
- Brady-Amoon, P., & Fuertes, J. (2011). Self-efficacy, self-rated abilities, adjustment, and academic performance. *Journal of Counseling and Development*, 89(4), 431–438. <https://doi.org/10.1002/j.1556-6676.2011.tb02840.x>
- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32–42. <https://doi.org/10.3102/0013189X018001032>
- Caprara, G. V., Vecchione, M., Alessandri, G., Gerbino, M., & Barbaranelli, C. (2011). The contribution of personality traits and self-efficacy beliefs to academic achievement: A longitudinal study. *British Journal of Educational Psychology*, 81(1), 78–96. <https://doi.org/10.1348/2044-8279.002004>
- Carneiro, R., Lefrere, P., & Steffens, K. (2007). Self-regulated learning in technology enhanced learning environments: A European review. *Higher Education*, 17(3). Retrieved from <http://www.selfdirectedlearning.com/index.html>
- Chan, C. K. K. (2012). Co-regulation of learning in computer-supported collaborative learning environments: A discussion. *Metacognition and Learning*. <https://doi.org/10.1007/s11409-012-9086-z>

- Chien, S. C. (2012). Students use of writing strategies and their English writing achievements in Taiwan. *Asia Pacific Journal of Education*, 32(1), 93–112. <https://doi.org/10.1080/02188791.2012.655240>
- Chun, D. M. (2011). Computer-assisted language learning. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning (Volume II)* (pp. 663–680). New York, NY: Routledge. Retrieved from https://s3.amazonaws.com/academia.edu.documents/30836052/ebooksclub.org__Handbook_of_Research_in_Second_Language_Teaching_and_Learning__Volume_2__ESL__amp__Applied_Linguistics_Professional_Series.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1532505975&Si
- Cleary, T. J., & Zimmerman, B. J. (2004). Self-regulation empowerment program: A school-based program to enhance self-regulated and self-motivated cycles of student learning. *Psychology in the Schools*, 41(5), 537–550. <https://doi.org/10.1002/pits.10177>
- Council of Europe. (2017). Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR).
- Dickinson, L., & Carver, D. (1980). Learning how to learn: Steps towards self-direction in foreign language learning in schools. *English Language Teaching Journal*, 35(1), 1–7. Retrieved from <https://eric.ed.gov/?id=EJ238895>
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. London and New York: Lawrence Erlbaum Associates.
- Downes, S. (2012). *Connectivism and connective knowledge: Essays on meaning and learning networks*. National Research Council Canada. Retrieved from http://www.downes.ca/files/books/Connective_Knowledge-19May2012.pdf
- Duckworth, A. L., Tsukayama, E., & May, H. (2010). Establishing causality using longitudinal hierarchical linear modeling: An illustration predicting achievement from self-control. *Social Psychological and Personality Science*, 1(4), 311–317. <https://doi.org/10.1177/1948550609359707>
- England, S. (2017). Tech for the modern EFL student: collaborate and motivate with Padlet. *Accents Asia*, 9(2), 56–60. Retrieved from

- <http://www.issues.accentasia.org/issues/9-2/England.pdf>
- Foster, A. L. (2006). Students fall short on “information literacy”, educational testing service’s study finds. *The Chronicle of Higher Education*, 53(10), 1–2.
- Fuchs, B. (2014). The writing is on the wall: using Padlet for whole-class engagement. *Library Faculty and Staff Publications*, 240. Retrieved from https://uknowledge.uky.edu/libraries_facpub
- Gao, X. (2007). Has language learning strategy research come to an end? A response to Tseng et al. (2006). *Applied Linguistics*, 28(4), 615–620. <https://doi.org/10.1093/applin/amm034>
- Hadwin, A. F., Järvelä, S., & Miller, M. (2011). Self-regulated, co-regulated, and socially shared regulation of learning. In B. J. Zimmerman & D. H. Schunk (Eds.), *Handbook of Self-Regulation of Learning and Performance*. New York, NY: Routledge. <https://doi.org/10.4324/9780203839010.ch5>
- Hernández-Sellés, N., González-Sanmamed, M., & Muñoz-Carril, P. C. (2014). La planificación del aprendizaje colaborativo en entornos virtuales. *Comunicar*, 21(42), 25–33. <https://doi.org/10.3916/C42-2014-02>
- Hockly, N. (2011). The digital generation. *ELT Journal*, 65(3), 322–325. <https://doi.org/10.1093/elt/ccr041>
- Inozu, J., Sahinkarakas, S., & Yumru, H. (2010). The nature of language learning experiences beyond the classroom and its learning outcomes. *US-China Foreign Language*, 8(1), 14–22. Retrieved from https://s3.amazonaws.com/academia.edu.documents/36449541/the_nature_of_language_learning.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1531767036&Signature=fdeAflW5gDrnxLA26zc2B2onZoE%3D&response-content-disposition=inline%3Bfilename%3DThe_nature_of_la
- Kim, D. H., Wang, C., Ahn, H. S., & Bong, M. (2015). English language learners’ self-efficacy profiles and relationship with self-regulated learning strategies. *Learning and Individual Differences*, 38, 136–142. <https://doi.org/10.1016/j.lindif.2015.01.016>
- Kitsantas, A., Steen, S., & Huie, F. (2009). The role of self-regulated strategies and goal orientation in predicting achievement of elementary school children. *International Electronic Journal of Elementary Education*, 2(1), 65–81.
- Klement, M., Chráska, M., & Klementová, S. (2015). Explanation of instruments

