# "Was very father": Mexican high-school students' perspectives of Project-based Language Learning

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# ABSTRACT

Project-based Learning (PjBL) is often described in the literature (e.g., Al-Balushi and Al-Aamri, 2014; Karaçalli and Korur, 2014; etc.) as an educational model that works. Despite the substantial number of studies on the model, little has been done in the way of exploring students' perspectives of the use of PjBL in English language classrooms. Such a reality is especially true in secondary education contexts in Latin American countries.

This thesis reports on an original research study conducted to assess students' perspectives of Project-based Language Learning (PBLL) in three public high schools in the state Jalisco, in Mexico. The study's main objectives were to uncover learners' value judgements about their PjBL experience; to determine the perceived outcomes of that learning event, and; to identify factors contributing to or hindering learning in that context. Qualitative data was collected (n=456) by means of survey, following the implementation of an eight-week pilot, after which thematic analysis was used to analyze the responses.

Main research findings show that learners predominantly view their PBLL experience positively and find that PBLL helps them develop not only language, but also content and competencies. The study also found that acknowledging people as resources, promoting interaction through group work, and actively using the language are understood to be practices conducive to learning, whilst having limited time and having peers with negative attitudes/different ideas are believed to hinder learning. Such findings are in line with those of existing literature (e.g., Mali, 2017; Miller, Hefner and Fun, 2012) and shed light on the complexity of learning, in addition to providing valuable evidence to further support the claim that PjBL lends itself well to CLIL education.

Keywords: Project-based language learning, learner perspectives, Mexico, high school, EAL

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# CONTENTS

## ABBREVIATIONS

CA    Content Analysis

CLIL   Content and Language Integrated Learning

EAL    English as an Additional Language

Ec-SCT  Ecological perspective to Sociocultural Theory

ECF    EduCluster Finland

EFL    English as a Foreign Language

ELT    English Language Teaching

ESL    English as a Second Language

PjBL   Project-based Learning

PBLL   Project-based Language Learning

SCT    Sociocultural Theory

TA    Thematic Analysis

UdG   Universidad de Guadalajara

# 1 INTRODUCTION

Project-based Learning (PjBL), despite being an American model of education, has enjoyed widespread popularity across diverse contexts globally for its said potential to engage students in action and promote meaningful learning efficiently. Among the many contexts where PjBL is being increasingly implemented is the English as an Additional Language (EAL) classroom (Beckett, 2005). Although scholarly interest on PjBL has been growing since the turn of the millennium, and considerable work has been done to evaluate the effectiveness of PjBL in content classes (Kokotsaki, Menzies and Wiggins, 2016), little work has been done to explore empirically the use of PjBL in the language classroom (Petersen and Nassaji, 2016), with even less work having been done to explore learners' perspectives. Given that PjBL is a process-oriented, learner-centered model (Legutke and Thomas, 1991), and that it is being increasingly implemented in language classrooms, a need for more research on language learners' perspectives of their experience with the model has been identified.

Following the implementation of an eight-week pilot in EAL classes in three different high-schools in the state of Jalisco, Mexico, qualitative data has been collected by means of survey and analyzed using Thematic Analysis. This thesis, which is organized in six chapters, aims to paint a detailed picture of language learners' perceptions of their PjBL experience in the abovementioned context by discussing learners' value judgements, the perceived outcomes of the experience, and the factors believed to have affected the learning process. To frame this study, chapter two presents a review of the literature on PjBL and its use in additional language classrooms, before looking at the few studies which have been conducted on learners' perceptions. Chapter three then presents one of the learning theories informing PjBL, namely Sociocultural theory, and focuses in on an ecological understanding of it (as discussed by van Lier, 2010;2008;2004). Following on, chapters four and five present the context of the study and the three research questions that guide it before outlining the methodology and design of the study. In chapter six, the findings of the present study are presented in accordance

with each research question. Lastly, chapter seven introduces a discussion on the possible meaning and significance of the findings, before closing off with a brief discussion on the implications for practice and limitations of the study.

# 2 LITERATURE REVIEW

## 2.1 Project-based learning

PjBL is hardly a new phenomenon in the field of education. Originating from Pragmatism, a philosophical movement from the 19th century which "promotes action and the practical application of knowledge in everyday life" (Frey, 1986, p. 31; as cited in Fragoulis and Tsiplakides, 2009, p. 113), the birth of PjBL is often traced back to the American Pragmatist John Dewey (1916) who advocated for "learning by doing" (Dooly, 2013, p. 80; Blumenfeld et al., 1991, p. 373). However, Beckett (2002) contends that PjBL was originally conceived of by the also American, efficiency expert David Snedden to teach science in agriculture classes. It was not until William Heard Kilpatrick, one of John Dewey's students, published his *The Project Method* in 1918, nonetheless, that the concepts of 'project' and 'project-based learning' were developed and popularized in education (Petersen and Nassaji, 2016; Baş and Beyhan, 2010; Beckett, 2002; Legutke and Thomas, 1991).

At the time of Kilpatrick's publication, the United States was experiencing a progressive education reform movement which proposed greater emphasis on the development of learners' flexible critical thinking and ability to engage in action so that schools, as a form of community life, could become a place where social and political change were generated (Petersen and Nassaji, 2016). Scholars such as Kilpatrick and Dewey believed that this could be achieved through the promotion of manual activity over verbalism; through learners' active participation in the learning process; and through the use of learners' immediate reality as the point of departure for learning (Fragoulis and Tsiplakides, 2009).

Despite having originally been conceptualized in American culture, over the years, as constructivist and socio-constructivist theories have gained ground in education, the theory of PjBL has spread across the globe and developed. Ideas by earlier European thinkers such as Jan Comenius, Johann Pestalozzi, Maria Montessori, and Jean Piaget, as well as by Russian psychologist Lev Vygotsky, and more recently, from David Kolbe's

(1984) *Experiential Learning* have been incorporated into a developing theory of PjBL (Petersen and Nassaji, 2016). Though ever-growing, such a theory draws from the traditions of philosophy, education, and social and cognitive psychology, which give it a solid foundation.

Perhaps due to receiving influences from such varied sources, there is currently no single accepted definition of what PjBL is. While many view it as an approach to education (Kokotsaki et al., 2016; Petersen and Nassaji, 2016; Baş and Beyhan, 2010; Bell, 2010), others view it as an instructional method (Torres and Rodriguez, 2017) or a framework (Bluemenfeld et al., 1991) which can either co-exist in the classroom with other forms of instruction, as a complement, or stand alone as the only form of instruction (Stoller, 2002). Considering that PjBL is founded in constructivist and socio-constructivist learning theories and that, as an educational phenomenon, it can exist side-by-side with other forms of instruction, for the purpose of this study, PjBL is considered a model of instruction – that is to say, a set of guidelines and strategies to be used by teachers in promoting learning.

Much as there is no agreement on what PjBL is, currently, there is no one set of defining features used by researchers or practitioners in the planning of events of PjBL; rather, there is a diversity. However, three defining characteristics seem to appear repeatedly across the literature. The first defining characteristic is that students are at the center of learning. Because PjBL draws on the constructivist principle that learners are active agents in the learning process (Inhelder and Piaget, 1958), PjBL events should be student-centered and, for the most part, student-driven (Torres and Rodriguez, 2017; Bell, 2010; Hmelo-Silver, Duncan and Chinn, 2007; Stoller, 2002; Legutke and Thomas, 1991). Events should also allow for the practice and development of student autonomy (Vogler et al., 2018; Dooly, 2013).

The second characteristic is that, in instances of PjBL, students interact and collaborate with others. On the basis of the sociocultural principle that learning is mediated in social interaction (Vygotsky, 1978), learning events should promote opportunities for learners to engage in collaboration with peers, by means of group work, and expert others (Torres and Rodriguez, 2017; Petersen and Nassaji, 2016; Baş and Beyhan, 2010; Stoller, 2002;

Thomas, 2000; Legutke and Thomas, 1991). Opportunities for learners to interact with the community at large should also be promoted (Torres and Rodriguez, 2017; Bell, 2010).

The third feature of PjBL is that, in learning events, students research and create by means of engaging in a project that speaks to their reality. Given learning is understood to be context-dependent due to being social in nature (Vygotsky, 1978), learners are to engage in inquiry on issues which are relevant to the context they are immersed in (Baş and Beyhan, 2010; Bell, 2010; Thomas, 2000; Blumenfeld et al., 1991). What is more, because learning is also seen as an active process, using what they have found through inquiry, learners are expected to produce a tangible artifact to be presented at the end of the process with the aim of socializing with others the knowledge and skills they have acquired through the process (Kokotsaki et al., 2016; Bell, 2010; Stoller, 2002; Blumenfeld et al., 1991). Despite there being an end product, PjBL proponents often stress the value should lie in the learning process (Petersen and Nassaji, 2016; Stoller, 2002; Thomas, 2000). This third defining characteristic is particularly relevant as it is often used to differentiate PjBL from other instructional models, such as Problem-based Learning (PBL) or investigative research, wherein learners investigate on a theme but do not necessarily create any concrete products at the end of the process (Vogler et al., 2018; Kokotsaki et al., 2016; Petersen and Nassaji, 2016).

It is vital to stress that central to the notion of PjBL are projects. Different scholars have debated over what exactly constitutes a project and what forms it could have. Although there is also no agreement, the aspects discussed in the literature are not exclusive. Thomas' (2000) definition of project is often used in research for its clarity, straightforwardness, and comprehensiveness. According to Thomas (2000), projects must meet five criteria to be considered an instance of PjBL. They are (1) centrality, which implies "projects are [underlined in original] the curriculum" (2000, p. 3) and are not just some activity for "application" of knowledge; (2) driving question, which means "projects are focused on questions or problems that "drive" students to encounter (and struggle with) the central concepts and principles of a discipline" (2000, p. 3); (3) constructive investigation, hence projects involve students in a "goal-directed process that involves inquiry, knowledge building, and resolution" (2000, p. 3); (4) autonomy,

which is to say "projects are student-driven to some significant degree" (2000, p. 4); and, (5) realism, that is "projects are realistic, not school-like" (2000, p. 4).

Furthermore, Blumenfeld et al. (1991) explain that projects are "long-term, problem-focused, and meaningful units of instruction that integrate concepts from a number of disciplines or fields of study" (1991, p. 370). Much like Thomas (2000), Blumenfeld et al. (1991) point out that projects require a driving question, but they emphasize the additional need for the process to help "build bridges between phenomena in the classroom and real-life experiences" (1991, p. 372) and eventually "result in a series of artifacts, or products, that culminate in a final product that addresses the driving question" (1991, p. 374). In agreement with both Thomas' (2000) and Blumenfeld et al.'s (1991) views, Petersen and Nassaji (2016) contribute to the dialogue by providing examples of what these artifacts could look like. According to the authors, the final products could have the form of a website, an advertising campaign, a guidebook, a written report, a newspaper, or a presentation, among other possibilities.

On the basis of the key characteristics of PjBL, one could argue that implementing PjBL is not without some challenges. Not only does the proper implementation of this model require a lot of work, but it also calls for a shift in perspective from students – and possibly teachers –, especially in contexts where they are used to having more traditional learning experiences. Project-based work requires that learners engage cognitively with subject matter quite intensively and for a somewhat long period of time (Bluemenfeld et al., 1991), which might increase their 'cognitive load' (Sweller, 1994). If left unattended, especially when coupled with the other creative demands of projects, this is likely to result in lower motivation and disengagement on the part of the students. Furthermore, learners who do not view errors as fostering learning or do not see the value of learning through projects, either because of their educational/social background or their beliefs, may not benefit as much from the experience (Beckett and Slater, 2005; Blumenfeld et al., 1991).