- and procedures used by the recipients of education in order to build their own learning network, based on the generic model cognitive process. *Procedia - Social and Behavioral Sciences*, 174, 1614–1622. <https://doi.org/10.1016/j.sbspro.2015.01.812>
- Komarraju, M., & Nadler, D. (2013). Self-efficacy and academic achievement: Why do implicit beliefs, goals, and effort regulation matter? *Learning and Individual Differences*, 25, 67–72. <https://doi.org/10.1016/j.lindif.2013.01.005>
- Kopp, C. B. (1982). Antecedents of self-regulation: A developmental perspective. *Developmental Psychology*, 18(2), 199–214. <https://doi.org/10.1037/0012-1649.18.2.199>
- Lai, C., & Gu, M. (2011). Self-regulated out-of-class language learning with technology. *Computer Assisted Language Learning*, 24(4), 317–335. <https://doi.org/10.1080/09588221.2011.568417>
- Lai, C., Shum, M., & Tian, Y. (2016). Enhancing learners' self-directed use of technology for language learning: the effectiveness of an online training platform. *Computer Assisted Language Learning*, 29(1), 40–60. <https://doi.org/10.1080/09588221.2014.889714>
- Lau, W. W. F., & Yuen, A. H. K. (2014). Developing and validating of a perceived ICT literacy scale for junior secondary school students: Pedagogical and educational contributions. *Computers and Education*, 78, 1–9. <https://doi.org/10.1016/j.compedu.2014.04.016>
- Lee, C. C. (2002). Strategy and self-regulation instruction as contributors to improving students' cognitive model in an ESL program. *English for Specific Purposes*, 21(3), 261–289. [https://doi.org/10.1016/S0889-4906\(01\)00008-4](https://doi.org/10.1016/S0889-4906(01)00008-4)
- Lee, I. (1998). Supporting greater autonomy in language learning. *ELT Journal*, 52(4), 282–290. <https://doi.org/10.1093/elt/52.4.282>
- Leu, D., Kinzer, C., Coiro, J., Castek, J., & Henry, L. (2013). New literacies: A dual-level theory of the changing nature of literacy, instruction, and assessment. In *Theoretical Models and Processes of Reading* (pp. 1150–1181). <https://doi.org/10.1598/0710.42>
- Leu, D., Mcverry, J. G., O'byrne, W. I., Kiili, C., Zawilinski, L., Everett-Cacopardo, H., ... Forzani, E. (2011). The new literacies of online reading comprehension: Expanding the literacy and learning curriculum. *Journal of*

Adolescent & Adult Literacy, 55(1), 5–14. Retrieved from <https://wiobyrne.com/wp-content/uploads/2014/09/The-New-Literacies-of-Online-Reading.pdf>

Ley orgánica para la mejora de la calidad educativa (LOMCE) (Ley Orgánica 8/2013, 9 de diciembre). (n.d.). Boletín Oficial del Estado, nº 295, 2013, 10 diciembre.