In light of the complexity of the model, it is fair to say teachers have a decisive role in making the PjBL experience successful. In addition to possibly having to explicitly challenge students' perspectives on learning – which is all the more true the older

students are –, they must take the role of facilitators of learning who provide plenty of 'scaffolding' (Sherwood and Bruner, 1975), an issue that is stressed by multiple researchers (see Vogler et al., 2018; Kokotsaki et al., 2016; Bell, 2010; Hmelo-Slver et al., 2007; Thomas, 2000; Blumenfeld et al., 1999). They also have the key responsibility of providing models so learners can develop the necessary skills to complete a given project – skills such as collaboration, communication, inquiry, and problem-solving, among others. Moreover, teachers must be tolerant and flexible (Torres and Rodriguez, 2017) because the dynamics of the classroom might not be as orderly-looking when students are not working in lockstep, and because they will likely be dealing with content that might not necessarily relate to their area of knowledge or expertise. Over and above that, teachers still hold the responsibilities common to more traditional environments such as encouraging and assessing learners, but unlike what often happens in those contexts, in PjBL they should not make "performance orientations salient" (Blumenfeld et al., 1991), rather focusing on the process of learning.

All in all, whilst it is clear that implementing PjBL is not necessarily an easy undertaking given the many challenges and requirements for learners and teachers alike, should they both engage in the process enthusiastically and play their roles as expected, the outcomes are promising. Advocates of such a model argue the possible gains are manifold. Regarding attitudes, PjBL is said to have the potential to promote increased student interest and motivation (Stoller, 2002; Blumenfeld et al., 1991), as well as enhance student engagement (Wurdinger, Harr, Hugg and Bezon, 2007). As relates to academic attainment, PjBL proponents and researchers claim it can foster the development of 21st century skills such as collaboration (Kokotsaki et al., 2016), problem-solving and creative-thinking (Baş and Beyhan, 2010), as well as help learners develop both deep understanding of content (Bell, 2010; Blumenfeld et al., 1991) and language skills (Bell, 2010; Beckett and Slater, 2005).

## 2.2 Project-based learning and English Language Teaching

Even though PjBL is not a new phenomenon, its introduction in the field of English Language Teaching (ELT) is rather recent. Whilst Hedge (1993) claims PjBL gained

ground in ELT in the mid-seventies as a reflection of the growth of learner-centered teaching and task-based learning in the field, Beckett (2002) explains that it was Swain's (1985) findings, which put into question Krashen's (1981) input hypothesis, that greatly contributed to the spread and wider adoption of PjBL in foreign and second language classrooms, a phenomenon that later came to be called Project-based Language Learning (PBLL). Whereas Krashen (1981) claimed comprehensible input ('i + 1') was the most important factor contributing to second language acquisition, Swain (1985) proposed, upon evaluation of learners in a Canadian French immersion program, that language learners need to produce comprehensible output in interaction in addition to receiving comprehensible input. In other words, according to Swain (1985), it is as important for learners to produce language in interaction as it is for them to be exposed to it if the goal is acquisition. PjBL affords learners opportunities to do both in an integrated manner.

Another factor might have also helped the model see wider acceptance in ELT. The 1990s saw the emergence of both Halliday's (1994) concept of systemic functional linguistics, which "calls for students to learn English as a Second Language (ESL) through studying subject-matter content and academic literacy skills using the English language as a meaning-making resource" (Beckett, 2005, p. 196), and Content Language Integrated Learning (CLIL), a "dual-focused educational approach in which an additional language is used for the learning and teaching of both content *and* [italics in original] language" (Coyle, Hood and Marsh, 2010, p. 1). Inasmuch as PjBL is a means for learning both content and language, it is said to lend itself well to such approaches that call for the integration of both. Therefore, it is reasonable to claim PjBL might have gained more space in ELT since the conception of both approaches above.

PBLL, as a phenomenon, is believed to afford particularly rich opportunities for language development. Much as in CLIL education, content is the starting point and provides the context from which language learning opportunities emerge. By engaging with content within the framework of a project, communicative needs arise (Torres and Rodriguez, 2017) which afford the development of both Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP) (Cummins, 1979). Through the production of comprehensible output, exposure to

comprehensible input, and scaffolded instruction, students engage in learning events and have the chance to develop both fluency and accuracy in all four language skills (reading, writing, listening, and speaking) (Beckett, 2002). Dooly (2013), however, draws attention to the fact that, in PBLL, "the teacher must not become overly focused on language use to the possible detriment of content, or at the risk of weighing down the project with schoolwork-type activities" (2013, p. 83) as content development is still just as important as language development.

In PBLL, much as in other models of education, teachers play a crucial role in assisting learners' linguistic development. In addition to using a variety of language-scaffolding techniques in class, when designing the project, teachers are to make sure they include "multiple (authentic) communicative outputs in varying forms (speaking, listening, reading, and writing) in a wide variety of sub-activities and activities, all within an array of contexts." (Dooly, 2013, p. 82). In the process, although teachers will choose to set some pre-defined linguistic goals, 'learning moments' which were not predicted are likely to arise often in class. Albeit helpful, planning lessons properly and spending time anticipating problems is not enough, and a lot of flexibility and tact are expected from teachers to deal with the language and communication demands that will emerge (Torres and Rodriguez, 2017). Finally, teachers must maintain a bifocal perspective at all times given language is both "the object of study and the vehicle for the learning process" (Dooly, 2013, p. 83).

It should be noted at this point that much of the literature here reviewed on PBLL seems to be based on a more traditional view of language. In it, language is commonly implied to be a system one learns, and the use of the word is often limited to mean named languages. Furthermore, a segmented view can also be observed as authors often refer to discrete skills such as speaking, listening, reading, and writing. However, should one look at language in a wider, translingual perspective (Garcia and Wei, 2014) which understands language as a transgressive sociocultural practice and which is perhaps more appropriate for a PBLL context, the claims made on the learning potential of PBLL could be expanded. Arguably, from a translingual perspective, instead of only affording the development of BICS and CALPS, or of fluency and accuracy in a target, named

language, one could look at PBLL as possibly affording the incorporation and reshaping of linguistic resources in multiple named languages, as well as the appropriation and development of multimodal forms of linguistic representation and expression.

## 2.3 Studies on Project-based Learning and Project-based Language Learning

PjBL has been well-documented in research and the array of literature is vast, covering all contexts of education across continents, from pre-primary to higher education. Despite there being some experimental and quasi-experimental studies across a diversity of contexts assessing the value of PjBL (see, e.g., Al-Balushi and Al-Aamri, 2014; Karaçalli and Korur, 2014; Hernández-Ramos and De La Paz, 2009; Gültekin, 2005, etc.), the ample majority of studies in the field are observational and carried out in content classes. Amongst the former group, studies usually employ quantitative methods and generally report that learners in PjBL environments either match or outperform those in more traditional contexts in terms of academic achievement and retention of knowledge – whilst also demonstrating higher levels of motivation and more positive attitudes towards learning. In the latter group, studies are typically qualitative or mixed-methods and usually concentrate either on teachers' (see, e.g., Habok and Nagy, 2016; Tamim and Grant, 2013), students' (see, e.g., Vogler et al., 2018; Mosier, Bradley-Levine and Perkins, 2016; Allison et al., 2015; Smith, 2015; Grant, 2011) or both groups' (see, e.g. Lima, Carvalho, Assunção-Flores and Van Hattum-Janssen, 2007) perceptions of PjBL in terms of its value and perceived outcomes, factors which affect the learning process, and feelings about stances of implementation of the model.

Amongst those studies which focus on students' perspectives, findings are varied and non-generalizable. With reference to learners' feelings, findings often show that learners have a generally positive view of projects and PjBL (Mosier et al., 2016; Alison et al., 2015), which has been suggested to be conducive to effective learning and to increased levels of wellbeing (Alison et al., 2015). As regards learning outcomes, PjBL has been said to afford learning that goes beyond the scope of the curriculum (Smith, 2015) and that often remains invisible (Grant, 2011). Furthermore, the model is perceived to have the potential to promote learning that is not only immediately applicable to classroom tasks (Alison et

al., 2015), but also relevant to students' lives outside of the classroom (Mosier, Bradley-Levine and Perkins, 2016). Examples of perceived outcomes include the development of both soft and hard skills (Vogler et al., 2018), 21$^{st}$ century skills (Mosier et al., 2016), empathy (Smith, 2015), as well as coping strategies and deeper learning (Alison et al., 2015). Finally, as regards factors affecting learning in PjBL, studies such as Grant's (2011) explain that a number of factors have been found to be associated with PjBL, amongst which are learners' perceptions of self and of their teachers, their understanding of what projects are, the importance given to grades, the amount of time available to complete a project, and the use of technology.

Whilst there are a number of studies on PjBL in the content classroom, there is a general dearth of research in foreign and second language classrooms. Although the number of studies in recent years has been growing, still few studies have explored empirically the use of project work in the EAL classroom (for examples of empirical studies, see Lubis, Lubis and Ashadi, 2018; Torres and Rodriguez, 2017; Shafaei and Rahim, 2015; Kettanun, 2014; Díaz Ramírez, 2014). Moreover, research is particularly scanty on student perspectives of PBLL. Through the use of databases such as ERIC, JYKDOK, and Google Scholar, only five research studies aimed at exploring learner perspectives in PBLL were found, all of which shall be discussed below.

In one systematic research study, Petersen and Nassaji (2016) explore students' and teachers' conceptions, beliefs, and attitudes toward the use of PjBL in the second-language classroom across three ESL schools in the province of British Columbia, Canada. 30 teachers with varying degrees of experience and 88 adult language learners from 11 nationalities at an upper-intermediate or advanced level participated in the study. Analysis of questionnaire and interview data indicated teachers and students alike had positive opinions of PBLL. Students, however, were less positive than teachers about some features of PBLL such as engaging in groupwork, working on a project for an extended period of time, or reflecting on the learning process. It is not clear from the study report whether students did not see added value or simply did not like participating in activities with such characteristics. It is also worth mentioning that this study was not conducted after a specific event of PBLL and therefore, there were no

means of ascertaining without doubt if participants in the study had ever even been exposed to actual instances of that model.

Another study conducted in British Columbia, Canada, produced divergent results. Beckett (2005) explores students' perceptions of PjBL in ESL classes in a High School. 73 students across grades 8-12, aged 13 to 18, who were originally born in Taiwan, Hong Kong or mainland China, but who had been in Canada for various amounts of time and had been exposed to multiple instances of PjBL in their ESL classes participated in the study. Upon analysis of student interviews and written reflections collected over a span of two years, findings showed the majority of learners (57%) perceived PBLL negatively and expressed frustration over the student-centeredness and perceived unstructured nature of the model, further expressing they often failed to see the relevance of some of the things they were doing. Anxiety and time demand were also mentioned as reasons why learners did not enjoy PBLL. Those who did enjoy it, however, or who at least acknowledged to some extent there are benefits to the model, reported having developed non-linguistic skills in research, technology-literacy, and presentation, and said they had fun, enjoyed the challenge, and felt an improvement in retention of information.

In a study conducted in a higher education institution in Hong Kong, Miller, Hefner and Fun (2012) explore students' views on the potential of and problems with using technologically-enhanced PjBL in an English for Academic Purposes context. One student cohort of 67 students of about 20 years-old was examined after being exposed to a term-long event of PBLL using a questionnaire, blog entries, and focus-group interviews. The results showed that, in general, students enjoyed the experience and found it exciting and different, with groupwork being often mentioned as the most enjoyable aspect of the intervention – which is contrary to Petersen and Nassaji's (2016) findings that learners do not enjoy groupwork as much. Moreover, they reported having felt like they developed their English language skills, especially oral skills like presentation, pronunciation, and listening. Among the issues with PBLL, learners expressed concerns with a perceived lack of time and lack of support in dealing with the technological tools which they were using to complete the project.

In a study from Indonesia, Mali (2017) examined EFL student perspectives on the implementation of PjBL in an 'Introduction to Computer Assisted Language Learning' undergraduate course. By delving into 30 young adult learners' perspectives through the analysis of their reflective notes, which were collected halfway through the PBLL event, the researcher identified perceived advantages and challenges with using this learning model. Among the main advantages alluded to by learners were the potential of the model to promote learner autonomy, the development of cooperation skills, and learning from each other. Challenges mentioned, on the other hand, related to dealing with learners with negative attitudes or different ideas, lacking feedback and guidance from the teacher, and managing time to work on the project. Whilst these findings are interesting and somewhat corroborate findings by other researchers, such as those by Miller et al. (2012), the study design included no means of triangulation and perspectives were collected prior to the experiments' end, when students' reflections might have been different.