Littlewood, W. (1996). "Autonomy": An anatomy and a framework. *System*, 24(4), 427–435. [https://doi.org/10.1016/S0346-251X\(96\)00039-5](https://doi.org/10.1016/S0346-251X(96)00039-5)

Lynch, R., & Dembo, M. (2004). Online Learning in a Blended Learning Context. *International Review of Research in Open and Distance Learning*, 5(2), 1–16. <https://doi.org/10.1017/CBO9781107415324.004>

Mayer, R. E. (1996). Learners as information processors: Legacies and limitations of educational psychology's second metaphor. *Educational Psychologist*, 31(3/4), 151–161. <https://doi.org/10.1080/00461520.1996.9653263>

McClelland, M., Cameron, C. E., Duncan, R., Bowles, R. P., Acock, A. C., Miao, A., & Pratt, M. E. (2014). Predictors of early growth in academic achievement: The head-toes-knees-shoulders task. *Frontiers in Psychology*, 5(June), 1–14. <https://doi.org/10.3389/fpsyg.2014.00599>

McClelland, M., Geldhof, J., Morrison, F., Gestsdóttir, S., Cameron, C., Bowers, E., ... Grammer, J. (2018). Self-regulation. In N. Halfon, C. B. Forrest, R. M. Lerner, & E. M. Faustman (Eds.), *Handbook of Life Course Health Development* (pp. 275–298). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-47143-3_12

McClelland, M., & Wanless, S. B. (2012). Growing up with assets and risks: The importance of self-regulation for academic achievement. *Research in Human Development*, 9(4), 278–297. <https://doi.org/10.1080/15427609.2012.729907>

McLoughlin, C., & Lee, M. J. W. (2010). Personalised and self regulated learning in the Web 2.0 era: International exemplars of innovative pedagogy using social software. *Australasian Journal of Educational Technology*, 26(1), 28–43. <https://doi.org/10.14742/ajet.1100>

Morrison, F. J., Ponitz, C. C., & McClelland, M. M. (2010). Self-regulation and academic achievement in the transition to school. In S. D. Calkins & M. A.

- Bell (Eds.), *Child development at the intersection of emotion and cognition* (pp. 203–224). Washington, DC: American Psychological Association.
<https://doi.org/10.1037/12059-011>
- Morshedian, M., Hemmati, F., & Sotoudehnama, E. (2017). Training EFL learners in self-regulation of reading: Implementing an SRL model. *Reading and Writing Quarterly*, 33(3), 290–303.
<https://doi.org/10.1080/10573569.2016.1213147>
- Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: a model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199–218.
<https://doi.org/10.1080/03075070600572090>
- Oxford, R. L. (1989). Strategy Inventory for Language Learning (SILL) [Measurement Instrument]. Retrieved from:
<https://richarddpetty.files.wordpress.com/2010/03/sill-english.pdf>
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. New York, NY: Newbury House Publisher.
- Oxford, R. L. (1996). *Language learning strategies around the world: Crosscultural perspectives*. Manoa: University of Hawai'i Press. Retrieved from
https://books.google.es/books/about/Language_Learning_Strategies_Around_the.html?id=DamZBpvwYOkC&redir_esc=y
- Oxford, R. L. (1999). Relationships between second language learning strategies and language proficiency in the context of learner autonomy and self-regulation. *Revista Canaria de Estudios Ingleses*, 38, 109–126. Retrieved from
https://s3.amazonaws.com/academia.edu.documents/44593187/08_Rebecca_L._Oxford.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1532432385&Signature=tq9EIOR0WWje%2B8Us3h6GSYBINj0%3D&response-content-disposition=inline%3Bfilename%3DRELATIONSHIPS_BETWEEN_SEC
- Oxford, R. L. (2011). *Teaching and researching language learning strategies*. Harlow, England: Pearson Education.
- Panadero, E. (2017). A review of self-regulated learning: Six models and four directions for research. *Frontiers in Psychology*, 8(422), 1–28.