In another study conducted at a higher education institute in Thailand, Poonpon (2017) analyzed data from interviews with 47 EFL undergraduate students majoring in Information Science after a PBLL intervention to uncover their perceptions of how it can foster development of the four language skills. Students perceived PBLL as having the potential to develop their language skills, especially reading, writing, and speaking, as well as other non-linguistic skills related to content and technology. Moreover, the majority expressed PBLL should be used more often, which suggests they see the value in it, despite having expressed the need for more scaffolding and developing better time management.

All in all, whilst some findings repeat across studies – especially those related to challenges or issues with implementation, all of which point to the need for more scaffolding and better allocation of time – the body of research on student perspectives is rather inconclusive. As can be observed, results have so far been context-specific and similarities and differences in findings across studies cannot be explained by any one characteristic of learners or the context. For example, whilst Petersen and Nassaji's (2016) and Beckett's (2005) studies were both conducted in Canada, they yielded divergent

results. Similarly, Miller, Hefner and Fun' (2012), Mali's (2017) and Poonpon's (2017) studies, despite having been conducted in higher education, also yielded somewhat different results. Arguably, then, learning experiences and research findings are likely to indeed be context-specific; however, the possibility that similarities and differences in findings could be attributed to specific characteristics, such as learner background, age, or level of education, to name a few, cannot be eliminated. Since research has hitherto been limited to few studies, neither affirmation can be made for sure. Hence, more research on PBLL is needed.

In light of the review and analysis made thus far, a need has been identified to conduct research on learners' perspectives of PBLL in a Mexican high-school context. Reasons to justify such a study are twofold. The first one relates to the importance of understanding learners' perspectives. If PBLL is indeed rooted in sociocultural theory, and if it is a learner-centered model of education, then it is paramount that we come to understand more about how learners feel about the use of such a model in their classes, as well as what and how they learn during lessons. The second reason, on the other hand, relates to the possible relevance, at both local and global levels, of understanding the Mexican context. Considering that only one of the five studies here reviewed was conducted in basic education and that none have come from Latin American countries, if PBLL implementation and outcomes vary across contexts, then little information is available to inform future implementations of PBLL in Mexican high schools. If, on the other hand, similarities and differences in experiences can be explained by learner or context characteristics, research in the Mexican high-school context could provide more information for one to hypothesize about what features likely affect PBLL experience, thus likely enabling the formulation of a theory of PBLL implementation.

# 3 THEORETICAL FRAMEWORK

## 3.1 Sociocultural theory

Sociocultural theory (SCT) is a theory of mind grounded in the writings of Lev S. Vygotsky and his students. Originally known as 'cultural psychology' or 'cultural-historical psychology' (Lantolf and Beckett, 2009), SCT was Vygotsky's aim at unifying the field by grounding it in Marxist theory (Cole and Scribner, 1978; Lantolf, Thorne and Poehner, 2015). During his time, psychological studies based on botanical and zoological models of human development were quite *en vogue*. Psychologists such as Karl Stumpf argued that development was caused by the maturation of the whole organism, meaning biological factors were the most critical ones impacting the development of human thinking (Vygotsky, 1978). Whilst Vygotsky acknowledged that "biological factors formed the basis of human thinking" (Lantolf and Thorne, 2007, p. 202), he claimed such factors in and of themselves were insufficient to explain mental activity because "the conception of maturation as a passive process cannot adequately describe [human behavior and its development]" (Vygotsky, 1978, p. 19).

Given that Vygotsky agreed with the Marxist principles that human consciousness is fundamentally social, and that human activity is mediated by both material and symbolic artifacts (Wertsch, 1985), he believed necessary to situate mental activity within a sociocultural context. Therefore, Vygotsky (1978) contested the view that human psychological processes preexist inside one's head just waiting to emerge at the right time of maturation by proposing instead that "while human neurobiology is a necessary condition for higher mental processes, the most important forms of human cognitive activity develop through interaction within social and material environments" (Engeström, 1987; as cited in Lantolf et al., 2015, pp. 1-2). With that, Vygotsky (1978) redefined development and proposed a new understanding of the relationship between development and learning as a sociocultural phenomenon be established. In other words, he denied the view that development, as the result of maturation, precedes learning and

posited instead that the relationship between learning and development is dialogical, i.e., that learning drives development just as much as the latter enables the former.

Since then, SCT has evolved by receiving contributions from scholars not only in the field of psychology, but of sociology, education, and linguistics, to name a few. Nowadays, SCT is used both as a methodology to improve teaching and learning processes and environments, and as a research framework which serves to guide the description and analysis of mediated mind studied in the contexts wherein humans engage in activity (Lantolf et al., 2015). In this thesis, SCT is similarly the key theory informing PjBL practice, as well as the theoretical framework grounding the study. In practice this means that this study will follow Vygotsky's suggestions that SCT research be historical (Vygotsky, 1978) and aim to "maintain the richness and complexity of living reality" (Luria, 1979; as cited in Lantolf, 2000, p. 18). Although Vygotsky also recommended word meaning be used as a unit of analysis (Wertsch, 1985), such recommendation will be disregarded since it has already been expanded, and utterance meaning will serve as unit of analysis instead so that context can be accounted for (Mortimer, 2010). In particular the present study draws on two fundamental concepts often used in SCT research, namely mediation and Zone of Proximal Development (hereafter ZPD), to guide it.

Mediation is often described as the central construct of SCT. Building on the assumption that the source of consciousness is located outside of one's head, the aforementioned construct serves to explain the process by which one develops consciousness on the inner plane (Lantolf, 2000), i.e., the process by which one internalizes the sociocultural, affective, and intellectual practices of a community. As Lantolf et al. (2015) observe, Mediation is grounded in the idea that people do not act directly on the world, but rather indirectly through the use of both material tools (e.g., hammer, knife, bulldozer) and symbolic artifacts (e.g., language, numeracy, music), both of which are the result of years of accumulation of human cultural activity (Tommasello, 1999). Such tools "serve as a buffer between the person and the environment" (Lantolf et al., 2015, p. 3) and "regulate our relationships with others and with ourselves" (Lantolf,

2000, p. 1). In other words, they *mediate* the relationship between the individual and the world around them, both on the material and social planes.

It is through engaging with, using, and/or creating artifacts that humans internalize, or learn, social practices. Mediated activity is what enables a person to learn to exert control over their own biology and instinctive behavior and develop higher-level functions – which allows them to, for instance, plan activity on the plane of ideas before physical action takes place. Interestingly, also through mediated activity, and simultaneous to the process of internalization, there is a reshaping of the relationship between the individual and the world around them, given mediated activity affects the socio-material environment just as much as it does the self – or in Vygotsky's (1978) words, "the mastering of nature and the mastery of behavior are mutually linked, just as man's alteration of nature alters man's own nature" (1978, p. 55). In this twofold process, both physical tools (outwardly directed) and symbolic artifacts (inwardly directed) play essential roles; however, language is considered the most important and powerful artifact humans possess because the linguistic sign "simultaneously points in two directions – outwardly, 'as a unit of social interaction (i.e., a unit of *behavior*),' and inwardly, 'as a unit of thinking (i.e., as a unit of *mind*)'" (Prawat, 1999, p. 268, italics in original; as cited in Lantolf et al., 2015, p. 5).

Whilst adults have usually learned to manipulate a number of mediational tools in their favor and can do so independently, children have not. In learning to do so, any human being follows a developmental sequence known as object-, other-, and self-regulation (Lantolf and Thorne, 2007). Such a sequence is suggested based on an observed shift in the *locus* of control of human activity (Lantolf et al., 2015). According to Lantolf and Thorne (2007), in the first stage, known as object-regulation, the individual either uses objects in their environment to think, or is controlled by them; in the second stage, named other-regulation, there is either control or explicit and implicit mediation by others such as parents, teachers, friends, etc.; and in the third stage, termed self-regulation, the individual is able to accomplish social and cultural activities with minimal or no extraneous support. Despite what may seem to be the case, none of the three stages are stable or absolute conditions. Depending on the demands of a task, a competent

person who can self-regulate in a given context may need to re-access earlier stages of development (Lantolf et al., 2015). For instance, a proficient language speaker may need to use a dictionary (object-regulation) when faced with a task which demands they use words they are not familiar with, much like a child may need parental support (other-regulation) to ride a bicycle after a fall, even if they have already developed the skill to do so independently and without training wheels.

In the developmental process described above, learning takes place through social forms of mediation in a relational space known as the Zone of Proximal Development (ZPD). The ZPD was originally defined by Vygotsky (1978) as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (1978, p. 86). Put in regulation-related terms, the ZPD is conceived of as the distance between self-regulated task completion and one's potential development level as determined by other-regulated task completion. As can be seen from the definition, "the ZPD is not a physical place situated in time and space; rather it is a metaphor for observing and understanding how mediational means are appropriated and internalized" (Lantolf, 2000, p. 17). Lantolf (2000) further elaborates that the ZPD can also be understood as "collaborative construction of opportunities […] for individuals to develop their mental abilities" (2000, p. 17).

Often times, especially in educational settings, the ZPD is understood as the support individuals need to internalize knowledge and other social practices. However, one must not confuse ZPD, pedagogical scaffolding (Sherwood and Bruner, 1975), and other types of assistance provided by the mediator/expert. Despite being similar in that they all somehow relate to the mediation that enables learning, the three are different phenomena. The ZPD can be thought of "in terms of the quality, and changes in quality, of mediation that is negotiated between expert and novice" (Stetsenko, 1999; as cited in Lantolf et al., 2015, p. 11) and serves as a tool to assess development. On the other hand, pedagogical scaffolding, as introduced by Sherwood and Bruner (1975) refers to the amount of assistance offered to a learner by the teacher in unpredictable moments of a

given activity. As for any planned pedagogical support offered, that is neither scaffolding nor ZPD, and it should just be called that: planned pedagogical support.

In addition to the clarification made above, three other points about the ZPD are worth raising. First, development in the ZPD has an upper limit which is determined through negotiated mediation between individuals collaborating in the construction of learning opportunities (Vygotsky, 1978). That is directly linked to the second point: mediation is only useful given the less-knowledgeable individual has a ZPD for the object of study. Those ideas could be explained by people not having yet internalized enough mediational means to cope with certain tasks or subjects. For instance, if a three-year-old is given the task of subtracting three-digit numbers, they will likely be unable to complete such a task even with support because it is beyond the upper limit of a three-year-old's ZPD since they have neither internalized enough knowledge of math nor developed enough abstraction to do such a calculation. The third point is that groups can operate within a collective ZPD; nevertheless, not all individuals in the group will develop equally. The fact that learners might have the same current level of development does not mean they will develop identically in the future. Whilst the group might have a projected future development, individuals will each need diverse amounts of time and types of support to reach the same levels. In conclusion, as can be seen from the three points above, although the ZPD is as a social phenomenon, it is personal in its realization.

## 3.2 Ecological perspective to Sociocultural theory

Although Vygotsky's contributions to the many fields which comprise the social sciences is unparalleled, his insights on consciousness and human development are by no means complete, and so much work has been done to advance his theory. Among the many scholars who have worked to further develop SCT is Leo van Lier, who proposes an Ecological perspective to SCT (hereupon Ec-SCT) to be applied in learning and teaching contexts. In addition to drawing on Vygotsky's ideas, Ec-SCT draws on J. J. Gibson's (1979) work on the ecology of visual perception, G. Bateson's (1972) work on the ecology of mind, and C. S. Peirce's studies on semiotics. Notwithstanding coming from different traditions, these works share strong ideological and conceptual principles, which form

the basis for ecological pedagogical practice (van Lier, 2008) and research. At its core, Ec-SCT looks "at the learning process, the actions and activities of teachers and learners, [and] the multilayered nature of interaction and language use, in all their complexity and as a network of interdependencies among all the elements in the setting, not only at the social level, but also at the physical and symbolic level" (van Lier, 2010, p. 3). In that sense, Ec-SCT is sociocultural, in that it acknowledges that "historical, cultural, and social artifacts and activities provide tools and resources to mediate learning in action"; ecological, in that "activity in a meaningful environment generates *affordances* for enhancing that activity and subsequent activities"; and semiotic, "in the sense that meanings rely not just on linguistic but also on all other meaning resources of physical, social, and symbolic kinds" (van Lier, 2004, p. 80).

Central to Ec-SCT is the dichotomy between perception and action. To better unfold a discussion on the issue, however, an understanding of the concept of *affordances* is crucial. According to James Gibson (1979), *affordances* are sets of invariant characteristics or properties inherent to an object, animal or event, "taken with reference to an animal" (Gibson, 1979, p. 67) and that offer, provide or furnish them with opportunities for action. For instance, the set of characteristics of a keyboard affords humans to type. Similarly, the properties of a conversation afford participants to voice their ideas. Eleanor Gibson and Anne Pick (2000) further elaborate on the concept of *affordances* and state that they refer "to the fit between an animal's capabilities and the environmental supports and opportunities [...] that make possible a given activity" (Gibson and Pick, 2000, p. 15). Upon analysis of the two definitions, it can be understood that although *affordances* will still exist even if they are not perceived or realized – since they are invariant properties –, perceiving and acting on them is dependent on one's capabilities as determined by their stage of development (Gibson and Pick, 2000) – or from a SCT perspective, by their ZPD. If one thinks about the examples previously given about keyboards and conversations, one can clearly see how the analysis above holds true. A keyboard does not afford a pig to type under any circumstances, given this animal has neither the physical characteristics nor the motor skills needed for this activity, just like a conversation does

not ever afford a newborn the possibility to voice their ideas, since they do not have the primordial ability to talk at that stage in their lives.

In that sense, Greeno (1994) points out that *affordances* are always relational with *abilities*, so "to be in the category of properties we call affordances, it has to be a property that interacts with a property of an agent in such a way that an activity can be supported" (Greeno, 1994, p. 340). Both Greeno (1994) and Gibson and Pick (2000) discussed the two reciprocal relations implied by the concept of *affordance*: first, animal and environment, or agent and system, must be adapted for one another; and second, perception guides action just as action produces information to be perceived (Greeno, 1994; Gibson and Pick, 2000). This way, *affordances* are understood to be pre-conditions for action, but it is up to the agent to both discover them through perceptual learning and learn to use them (Gibson and Pick, 2000) so they can then act on the environment/system/context, thus producing more information to be perceived.

The concept of *affordance* as discussed above is not without some limitations, all of which are related to the concept's stemming from a biology-based theory. Tim Dant (2004), a sociology scholar, identifies a few shortcomings and suggests ways forwards. First, as per Greeno's (1994) and Gibson's and Pick's (2000) discussion, it is the agent who discovers *affordances* through perceptual learning afforded by direct experience, with Gibson (1979) implying that one's knowledge derives only from the visual stimulus in perception. Dant (2004), nonetheless, reasons that what we know as human beings "is as likely to be based on textual experience as direct experience" (2004, p. 66) and suggests that one's "visual perception is not a complete story; it merely suggests possibilities about which I already know." (2004, p. 66) Therefore, one learns to perceive *affordances* both from direct experience and from seeing others, reading, or hearing about the *affordances*. Second, Dant (2004) observes that, as described by the other authors aforementioned, the concept's definition is rather focused on what an object or event "offers" the human user with certain capabilities and, in that sense, the process of engaging with an *affordance* is seen as one in which the actor acts "on" the object. From that perspective, the object is considered simply as a tool. Dant (2004) further points out that what these authors fail to acknowledge is that when a person and an object – or artifact, or event – come together,

forms of social action that get embodied in the human come to life through temporary "assemblages" which take on characteristics of both agent and object. Therefore, a more appropriate account of the concept of *affordances* would be one that understands that it is the "assemblage", not the agent, that allows for the production of social actions. From that perspective, it would not be accurate to say that a person reads a book; instead, when a person and a book come together, this "assemblage" allows for reading to happen as an embodied form of social action.

Following on from the notion of *affordances*, it is vital to acknowledge the dichotomy perception-action. From an ecological perspective, perception and action complement each other to form a whole. Perception is understood to be a pre-condition for embodied social action and in turn the social action then generates more information to be perceived. As Van Lier (2008) and Dant (2004) note, however, perception of the world is not only visual, but also auditory, tactile, gustatory, and olfactory. Therefore, one could argue perception, being a multisensory activity, is not only a pre-condition for embodied social action but could also be considered a form of social action in itself. Building on that idea, much as with other forms of embodied, mediated action, perception is arguably bi-directional, meaning perceiving something in the environment simultaneously allows one to perceive oneself.

The above has two major implications for educational processes. The first is that, unlike what Gibson (1979) defends to be the truth, it is not perception alone, but the perception-action phenomenon that is the linchpin of learning. Good learning opportunities, therefore, are those which are action-based and in which learners are stimulated by others to perceive *affordances* in their environments. Educators, in that context, have the responsibility to promote learning opportunities wherein learners have direct experiences as well as textual experiences that enable learning and, in their facilitating role, they should direct learners' attention to the *affordances* available in the environment. The second implication is that learning is necessarily a process in which the individual's internal and external worlds are modified. By acting, one perceives oneself and the world around them, thus learning and affecting their mental structures. However, because they are acting on the environment at the same time, that will also be

changed. Therefore, Van Lier (2004), through his Ec-SCT, calls for a new definition of learning wherein it is understood as "the ability to adapt to one's [changing] environment in increasingly effective and successful ways" (2004, p. 97).

# 4 THE PRESENT STUDY

## 4.1 The Research Context

Mexico, much like most other Latin American nations, persistently ranks among the lowest-achieving countries in international education assessments such as the Programme for International Student Assessment (PISA) (OECD, 2016). Moreover, recent studies report low levels of English proficiency in Mexico across age groups (Educational Testing Service, 2016; Education First, 2016; Pearson, 2013). As 80% of learners enrolled in middle or high school in urban areas receive instruction in English as an Additional Language (SECRETARÍA, 2017), these low results make a case for immediate action through the implementation of initiatives to raise educational outcomes.

The University of Guadalajara (UdG), based in the state of Jalisco, Mexico, is one of many institutions across the country who have decided to take action. Since 2015, through its Foreign Languages Institutional Program (FLIP), UdG has been in close collaboration with EduCluster Finland (ECF), University of Jyväskylä group, a Finnish-education export organization, to improve the overall quality of education in its faculties and high schools. A number of advisory and development processes have been developed since, among which is Connect, a pilot project which aims to improve the quality of EAL education in UdG high schools, locally known as *preparatórias*. Connect is based on two well-established educational practices, namely PjBL and CLIL, and is in three mostly sequential, but somewhat overlapping stages.

First, in preparation for the pilot implementation, a group of education experts based in Finland created three sets of resources to be used throughout the schoolyear 2018-2019, all of which were based on the main tenets of both PjBL (as described by Thomas, 2000) and CLIL. Each set, or learning project, had its own name and was centered around a different theme: The WOW Factor, which was an exploration into what makes someone an example or role model; The Power of Music, which was on music and its intersections with other areas of knowledge; and My Life Journey, which was on the personal and

social journeys of learners. Once the materials were created, 12 selected teachers of various levels of experience, but all of whom were new to PjBL, participated in a ten-hour education program led by language education experts. As a part of the program, those teachers, who came from three *preparatórias* across the state where the pilot would run, were introduced to some of the basic principles of PjBL and CLIL and participated in facilitated discussions on how to best activate the materials which had been created for classroom use.

As part of the second stage, the 12 selected language teachers ran the pilot in their schools. Two-hour lessons were held on Saturdays for 1440 students participating in the pilot. The WOW Factor ran between October and December 2018, for 14 hours distributed over seven weeks; The Power of Music ran between January and March 2019, for 16 hours distributed over eight weeks; and My Life Journey ran between March and May 2019, for 14 hours distributed over seven weeks. Throughout the whole time of implementation, although teachers were encouraged to work independently, channels of communication were kept open between the Mexican teachers and the ECF experts based in Finland, and both parties remained in touch and checked in on each other.

The third stage, which is currently ongoing, is that of conducting research and reporting, all of which is done as part of ECF's quality-assurance processes. Whilst pedagogical interventions are paramount, ECF understands research plays an equally crucial part in developing education initiatives such as Connect. Thus, at the end of each learning project, data were collected to compose a data corpus. Both quantitative and qualitative questionnaires, as well as interviews, and collection of learning artifacts were used to gather data from learners and teachers alike. Analysis of the data collected at the end of each learning project affords gauging success and suggesting clearer directions for improvement in areas such as materials design or teacher education, and now that data has been collected on the last learning project, a final report written by ECF experts will follow.

## 4.2. Research aim

Following the implementation of the bi-national cooperation initiative above and considering the identified knowledge gap described in the literature review, this study endeavors to explore Mexican high-school language learners' emic perspectives of the use of PjBL in their EAL classes. In doing so, it assumes a *contextualist* stance in that, whilst it aims to report meanings, experiences, and the reality of participants at a semantic level (Braun and Clarke, 2006), it also makes use of a postmodernist, sociocultural lens based on the epistemological and ontological assumption that human being are active agents (Harré, 1993) and that knowledge is socially constructed (Vygotsky, 1978) to theorize findings. On the basis of the above, as well as taking the data to which access was granted into consideration, three research questions (RQ) were devised to drive the present study.

RQ1. What are participants' value judgements about their PBLL experience?

RQ2. What are participants' perceived learning outcomes?

RQ3. Which factors have affected participants' learning experience of PBLL?

# 5 METHODOLOGY

## 5.1 Data collection

As part of their quality assurance processes, at the end of each of the three learning projects, ECF sent an online questionnaire to learners to inquire about their experience of engaging with PjBL through Connect. Such a method of data collection was chosen because it affords accessing large groups of people at a distance (Newby, 2014), which was needed given the geographical distance separating the Finnish experts and Mexican learners. The questionnaires, which were written in English, comprised five four-point Likert-scale questions assessing learners' opinions of aspects of their experience (namely value judgement, feelings and emotions, group work, and achieved outcomes). Furthermore, an open-ended, unstructured question was included (i.e. "What I would like to tell you about my experience of these lessons is…"). The reasons for choosing this type of question were twofold. First, open questions do not impose a response framework on learners (Newby, 2014), and as such, research participants can really focus on discussing those issues of the experience they find most pressing – although one might argue that, in this specific case, the questions that precede it might have influenced participant responses (Newby, 2014). Secondly, unstructured questions allow for the obtainment of a richer picture as they give us a sense of participants' own voices and personality (Newby, 2014), thus providing researchers with great data for studies on perceptions and perspectives.

Before being sent out, questionnaires were subject to the critical scrutiny of four experts involved with Connect, all of whom provided feedback on the format and content of the tool. Once the questions had been revised, in December 2018, at the end of "The WOW Factor", the first questionnaire was sent to all participating students (n=1440). Participating teachers were instructed to administer the questionnaire in class so learners could answer it under adult supervision and receive any support, if needed. Teachers were also instructed to encourage learners to choose in which language they wanted to respond. The response rate was of approximately 31.7% (n=456). At that time, the author

of this study, having been involved in Connect's planning, asked whether it would be possible to use the student data as a part of a master's study. Both ECF and UdG responded positively to this request and the data was made available by personnel from ECF through a protected online link.

Given the timeline of the study and the fact that data collection was still not done for all of Connect, feasibility had to be taken into consideration, and so it was decided that the study would be cross-sectional and only focus on participants' perspectives of PBLL at the end of the first learning project. Feasibility also had to be taken into consideration when selecting the data set from the available data corpus. For the present study, only access to questionnaire data was granted, making that the original research corpus. Whilst it would have been ideal to use more than one type of data to strengthen validity and credibility through triangulation, ECF's online system does not allow researchers to see each individual's responses to the Likert-scale questions, but only provides them with the means and standard deviations. Given there were 456 respondents and the resources available to the researcher were scarce, a decision to limit data usage had to be made. All factors considered, an assessment was made that using all the data collected in a mixed-method study would be highly impractical. Therefore, it was decided that all quantitative data would be discarded and only answers to the open-ended question would be used.