- <https://doi.org/10.3389/fpsyg.2017.00422>
- Pinter, A. (2006). Verbal evidence of task related strategies: Child versus adult interactions. *System*, 34(4), 615–630. <https://doi.org/10.1016/J.SYSTEM.2006.09.005>
- Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of Self-Regulation* (pp. 452–502). London: Academic Press. <https://doi.org/10.1016/B978-012109890-2/50043-3>
- Posner, M. I., & Rothbart, M. K. (2000). Developing mechanisms of self-regulation. *Development and Psychopathology*, 12(3), 427–441. <https://doi.org/10.1017/S0954579400003096>
- Pujolàs, P., Riere, G., Pedragosa, O., & Soldevila, J. (2005). Aprender juntos alumnos diferentes. El “qué” y el “cómo” del aprendizaje cooperativo en el aula. *Laboratorio de Psicopedagogía*. Barcelona: Universidad de Vic. Retrieved from [http://www.deciencias.net/convivir/1.documentacion/D.cooperativo/Aprender juntos_Alumnosdiferentes\(1\)_Pujolas_25p.pdf](http://www.deciencias.net/convivir/1.documentacion/D.cooperativo/Aprender juntos_Alumnosdiferentes(1)_Pujolas_25p.pdf)
- Roschelle, J., & Teasley, S. D. (1995). The construction of shared knowledge in collaborative problem solving. In C. O'Malley (Ed.), *Computer Supported Collaborative Learning* (pp. 69–97). Berlin: Springer. https://doi.org/10.1007/978-3-642-85098-1_5
- Rose, H., Briggs, J. G., Boggs, J. A., Sergio, L., & Ivanova-Slavianskaia, N. (2018). A systematic review of language learner strategy research in the face of self-regulation. *System*, 72, 151–163. <https://doi.org/10.1016/j.system.2017.12.002>
- Rubin, J. (1975). What the “good language learner” can teach us. *TESOL Quarterly*, 9(1), 41. <https://doi.org/10.2307/3586011>
- Rubin, J. (2001). Language learner self-management. *Journal of Asian Pacific Communications*, 11, 25–37.
- Saab, N. (2012). Team regulation, regulation of social activities or co-regulation: Different labels for effective regulation of learning in CSCL. *Metacognition and Learning*, 7(1), 1–6. <https://doi.org/10.1007/s11409-011-9085-5>
- Schunk, D. H. (2012). *Learning theories: An educational perspective*. Printice Hall Inc., New Jersey (Vol. 53). Boston, MA: Pearson Education.

<https://doi.org/10.1017/CBO9781107415324.004>

- Seker, M. (2016). The use of self-regulation strategies by foreign language learners and its role in language achievement. *Language Teaching Research*, 20(5), 600–618. <https://doi.org/10.1177/1362168815578550>
- Sentürk, B. (2016). Self-regulation strategies and vocabulary size of EFL Turkish university students. *Procedia - Social and Behavioral Sciences*, 232, 90–97. <https://doi.org/10.1016/j.sbspro.2016.10.023>
- Shea, P., & Bidjerano, T. (2010). Learning presence: Towards a theory of self-efficacy, self-regulation, and the development of a communities of inquiry in online and blended learning environments. *Computers and Education*, 55(4), 1721–1731. <https://doi.org/10.1016/j.compedu.2010.07.017>
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*, 2(1), 1–8. Retrieved from http://www.itdl.org/journal/jan_05/article01.htm
- Spada, N. (2007). Communicative language teaching: Current status and future prospects. In J. Cummins & C. Davison (Eds.), *International handbook of English language teaching* (pp. 271–288). Boston, MA: Springer US. https://doi.org/10.1007/978-0-387-46301-8_20
- Stefansson, K. K., Gestsdottir, S., Birgisdottir, F., & Lerner, R. M. (2018). School engagement and intentional self-regulation: A reciprocal relation in adolescence. *Journal of Adolescence*, 64, 23–33. <https://doi.org/10.1016/j.adolescence.2018.01.005>
- Thorne, S. L., Black, R. W., & Sykes, J. M. (2009). Second language use, socialization, and learning in Internet interest communities and online gaming. *The Modern Language Journal*, 93(Focus Issue), 802–821. <https://doi.org/10.1111/j.1540-4781.2009.00974.x>
- Thota, N. (2015). Connectivism and the use of technology/media in collaborative teaching and learning. *New Directions for Teaching and Learning*, 142(Summer 2015), 81–96. <https://doi.org/10.1002/tl.20131>
- Timothy, T., Seng Chee, T., Chwee Beng, L., Ching Sing, C., Joyce Hwee Ling, K., Wen Li, C., & Horn Mun, C. (2010). The self-directed learning with technology scale (SDLTS) for young students: An initial development and validation. *Computers and Education*, 55(4), 1764–1771. <https://doi.org/10.1016/j.compedu.2010.08.001>