## 5.2 The WOW Factor

The WOW Factor was the first of three learning projects designed for use with Mexican learners in UdG's *preparatórias*. Intended for use over 14 hours of instruction, the series of sessions and resources were devised with two overarching learning objectives in mind: gaining confidence in exploring different roles as a language user and developing skills to reach a common goal over a longer period of time. However, each lesson and accompanying resources had its own set of specific goals, which could be purely linguistic (e.g. describing people and their accomplishments), but could also be attitudinal (e.g. developing an appreciation for the linguistic resources in the classroom), political (e.g. perceiving the role of English as a Lingua Franca in communication),

cognitive (e.g. developing strategies for organizing information), or skills-related (e.g. identifying what makes a good presentation). Such objectives were not explicitly presented to students.

For this project, learners were presented with a main task. In groups, over the course of seven weeks, they were to collectively select a person who inspired them and do research on their life to come to a conclusion as to why they considered that person to be inspirational. Then, learners were to choose any mode of presentation (e.g. writing and performing a song, making a video, writing a news story, etc.) and prepare a final showcase, wherein knowledge would be shared with the entire school community. The process leading to the showcase was in four phases, each motivated by a main question, all of which were presented to learners. The stages and questions were:

(1) Launch: why are we doing this project?

(2) Ideas: what is out there?

(3) Production: how do we do it and how do we share it?

(4) Reflection: what have we done?

In the process, teachers were to support learners in ways as to make them gradually less dependent on scaffolding and pedagogical support, more willing to engage in collaborative work leading to the co-construction of knowledge, and keener on learning languages. To support teachers, in addition to training, learning resources were provided, along with suggested activities and teaching tips. Moreover, a language policy of "English when we can, Spanish when we have to" was suggested.

### 5.3 The Participants

Participants in the study were 456 high-school students, aged 15-16 (on average), from the three *preparatórias*. According to FLIP and the 12 participating teachers, most learners had little to no experience of engaging with PjBL prior to Connect given such a model is not common in Mexican schools. Moreover, despite being in high-school and having had three years of English instruction in middle school, many of their students are assumed to be at an A1- level, as defined the Common European Framework of Reference (CEFR). Such an assumption is built on previous study findings which report that between 88-

92% of learners entering UdG high schools only demonstrate an A1- level on their entrance exam (FLIP, 2016; 2019). Nevertheless, because each of the three *preparatórias* represents a different reality found across the state of Jalisco (with the first school being located in a rural, agricultural town of about 24000 inhabitants; the second in a small city of about 52200 inhabitants on the outskirts of the capital; and the third in a middle-class neighborhood in the capital city of Guadalajara, which has a population of about 1.5million inhabitants), learners come from various backgrounds, and so a multiplicity of realities is said to exist.

## 5.4 Data Analysis

A choice was made to use thematic analysis (TA) to analyze the data that had been collected. Rooted in the tradition of content analysis (CA) (Joffe, 2012) and often introduced as a part of phenomenology (Holloway and Todres, 2005), TA is "a method for systematically identifying, organizing, and offering insight into patterns of meaning across a data set" (Braun and Clarke, 2012, p. 57) with the purpose of shedding light on participants' shared meanings and experiences. By being a method and not an approach to data analysis, it is not tied to a single "epistemological viewpoint about the nature of enquiry, the kind of knowledge discovered or produced, and the kind of strategies that are consistent with it" (Vaismoradi, Turunen and Bondas, 2013, p. 398). Thus, TA offers researchers great flexibility to conduct research in a number of ways and from a variety of philosophical, epistemological, and ontological standpoints. Despite that flexibility, it should be noted TA is based on a factist perspective, i.e. one that "assumes data to be more or less accurate and truthful indexes of reality out there" (Vaismoradi et al., 2013, p. 400) and, as such, it places primacy on participants' perceptions.

It should be noted at this point that TA is not an "anything goes" kind of method. Given the flexibility offered by TA, one might question its validity to produce scientific sound and robust findings. On that matter, Braun and Clarke (2006) emphasize the importance of clearly stating one's assumptions, as well as thoroughly discussing each step in the analysis process and acknowledging all steps as choices consciously made by the researcher so that readers can properly assess the quality of a study. Complying with

their suggestion and having already stated the assumptions underlying this study in the previous chapter, this section shall now turn to a description of the analysis process. Based on Braun and Clarke's (2006) model, the analysis of the data was an iterative process (Tracy, 2013) in six somewhat overlapping phases, as illustrated in Table 1.

**Table 1. Data Analysis Process**

| Phases | Tasks |
|---|---|
| 1. Orientation | i.  Multiple read-throughs to get familiarized with data<br>ii.  Identification of main topics discussed throughout data corpus<br>iii.  Formulation of RQs<br>iv.  Choice of analysis method |
| 2. $1^{st}$ cycle coding | v.  Development of a coding scheme<br>vi.  Coding data<br>vii.  Grouping of codes into superordinate codes |
| 3. $2^{nd}$ cycle coding | viii.  Coding data using superordinate codes<br>ix.  Distinguishing between data item and utterance<br>x.  Grouping superordinate codes into themes |
| 4. Reading | xi.  Reading about PjBL, PBLL, SCT, and Ec-SCT |
| 5. Review | xii.  Checking if themes work in relation to the coded extracts<br>xiii.  Cross-validation<br>xiv.  Review of coding<br>xv.  Transferring coded extracts to a digital chart |
| 6. Reflection | xvi.  Reflecting on analysis in light of the literature<br>xvii.  Reading through charted information to decide how findings would be reported<br>xviii. Selecting extract examples to report |

*Orientation phase*

Once access to data was granted, several read-throughs were conducted to "obtain the sense of the whole" (Vaismoradi et al., 2013, p. 402), which in turn enabled the formulation of a research task and three RQs: "What are participants' value judgements about their PBLL experience?"; "What are participants' perceived learning outcomes?", and; "Which factors have affected participants' learning experience of PBLL?". Once the RQs had been devised, a choice had to be made as to which data analysis method would be used to shed light on participants' perspectives of their PBLL experience. Considering the task, which was to better understand students' learning experience, as well as taking my own experiences into consideration, TA was chosen as a method. Reasons for such a decision were manifold.

First and foremost, TA lies in the realm of qualitative research. Given the nature of data being used and the aim of the study, using such type of method was deemed relevant. Furthermore, because qualitative methods are often characterized by "a belief in multiple realities, a commitment to identifying an approach to in-depth understanding of the phenomena, [and] a commitment to participants' viewpoints" (Vaismoradi et al., 2013, p. 398), using a qualitative approach aligns with my own view of the world and life mission.

A second relevant reason was TA's flexibility. Such an aspect of this method allows researchers to use, for example, a theory-driven or data-driven approach to analysis. As the present study's purpose was to provide a rich description of learners' emic accounts of their PjBL experience, a data-driven approach was adopted to keep as much of learners' perspectives as intact as possible. Whilst other methods also afford researchers the same option (e.g. grounded theory), because TA is not wedded to any one particular pre-existing theoretical framework or epistemological position, there is no set commitment to reporting findings in a specific, pre-defined way (Braun and Clarke, 2006). As a first-time researcher that was very much appreciated, especially because that was seen as an opportunity to not only work in a freer way, but also learn more about

my own views on the world and on the nature of knowledge, and simultaneously practice making coherent choices.

Thirdly, TA focuses on uncovering shared or collective meanings and experiences identified across a data set (Braun and Clarke, 2012) without necessarily regarding frequency, as is the case with CA. At times, what is common to many is neither necessary nor important to understanding a phenomenon (Vaismoradi et al., 2013). By acknowledging that, TA is focused on finding relevant answers to a particular research question and not simply counting instances of mentions of a topic and equating this to relevance.

Finally, each one of the three RQs devised related to different dimensions of meaning (respectively affective, symbolic, and cognitive), which according to Joffe (2012) should be the purpose of a thematic analysis.

*1st cycle coding*

Bottom-up, inductive data analysis started during this stage. First, the file containing the data corpus was printed in three copies, one per RQ. Data was then coded at the semantic level by looking for any excerpts that offered answers or insights into each question. At this stage, each participant's response was considered a data item, and equal or very similar answers provided by different participants were only acknowledged once (e.g. "I thought that in these lessons we were going to learn more about language but we focused only on the project" [respondent #828604] and "I thought that in this [*sic*] lessons we going [*sic*] to learn more about language but we only focus [*sic*] on the project" [respondent #828605]). Moreover, codes were named after words participants used, that is, *in vivo* codes (Glaser, 1978) were used. For RQ1, any references to values, opinions, or feelings were initially included, with answers such as "I found it very nice and fun" (respondent #824766) generating codes such as "nice" and "fun". For RQ2, all references mentioning learning outcomes were selected, generating codes such as "new words" or "how to work in groups". Finally, for RQ3, any references to the learning process were originally included, generating codes such as "we all learned from everyone" or "we interacted speaking English". Contributions that did not answer to any of the questions,

such as "*el profe* [*sic*] *de inglés que nos da* [*sic*] *es* [*sic*] *bien shido y guapo*" [Our English teacher is really cool and handsome] (respondent #827298) were neither coded nor eliminated at this point.

As each new data item was reviewed, either new codes would be created, or ones previously used would be employed again. Once the entire data corpus had been coded for the different RQs, the data was reviewed to make sure that no two codes were used to describe the same content of the data. In doing this, all codes were listed per RQ and then grouped into superordinate codes. For instance, for RQ2, codes such as "learnt new words", "learnt many meanings" and "learnt how to use words adequately" were grouped into a superordinate "vocabulary" code, thus moving away from participants' use of words into a slightly more interpretive stance.

*2<sup>nd</sup> cycle coding*

During this stage, the entire data corpus was coded again, this time using the superordinate codes that had been created. No major problems arose during this stage as superordinate codes seemed to work well for the extracts that had been selected. Nevertheless, a challenge presented itself in terms of delimitating where answers to questions started or ended within data items, and so a need was felt to differentiate participant contribution from data item. For instance, respondent #825006's contribution "*Fue extremamente satisfatória, reforcé mis conocimientos*" [It was extremely satisfactory, I reinforced what I had learnt] was initially selected in its entirety as responding to RQ1, along with respondent #830305's "*Me gusto esa experiencia porqué fue bastante divertida*" [I liked this experience because it was very fun]. However, "I reinforced what I had learnt" was not related to #825006's value judgement of their PjBL experience as much as "because it was very fun" was to #830305's. It was then decided that utterances, and not participants' entire contributions, would be the data item and unit of analysis.

According to Moate (2013), whilst each utterance belongs to a longer chain of speech communication, they are complete answers in themselves and are essential to determine the meaning of specific words used by participants. In determining the boundaries of each utterance, i.e. what makes a complete answer, techniques were

borrowed from sociocultural discourse analysis, henceforth SCT-DA (Mercer, 2004). Incorporating a concern with the lexical content and the cohesive structure of responses, attention was directed to whether, for instance, learners joined clauses with conjunctions such as "because" or "since", or whether they used punctuation signs instead. Other examples include the of "we" vs. "I" and the use of the same verb tense vs. different tenses. That way, contributions such as #825006 were divided into two utterances while #830305 remained as one.

Once utterances were determined, the second cycle coding with superordinate themes was reviewed once more, reconsidering which utterances should actually be included as responses to each RQ. Finally, superordinate codes were merged to form themes. For instance, for RQ3, codes such as "teacher as resource", "peers as resource" and "peers as hindrance" were grouped under "people influencing learners' experiences".

*Reading*

During the previous stage, it became apparent that, despite being mostly data-driven, the analysis was not without theoretical influences. As such, two main points became clear. First, the inductive analysis process was slowly becoming contextualized, much like analysis had been moving away from the semantic level towards a more interpretive one. Second, there would be a need to review literature on SCT to better analyze participants' contributions on their experiences. A choice to specifically review SCT literature was made given such a tradition served as the foundation for both PjBL and SCT-DA. Therefore, time was spent reading works by authors such as Lev Vygotsky, James Wertsch, James Lantolf, Steve Thorne and Leo van Lier, among others. What is more, literature on PjBL and learners' perspectives of it were also reviewed. As a result of that stage, both the literature review and theoretical framework chapters of this study were written.

*Review*

This stage started by checking if the themes that had been generated worked in relation to the coded extracts. Once that had been done, a university staff member who worked as a research assistant was asked to check the reliability of coding. By using the themes as codes, they coded twenty percent of the data corpus, reaching 89.5% agreement for RQ1 and 92.9% agreement for RQ2 – which was considered desirable. However, for RQ3 there was only 57.6% agreement. The disagreement on RQ3, which was mostly related to discrepancies in how to determine linguistic signs of effect, was used as a basis for discussion between the two coders and for the further improvement of coding. Unfortunately, the research assistant was not available to code RQ3 again in time and see whether the reliability of coding had improved. Nevertheless, despite not being able to do so, their contributions were still invaluable in that they helped the researcher reconsider their own rigor and consistency of coding. Finally, once themes had been checked against the coded extracts one more time, a digital file was created. All the coded utterances were then transferred to this file and categorized under each RQ and theme. Participant contributions and data items not relevant to any RQ were finally eliminated.

*Reflection*

Having read the literature on SCT, Ec-SCT and PjBL, as well as finished organizing data into themes, a concern with establishing links between the analysis and the literature emerged. It was then noted that, in addition to having borrowed techniques from SCT-DA, the layered simultaneity (Blommaert, 2006) initially hinted at by Vygotsky (1978) but later elaborated on by van Lier (2010) had also been somewhat acknowledged by the researcher and was present throughout the data set. According to van Lier (2010), "any utterance has a number of layers of meaning. It refers not only to the here and now, but also to the past and the future of the person or persons involved in the speech event, to the world around us, and to the identity that the speaker projects" (van Lier, 2010, p. 3). In this way, utterances point "backward – invoking history and background, forward – looking towards the future, outward – relating to the world, and inward – relating to identity and personal cognition and emotions" (van Lier, 2010, p. 3). In the researcher's

personal notes, a number of commentaries on data items were related to such a phenomenon. For instance, when looking at participants' use of "we" vs. "I" to define the boundaries of an utterance, utterances had been identified in the researcher's personal notes as relating more to the self, i.e. pointing inward, or to the world, i.e. outward. As a further example, when organizing codes for RQ1 such as "I would like to continue" or "not what expected", backward and forward orientations were also acknowledged. Recognizing the multilayered nature of the participants' utterances provided clearer insights into the nature of the research process itself and the multilayered nature of the 3 RQs. On this basis, it seems reasonable to claim that each RQ possibly helps uncover not only what participants perceive happened during the implementation of Connect, but also what their expectations and goals are.

In light of these reflections, the researcher started considering how the results would be reported. The digital file containing the analyzed data was re-read and re-organized to help in the writing process. Information was rearranged in the form of a writing outline and possible extract samples were selected to illustrate points reported in the findings section and provide a more authentic voice. Futhermore, despite not having considered frequency of occurrence across the data set to weigh the importance of different themes, a decision was made at this stage to quantify answers so that, in reporting findings, the spread of answers could be illustrated.

## 5.5 Quality

As Flick (2007) notes, no universal set of criteria exists for assessing the quality of a given study given the vast array of existing approaches, methodological procedures, and contexts. Nevertheless, certain intertwined criteria of what could be called quality science, such as reliability, objectivity, and validity, are commonly observed across research studies of various traditions as they are deemed crucial for determining the rigor of a study. Whilst there is debate on the applicability and relevance of such criteria in qualitative studies, there is also a general consensus that they should not be discarded; they should be reformulated (Tracy, 2013; Flick, 2007). Following such recommendations,

this section shall now tackle the three criteria to frame the discussion of the present study's quality.

Reliability, as referring to the researcher's stability and consistency (Tracy, 2013), was primarily attended to in two ways, namely multiple coding and transparency. Similar in process to the quantitative equivalent *inter-rater reliability*, multiple coding differs from the former in that it does not aim at the complete replication of results, but rather at the cross checking and refinement of coding strategies. In that sense, such a technique is useful in strengthening the rigor of data analysis in qualitative studies. As has been discussed, a second coder coded 20% of the data set at the review stage of analysis. Whilst no statistical tests such as Cohen's kappa were run, percentage calculations were made and, on the basis of those, discussion on how to improve coding took place with a focus on the content of disagreements which, according to Barbour (2001), is just as valuable in quantitative research.

Although valuable, multiple coding is by no means a complete measure to increase reliability in qualitative research. Thus, a concern with transparency was also deemed essential. As Elman and Kapiszewski (2014) affirm, "scholars cannot just assert their conclusions, but must also share their evidentiary basis and explain how they were reached." (2014, p. 43) As such, it becomes essential to clearly state the philosophical and epistemological assumptions underlying the research process, as well as carefully outline the data collection and analysis processes in detail (Braun and Clarke, 2006) to achieve analytic and production transparency (Moravcsik, 2014). Both steps have been taken in this study. Furthermore, to achieve data transparency, data extracts were included *verbatim* in the findings section to support claims and serve as an illustration of the content present across the data set – which is particularly critical given the impossibility of making it available to the larger audience due to legal and ethical constraints. It should be noted that, in an attempt to increase transparency and, in turn, reliability, despite having the utterance as the unit of analysis, full respondent contributions (i.e. data items) were included in the findings chapter in place of single utterances – with only few exceptions made for those cases in which including the entire data item would break the flow of the text.

As regards objectivity, it should be made known that this criterion was not a primary focus of this study given qualitative studies require active interpretation, which is, by nature, a subjective undertaking. Despite there being some more objective aspects of the study, especially as concerns the employment of SCT-DA techniques, or the level at which data was analyzed, data had to be interpreted at all levels of analysis, even if to a minimal extent. As Braun and Clarke (2006) put it, even in TA studies which identify themes at a semantic level, there is some level of interpretation, especially as one moves from codes into themes. It is important to acknowledge that, in making choices on how to interpret data, biases based on one's beliefs, values, and previous experience potentially operate at a subjective level.

Having acknowledged the inherent subjectivity of the research process in qualitative studies, it should be stated that both measures taken to increase reliability measures also serve to improve the objectivity of the present study. Multiple coding serves this purpose in that it aims at responding to "the charge of subjectivity sometimes levelled at the process of qualitative data analysis" (Barbour, 2001, p. 1116), whilst research transparency helps readers and assessors identify possible subjective biases or misinterpretations of data that may occur as a result of those.

Finally, it is vital to discuss validity, understood in this study as the accuracy of the findings. Despite taking a position of denial of a positivist paradigm, and therefore assuming no commitment to replication or generalization of findings (Elman and Kapiszewski, 2014), a specific measure has been taken to taken to improve accuracy of findings. Given the prominent role language played in the analysis, both because it operated at the semantic level and because techniques from SCT-DA were used, special attention was given to linguistic detail (Gee, 2005), i.e. the manner in which words and linguistic structures were used consistently by participants. For example, in naming codes during the first cycle after words or expressions that had been employed by participants, there was a concern with establishing a level of validity. Such a concern can also be seen in the observation of cohesive devices as a stable criterion for identifying and coding utterances.

All in all, despite denying a positivist epistemology and understanding that the three criteria discussed come from a quantitative tradition, measures have been taken to increase reliability, objectivity, and validity. In addition to the three criteria above, other measures suggested by Lincoln and Guba (1985) which are especially relevant for qualitative research were taken to improve quality. For example, prolonged engagement with the data took place. Not only was data analyzed at different levels, multiple times, but the entire analysis process lasted for about five months, during which the researcher would analyze data, take breaks, and then come back to it with a different mental state to double check and improve analysis. Furthermore, both 'member checks' and 'peer debriefing' took place. During the entire research process, meetings with both the thesis supervisor and other MA students were held to discuss the present study. As a result of these, blind spots were identified and working results and hypothesis were assessed, allowing for the researcher to take a more reflexive stance and reconsider, for instance, how consistent the process has been or how subjective biases have operated in decision-making.

## 5.6 Ethical Considerations

Full disclosure of ECF's and FLIP's intentions with data collection were made clear to the different stakeholders involved prior to the beginning of the process. In accordance with Creswell's (2005) recommendations, when access to the student data in possession of ECF and UdG was requested, full disclosure of the research intentions and process were made. A consent form was signed by a representative from each institution, as well as by the researcher himself. An agreement was made then that the research output would be shared with both parties despite not being an official part of ECF's original quality-assurance processes.

The data file received did not contain any personal information on the different participants and they were only identified by randomly assigned, computer-generated respondent numbers between 824707 and 830340. Although some information such as the gender of participants could sometimes be inferred by the language used in survey answers, to further protect participants' identities, whenever references to them are made

in the findings section, the third-person singular pronoun 'they'/'them' is used. The original data file, as well as all other files created, have been protected in the researcher's own computer and all printed copies were kept at the researcher's possession at all times. All hard copies, as well as the original file, will be destroyed upon submission of the study.

An important point has to be made on integrity and conflict of interest. Despite not being a staff member of either collaborating organizations (ECF or UdG), the researcher has previously been hired by ECF to work on projects as a contractor, including on the planning of Connect's learning resources and teacher training. The researcher was not in any way involved with the teaching of students or data collection and, as a matter of fact, had no contact with participants at any time.

# 6 FINDINGS

This section will present this study's findings in accordance with the research questions, starting with a discussion on how students evaluate their PBLL experience, followed by an analysis of the perceived learning outcomes and, finally, by an examination of factors affecting their learning experience. The order of the questions is worth noting as it mirrors the chronology of data analysis. As will be observed, as the reader approaches each question, the need to clarify specific ideas will become apparent. With that, so will the need for each research question that follows. In that way, as one progresses through the chapter, each main issue relevant to the scope of this thesis will be tackled and elaborated on, painting a detailed picture of participants' learning experience as perceived by them. In doing so, inevitably, some findings will overlap, and some will be identified by the reader as possibly pertaining to a different theme. However, from an Ec-SCT, this is only expected because such is the nature of research and the complexity of educational events.

## 6.1 What are students' value judgements about their PBLL experience?

323 respondents (70.8%) offered some type of evaluation of their experience PBLL experience. Upon analysis of their answers, utterances were classified under three mutually exclusive categories: positive, negative or mixed opinions.

### 6.1.1 Positive

A majority of respondents (n=278; 61%) express positive feelings or opinions relating to the use of PjBL in their EAL classes. Participants mostly describe the experience as "good", "great", "nice", "cool", and "fun", as in "I think it was a very good experience, that [*sic*] it was very fun and that [*sic*] it was a new way of learning English" (respondent #824910) or "*Muy bueno, me gusta la manera de aprender*" [Very good, I like the way of learning] (respondent #827299). In a linguistically-interesting example, a respondent creatively uses the word "father" as an adjective in his response, which is originally written in English, to express his positive opinion of the experience. They say, "It was a

very good experience, a way to improve my English and was [*sic*] very father [*sic*] to carry out the project" (respondent #825040). It is worth noting that the Spanish word "*padre*", which literally translates as "father", actually has positive semantic connotation and means "cool" – which is what this learner likely meant.

With relatively lower but still considerable frequency, learners whose value judgement of the learning experience was positive described it as "interesting", "pleasant", "dynamic", "wonderful" and "creative". A few respondents also reported feeling "comfortable" or "happy" in class. For instance, this respondent said

> "*Fue que la vedad* [*sic*] *me senti muy comodo* [*sic*] *con esta forma de trabajo y me gustaría seguir aprendiendo así*" [To tell the truth, I felt very comfortable with this way of working and I would like to keep learning this way] (respondent #828077).

When evaluating the use of PjBL, whilst most respondents speak of the present experience in ways that seem to convey literal meaning and point mostly inward, i.e. talking explicitly about their feelings and emotions, some others communicate utterances that are clearly multilayered, as is the case of the last example given above. By saying "To tell the truth, I felt very comfortable with this way of working and I would like to keep learning this way", respondent #828077 speaks not only of the positive feeling experienced in class, but also of their future preference to keep learning through PjBL and of their previous expectation of not feeling comfortable in their language class – all of which serves to further qualify the experience as a positive one. In that specific case, in making a positive evaluation of the use of PjBL in their language classes, their utterance clearly points in at least three directions: inward, forward, and backward.