- Tseng, W., Dörnyei, Z., & Schmitt, N. (2006). A new approach to assessing strategic learning: The case of self-regulation in vocabulary acquisition. *Applied Linguistics*, 27, 78–102. <https://doi.org/10.1093/applin/ami046>
- Ursache, A., Blair, C., & Raver, C. C. (2012). The promotion of self-regulation as a means of enhancing school readiness and early achievement in children at risk for school failure. *Child Development Perspectives*. <https://doi.org/10.1111/j.1750-8606.2011.00209.x>
- Vygotsky, L. S. (1978). *Mind in society: Development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology*, 71(1), 3–25. <https://doi.org/10.1037/0022-0663.71.1.3>
- Winke, P., & Goertler, S. (2008). Did We Forget Someone? Students' Computer Access and Literacy for CALL. *CALICO Journal*, 25(3), 482–509. <https://doi.org/10.1558/cj.v25i3.482-509>
- Winne, P. H., & Hadwin, A. F. (1998). Studying as self-regulated learning. In D. Hacker, J. Dunlosky, & A. Graesser (Eds.), *Metacognition in educational theory and practice*. Hillsdale, NJ: Erlbaum.
- Winne, P. H., & Hadwin, A. F. (2008). The weave of motivation and self-regulated learning. In D. H. Schunk & B. J. Zimmerman (Eds.), *Motivation and self-regulated learning: Theory, research, and applications*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Winters, F. I., Greene, J. A., & Costich, C. M. (2008). Self-regulation of learning within computer-based learning environments: A critical analysis. *Educational Psychology Review*, 20(4), 429–444. <https://doi.org/10.1007/s10648-008-9080-9>
- Wirth, J., & Leutner, D. (2008). Self-regulated learning as a competence. *Zeitschrift Für Psychologie / Journal of Psychology*, 216(2), 102–110. <https://doi.org/10.1027/0044-3409.216.2.102>
- Yongqi, G., & Johnson, R. K. (1996). Vocabulary learning strategies and language learning outcomes. *Language Learning*, 46(4), 643–679. <https://doi.org/10.1111/j.1467-1770.1996.tb01355.x>
- Zhang, L. J., Gu, P. Y., & Hu, G. (2008). A cognitive perspective on Singaporean primary school pupils' use of reading strategies in learning to read in English.

- British Journal of Educational Psychology*, 78(2), 245–271.
<https://doi.org/10.1348/000709907X218179>
- Zimic, S. (2009). Not so 'techno-savvy': Challenging the stereotypical images of the 'Net generation.' *Digital Culture & Education*, 1:2, s. 129–144. Retrieved from <http://swepub.kb.se/bib/swepub:oai:DiVA.org:miun-11278?vw=full&tab2=abs>
- Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*.
<https://doi.org/10.1207/s15326985ep2501>
- Zimmerman, B. J. (1994). Dimensions of academic self-regulation: A conceptual framework for education. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 3–21). Hillsdale, NJ: Erlbaum.
- Zimmerman, B. J. (2000a). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of Self-Regulation* (pp. 13–39). London.
- Zimmerman, B. J. (2000b). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25(1), 82–91.
<https://doi.org/10.1006/ceps.1999.1016>
- Zimmerman, B. J. (2002). Achieving self-regulation: The trial and triumph of adolescence. In F. Pajares & T. Urdan (Eds.), *Academic motivation of adolescence* (pp. 1–27). Greenwich, CT: Information Age.
- Zimmerman, B. J., & Campillo, M. (2002). Motivating self-regulated problem solvers. In J. E. Davidson & R. J. Sternberg (Eds.), *The Psychology of Problem Solving* (pp. 233–262). New York, NY: Cambridge University Press.
<https://doi.org/10.1017/CBO9780511615771.009>
- Zimmerman, B. J., & Kitsantas, A. (1997). Developmental phases in self-regulation: Shifting from process goals to outcome goals. *Article in Journal of Educational Psychology* *Journal of Educational Psychology*, 89(1), 29–36.
<https://doi.org/10.1037/0022-0663.89.1.29>
- Zimmerman, B. J., & Martinez-Pons, M. (1986). Development of a structured interview for assessing student use of self-regulated learning strategies. *American Educational Research Journal*, 23(4), 614–628.
<https://doi.org/10.3102/00028312023004614>

Zimmerman, B. J., & Martinez-Pons, M. (1988). Construct validation of a strategy model of student self-regulated learning. *Journal of Educational Psychology*, 80(3), 284–290. <https://doi.org/10.1037/0022-0663.80.3.284>

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