The same phenomenon is observed in other respondents' utterances conveying a positive stance. In terms of looking towards the future, an interest in continuing to learn through PjBL is often mentioned or observed. Furthermore, the model's usefulness and efficiency in promoting meaningful learning is commonly acknowledged in statements such as "*Pues* [*sic*] *que fue un buen proyecto y se* [*sic*] *que en un futuro me servira* [*sic*]" [Well, that it was a good project and that in the future it will be of use to me] (respondent #824708). With reference to those respondents whose answers point backward, their

experience is commonly associated with previous ones by means of implicit comparison and, as such, it is described in relative, rather than absolute terms. In those cases, the novel and exciting aspect of PjBL is often alluded to in comparisons such as "They were the best english [*sic*] classes" (respondent #830257) or "This was nwe [sic] for me and I really liked it a lot. It's a way out of the usual [*sic*]" (respondent #827294).

Unfortunately, a considerable number of answers (n=174) did not extend beyond the mere ascribing of adjectives to describe their experience in general terms, i.e. learners did not elaborate on why they evaluate the experience positively. This way, many respondents offered little insight into their perspectives and, as such, it is usually not clear what it is that these students particularly liked about the experience, what they thought was fun or interesting, how their experience is specifically different from previous ones or how it will be useful. Some learners, however, were more detailed and justified their opinions on the experience by linking them either to perceived outcomes or to how the learning event was implemented – and in the case of eight learners, to both.

*"Esta experiencia fue agradable ya que me hacia falta más confianza"*

Some respondents (n=52; 11.4%) evaluate their experience positively and justify their opinions by alluding to the achievement of specific outcomes. Although there was considerable variety, the two most widely cited learning outcomes in those cases were the development of one's vocabulary and confidence to use the language more independently – both of which can, in turn, result in increased performance and motivation according to a few of the respondents. On that issue, respondent #828055 says,

> "*Creo que está* [*sic*] *experiencia fue* [*sic*] *agradable ya que me hacia falta más confianza para seguir hablando en inglés y gracias a este curso la obtuve, ahora no puedo parar de hablar en inglés y me gusta porque se* [*sic*] *que así aprendo mejor*" [I believe this experience was nice since I lacked confidence to speak in English and thanks to this course I got it, now I cannot stop speaking in English and I like it because I know this is how I learn best].

Utterances like this one, which clearly point both inward and backward by reporting changes which happened to learners' selves and were afforded by their engaging with

PjBL in their EAL classes, are common and were produced by most of the 52 respondents reported above. Interestingly, a few research participants produced utterances with very clear outward direction and discussed changes which happened to others. For example, at times, learners cite shared learning outcomes achieved by the group, reaffirming the social aspect of PjBL. Furthermore, two respondents specifically discuss the positive impact the experience has had on their teachers and link that to their own positive experience. According to them, with the adoption of the model, their teachers became more motivated and committed. Respondent #824972 says on the issue

> "*Fue muy reforzante* [*sic*] *en el aprendizaje ya que anteriormente había dejado de estudiarlo por falta de los educadores, pero com el factor wow se siente* [*sic*] *mas* [*sic*] *comprometidos los docentes y yo como alumna*" [It was really stimulating for my learning since previously I had stopped studying because of the educators, but with the WOW Factor the teachers feel more committed and I do too, as a student.]

In addition to clearly pointing both inward and backward, the utterance above also points outward, in that it discusses the relationship between self and the world and the role such a relationship has in mediating the experience of the self. That is, by discussing outcomes as the result of the social activity of learning through engaging with others, respondents imply that the people and environment around them have had a positive impact on their experience. That issue, however, is discussed much more explicitly by those learners whom attribute their positive feelings to specific practices in the learning process.

*"[…] my experiences were good because we shared ways of thinking"*
Some respondents (n=60; 15.1%) justify their positive impression of the experience of engaging with PjBL in their EAL classes by mentioning specific practices which were promoted in the learning process. Acknowledging the social component of PjBL and the role it can have in mediating learning, a number of these participants explain their experience is good because it affords them opportunities to work with others and, by doing so, engage in practices such as collaborating in completing a task, pooling resources, and capitalizing on the ones offered by others. Among the social learning practices participants particularly like, those most often mentioned are learners

socializing knowledge, being corrected by classmates, and interacting with others in groups through the use of English. In fact, the opportunity to engage in language use as afforded by socializing knowledge was mentioned quite a few times and learners report enjoying the opportunity to speak English in class to engage with peers. Participant #824784 nicely sums up the opinions presented here so far when they say "*Pues mis experiencias fueron buenas por que* [*sic*] *compartimos formas de pensar con mis compañeras y po que interactuamos hablando ingles* [*sic*]." [Well, my experiences were good because we shared ways of thinking with my peers and because we interacted speaking English.]

It is worth mentioning that, in a number of responses that touch on issues of communication or group work, an atmosphere of mutual support, which is suggested to be achieved as a result of engaging with PjBL and which learners appreciate, can be inferred. For instance, respondent #829125 says,

> "*Que es muy bueno, porque además de que te sientes más seguro de usar el inglés, compartes momentos que son maravillosos y tienes más comunicación con tus compañeros y maestros.*" [That it is very good because, in addition to feeling safer to use English, you share wonderful moments and communicate more with peers and teachers]

This participant produces an utterance which, through the use of the word "safer", points simultaneously inward and outward and so it communicates their feeling whilst also drawing an implicit picture of what the classroom atmosphere which they appreciate is like. Similar responses were found across the data set.

A final aspect of the learning process participants particularly enjoy is the meaningfulness and relevance of content in a PjBL context. A number of learners share how much they like engaging with content which can be personalized and allows them to talk both about themselves and topics of their interest. Moreover, two of them report appreciating having the choice of topic for investigation as it allows them to learn something that is truly meaningful to them.

### 6.1.2 Negative

The results discussed so far seem to suggest that students' experience was overwhelmingly positive. Nevertheless, not all students enjoyed it. Few respondents (n=9; 2%) convey negative feelings or opinions regarding the use of PjBL in their English classes. Despite saying very little, those participants did communicate two crucial messages clearly. Four learners expressed feeling confused in class, without making any references as to what specifically was confusing about their classes. Responses were along the lines of "*La verdad fue muy confuso, si me distraia tan solo un poco era suficiente para revolverme*" [Truthfully it was very confusing, if I got even just a bit distracted that was enough to upset me] (respondent #824931). One of those four learners suggests there was a lack of explaining, or lecturing, which they associates with their confusion. This learner, however, was not the only one to raise the issue of lack of explanation. Three other responses, which had clear backward direction, outlined that the initiative did not meet their expectations. It is clear from their responses that they expected to have learnt more by having explanations about the language and practicing more English – and that, according to them, did not happen.

### 6.1.3 Mixed

Mixed opinions were also present in the data set. A small number of participants (n=36, 7.9%) produced utterances which acknowledged there were both positive and negative aspects to their experience. For example, a couple of learners stated that learning through PjBL was at times fun and at other times boring. Two other learners, despite having had fun or being satisfied with the outcomes, explain that it was "a bit" difficult or stressful. Even though the learners above referred to did not develop their ideas much, the overwhelming majority of participants whose responses conveyed mixed opinions produced noticeably multilayered utterances with ideas which were often developed and justified.

With the exception of two participants who explicitly point out that they appreciated researching about someone they find interesting, most participants who took the opportunity to develop their ideas generally just classify their experience as "good"

or "interesting" and then focus on discussing what they think is negative about it. By producing utterances with clear backward and forward orientation, these respondents speak about how the experience lagged behind expectations and/or suggest points for future improvement. In doing so, those learners often report practices or characteristics of their experience which they do not like, which they perceive to have hindered their own or other's learning, or which they do not see as appropriate for a language classroom.

Amongst those participants who suggest points for future improvement, a few suggest the promotion of learning practices which they would like to see more often in their classes either because these practices help them learn or because learners like them. It is worth noting that these responses varied widely from participant to participant. Among the various practices mentioned were promoting more interaction, rethinking the management of groupwork, developing better planning, and promoting pre-teaching of language to ensure learners are able to communicate confidently to complete tasks. An issue commonly brought up by other learners who propose ideas for the future is that of time. A few learners suggest there should be more hours of class a week for them to practice and learn more. Moreover, a few other students say they do not like coming to classes on Saturday and that they would rather have their classes on a different day.

In the case of learners whose answers reveal that the experience fell short of expectations, an interesting issue is raised which is worth reporting: they feel like they have not learnt what they expected, which in most cases meant (enough) English. For instance, respondent #825042 says, "*Me la pase* [*sic*] *bien, pero no siento que hayamos aprendido inglés*" [I had a good time, but I do not feel like we have learnt English]. Another respondent suggests a possible reason why that could be when they, assuming a passive nature of the activity of learning, affirm "if the goal is to learn English, this will not be achieved, since in doing this practice we are not receiving more knowledge of English." (respondent #824765). The idea that PjBL is not good for learning English occurred in other responses as well. In fact, a couple of learners expressed that PjBL was only good for practicing English, and as such, a certain level of English was needed, thus justifying their previously mentioned request of pre-teaching language. According to those learners, having a lower command of the English language may affect the overall quality

of learner experience and, as such, the outcomes achieved. Participant #825017 touches on this issue and effectively summarizes much of what has been discussed hitherto when they say,

> "*Mi experiencia trabajando con este proyeto fue bastante buena y me fue interesante realizarlo acerca de alguien que admiramos, sin embargo al momento de ponerse de acuerdo como equipo respeto a que personaje elegir fue algo problemático, puesto que cada quien tiene distintos gustos y ideales, asi que no todo el equipo quedo conforme con la elección, me gustaria que el trabajo se realizara con menos integrantes o de manera individual, esto con el propósito de llegar a mejores acuerdos y hacer un trabajo más equitativo. Por otro lado, considero que no obtuve ningún conocimiento nuevo de inglés, solo practique lo que ya sabia; en mi caso, tengo un nivel más Avanzado y pude ponerlo en práctica, sin embargo, alguien que no sabe ni lo básico el Proyecto no le sirvió de nada, por lo que creo que se debería mejorar la estrategia. Para finalizar, me agradó que implementran clases extras de inglés para mejorar nuesto nivel, pero creo que deberian poner en práctica un método distinto para mejorar y aumentar los resultados obtenidos.*" [My experience working with this project was really good and it was interesting to make it on someone who we admire, however when came the time to decide as a group which figure to choose it was problematic, given that each one has their different tastes and ideas, so not all the group was satisfied with the choice, I would like for the final project to be done with fewer members or individually, that with the purpose of reaching better agreements and making the work fairer. On the other hand, I consider that I have not achieved any new knowledge of English, I only practiced what I already knew; in my case, I have a more advanced level and I could put it to practice, however, for someone who does not know the basics the project was worthless, so I believe the strategy should be improved. To finish, I liked that they implemented extra English classes to increase our level, but I believe they should put in practice a different method to better and increase the outcomes achieved.]

## 6.2 What are students' perceived learning outcomes?

As has been discussed, a few respondents explicitly associate the quality of their experience to the achievement of certain learning outcomes. However, many others who name perceived learning outcomes in their survey answers do not express any value judgements – or, if they do, the two are not associated. In order to paint a more comprehensive picture of every learner's experience, this section shall now look at all responses which touch on learning outcomes. It is worth remembering that, from an Ec-SCT perspective, every utterance is multilayered and points inward, outward, backward, and forward. Therefore, it could be argued that, in talking about the perceived learner

outcomes, participants could just as much be talking about what results they expect of a language learning experience or what they would like to still develop in the future. As such, even if not apparently, this section tackles those three interwoven issues simultaneously.

Whilst 204 respondents (44.7%) made reference to having learnt through the experience and often named what they learnt, 12 (2.4%) said they did not learn anything new. It is significant to mention that, in the case of the latter, there is a very clear message sent out that participants expected to learn more, especially English, but did not – issue which was identified in the backward orientation evident in most utterances. Upon analysis of the 216 answers, general utterances such as "I learnt a lot" were eliminated, and the remaining were classified under three not mutually exclusive categories, namely language, content, and competences.

### 6.2.1 Language

A majority of respondents' answers (n=140; 30.7%) list outcomes learners perceive to have achieved in relation to language. It is worth stating that language here is seen not simply as a system one learns, but rather as a social and cognitive practice (Pennycook, 2010). Therefore, answers included touch both on the development of communicative competence (Celce-Murcia, Dörnyei and Thurrell, 1995) in named languages, as well as of the metalinguistic and cognitive skills believed necessary to integrate linguistic resources into one's linguistic repertoire.

Much like what was observed in the responses which evaluated PjBL positively, a major trend was also observed here where several learners report having developed their vocabulary or changed their attitudes towards the language. In relation to the former, respondents said that, in learning new words not only did one learn their meanings, but also "*como usarlas adecuadamente*" [how to use them appropriately] (respondent #824756) and "*como pronunciarlas*" [how to pronounce them] (respondent #824986), thus suggesting that PjBL offers them opportunities to learn vocabulary quite thoroughly as multiple dimensions of the language system (namely semantics, pragmatics and phonetics/phonology) are covered. In relation to the latter, respondents most frequently

report having developed more confidence to use the language – a change which many specifically associate with the opportunity to practice English more often –; however, other changes are also mentioned. A few other participants mentioned feeling more comfortable, less shy, and more motivated/interested to use or learn English. In an interesting example, one participant goes as far as saying "I fell [*sic*] very good with my new language" (respondent #828536), suggesting a newfound sense of ownership of the additional language. Finally, and also interestingly, a couple of participants report having understood "the importance English has and that it can be of use in the future" (respondent #828566).

In addition to the findings above, which had already been hinted at in RQ1, but were further confirmed and explored here, three other important findings were unearthed by looking at utterances which specifically discussed learning outcomes. First, several learners believe they have developed oral skills in communication mostly related to speaking and pronunciation, but also generally related to communication skills. Students who mentioned having developed their speaking skills commonly said they learnt "many ways of speaking", which, given the structure and content of the resources used to support learners during the project, is believed to possibly mean two things. It is possible learners mean they have developed knowledge of specific functions (e.g. learned different ways to agree and disagree) as, for instance, respondent #824918 says "I had fun while learning a lot [*sic*] of new ways to speak and how to describe a persons [*sic*] cualities [*sic*]". It is also possible learners mean they have learnt about social modes of talking (i.e. exploratory, disputational, and cumulative talk, as described by Wegerif and Mercer, 1997), as could be interpreted from respondent 824978's response where they say that engaging with that project helped them learn to "*comunicarnos con los demás de una mejor manera y así poder trabajar en equipo como se debe*" [communicate better with other people and, this way, be able to work in teams as one should]. Still on speaking, a couple of students report having developed fluency, which they associate both with their newfound confidence to speak and with increased knowledge. To end the discussion on oral skills, and specifically on the issue of pronunciation, learners usually refer to learning how to pronounce new words, but do not specify anything else or provide any examples.

This way, it is impossible to make any further analysis on what aspects of pronunciation, e.g. segmental or suprasegmental, learners developed through this experience.

Another valuable finding, even if only reported by four participants, was that increased knowledge of grammar and ability to "form clauses and sentences" was mentioned as a perceived learning outcome. A couple of those learners specifically reported having developed accuracy in English as they learnt to use words correctly. Such findings, despite being apparently numerically irrelevant, are especially interesting given a considerable number of learners made reference to learning more <u>about</u> English, also saying things along the line of "very helpful project to understand English" (respondent #827273). Whilst such statements could simply reflect poor communication, they could also mean that learners developed metalinguistic awareness and, as such, likely developed or strengthened their grammatical knowledge of the English language as well, which further contributes to the relevance of the finding reported by those four learners.

The last important finding, according to four other participants, is that through engaging with PjBL they were able to learn strategies to learn languages. Described by them as an experience that "*es bueno porque te enseñas aprender*" [is good because it teaches you to learn] (participant #829111), participants specifically mentioned having learned word tools and "ways to complete activities". If one considers these findings along with the ones previously discussed on metalinguistic awareness, it would be possible to claim that, for a number of learners, one important outcome from their experience might have been the development of awareness and incorporation of strategies which involve manipulation of language to improve learning, otherwise known as cognitive language learning strategies.

## 6.2.2 Non-linguistic content

A small number of respondents (n=14; 3.1%) report having learnt non-linguistic content through engaging with PjBL in their EAL classes. Learners who discuss non-linguistic content outcomes talk about having learnt about people (personalities or characters) and their stories, which, in fact, was the theme of the project. Remarkably, in eleven out of

those fourteen responses, learners mentioned non-linguistic content and linguistic outcomes alongside each other, thus acknowledging the integrated nature of PBLL, which is something these learners seem to enjoy. Participant #830336, for example, says "*Que aprendí mas* [*sic*] *sobre algunas personas a las que* [*sic*] *mis compañeros y me gusto* [*sic*] *relacionar esto con el ingles* [*sic*]" [That I learnt more about some people [?] and I liked to relate this to English].

**6.2.3 Competences**

Some respondents (n=33; 7.2%) claim to have developed skills which "will be of great help in other jobs [*sic*]" (respondent #824776) and which "*pueden ser utilizadas en un futuro*" [can be used in a future] (respondent #825015). In educational research literature, such skills have often been referred to as 21st century skills. Respondents most often mentioned having developed the ability to work in teams "*como se debe*" [as one should] (respondent #824978). To those learners, what this likely means, as based on their responses, is collaborating with peers and communicating properly – skills which learners also report to have developed. Interestingly, three learners explain they have learnt something else about group work: its value. For instance, respondent #824951 says, "*Aprendí que si trabajamos todos en equipo podemos lograr muchas cosas en esta vida*" [I learnt that if we all work in teams, we can achieve many things in this life], which clearly indicates they realized the maxim "alone we can do so little, together we can do so much" holds true for them.

Similarly, a few learners voice interesting insights on their own value or personality, which suggests they have developed some level of self-awareness of who they are as individuals or learners. In a few responses of evident inward orientation, learners talk about how some of their weaknesses were exposed in the process and, through that, they learnt about themselves. For instance, a learner says they have realized that they do not have the command of the English language they would need or want to have. Other examples of such reflections include learners affirming they understood what their potential is, how much of a perfectionist they are, or that they have something to contribute too when working in groups.

In addition to those two main findings about team work and self-awareness, a few learners also reported having developed other skills which were not mentioned by many, but which are nonetheless worth naming here. They were creativity, making and editing videos, "developing a project in stages" (which could be understood as managing one's work), and speaking in public.

**6.3 Which factors have affected participants' learning experience of PBLL?**

Several respondents (n=128; 28.1%) discussed in their survey answers aspects of the pilot program that they considered affected their experience and which, as such, were factors possibly mediating or hindering their learning. In discussing such aspects, learners touched on a number of issues, ranging from teacher and student roles to efficiency of certain classroom practices or activities. Upon analysis of the data set, utterances which touched on those aspects were classified under four non-mutually exclusive categories, namely people, physical resources, time, and practices.

**6.3.1 People**

In participants' accounts of the learning process, people were central to their narratives. As such, both peers and teachers were often mentioned as a factor affecting participation and learning – and, therefore, overall experience of PBLL. It is noteworthy that peers were mentioned much more often than teachers, which could possibly serve as indication of the perceived key significance of learners in leading a process that should, by nature of the approach, be student-centered, and/or; of the novel aspect of student-centered learning.

With regard to peers, respondents refer to them as resource about twice as often (n=22; 4.8%) as they do as hindrance. General utterances such as "*aprendí mucho de todos mis compañeros y de sus proyetos* [*sic*]" [I learned a lot from all my peers and their projects" (respondent #828078) or "The activities that we have to [*sic*] carry out I liked a lot because they were in a team and so we all learned from everyone" (respondent #824823) clearly indicate not only the perceived role learners had in promoting peers' learning, but also the "direction" of learning, which is both outward-in and inward-out. In more illustrative

examples, peers are described as helpful mediators of learning who, for example, corrected one another or who supported one another in negotiating meaning when something remained unclear.

At the same time, challenges dealing with peers which affected learner experience were also presented by participants. The main issue mentioned is learners not doing enough work, which some perceive or report as a lack of care, as can be seen from respondent #824957's utterance "in my team I did not feel very comfortable because they did not care and, instead of doing the work, they talked." Participants who report such an issue say that learners' not caring implies in more work for them and makes them feel uncomfortable. A related issue raised by three participants is that of dealing with people who have different interests. Given the nature of PjBL, learners had some freedom to choose what they wanted to study; however, "*al momento de ponerse de acuerdo como equipo respecto a que personaje elegir fue algo problemático, puesto que cada quien tiene distintos gustos e* [*sic*] *ideales, así que no todo el equipo quedo conforme con la elección,* [*sic*] *me gustaría que el trabajo se realizara con menos integrantes o de manera individual, sto con el propósito de llegar a mejores acuerdos y hacer un trabajo más equitativo*" [when came the time to decide as a group which figure to choose it was problematic, given that each one has their different tastes and ideas, so not all the group was satisfied with the choice, I would like for the final project to be done with fewer members or individually, that with the purpose of reaching better agreements and making the work fairer] (respondent #825017). As described by the participant above, such an issue, which compounded by the perceivedly large group sizes, also implies an inequitable distribution of work for learners which, in turn, has likely affected learning and overall experience.

Curiously, unlike peers, teachers are never mentioned as being a hindrance during the pilot. Whilst two respondents who discuss how their teachers have changed in the process do acknowledge that teachers may negatively affect learner experience, participants always depict their teachers as important resources for learning in the project. For instance, teachers are described by participants as mediators of learning when they, by helping learners practice the language, aid learners in "learning the basic". Additionally, a couple of participants refer to their teachers as important models who, by

providing language input, directly promoted learning, as can be seen from the following utterance:

> "Es un buen proyecto que te ayuda a saber muchas cosas y a saber más vocabulario por qué [*sic*] a maestra nos hablaba en puro ingles [*sic*]" [It is a good project that helps you learn many things and learn more vocabulary because the teacher would only speak English] (participant #829103).

### 6.3.2 Physical resources

Only few (n=4; 0.9%) participants raise issues related to the use of physical learning resources, which could suggest its perceived lesser importance in PjBL contexts vis-à-vis, for instance, people. In fact, a participant, despite not presenting a full idea, suggests exactly this through the use of "but" when they say "when we do the teams [*sic*] and we work together, with fantastic ideas, I love it, even though sometimes [*sic*] don't have the resources for we do [*sic*], but [*stress not present in the original*] coexistence with people who already interact." (respondent #824988) Unlike them, however, the three other participants seem to believe physical resources play a central role in mediating learning. Whilst two of them talk about how their life was made easier by having all the necessary resources – with one of them specifically stressing that if you have all the material resources, the only other things you need are will to learn and responsibility –, the other one specifically talks about how not having a book affects them since they do not know what to do.

### 6.3.3 Time

Some participants (n=15; 3.3%) raise the issue of time and how it has affected their learning experience. Amongst them, there seems to be a general consensus that having more time is of utmost importance. The reasons, according to them, are twofold. First, PjBL is more time-consuming and, as such, there was a perceived feeling that time "*se avanzó muy rápido*" [went by fast] (respondent #824980), making it harder, but not impossible, "to learn and handle the language well" (respondent #824771). Second, time of exposure, as well as time for language practice, are factors which directly impact learning. Utterances such as "By coming more hours a week and listening to the

pronunciation, it is easier to learn" (respondent #827306) or "I was able to practice English more often and in that way I can lose my shame and encourage myself to talk more often" (respondent #825009) clearly show learners' stance with respect to the effect time has on learning and suggest that more time results in better learning. Despite the consensus discussed above, learners seem to disagree with each other on whether the time they had was enough.

On that issue, although a few participants highlighted the need for more time, a couple of others said that the problem might be one of time management. According to these participants, "there was a lot of time doing nothing" (respondent #824713) and perhaps if the time of class were different, learners would be able to do more in class. It is worth remembering that, as was previously discussed, some learners said coming to classes on Saturdays was not something they enjoyed, and as such, that may also be a factor affecting how prone to participating and using time efficiently learners are.

### 6.3.4 Practices

Finally, a number of participants (n=84; 18.4%) produced utterances discussing various specific practices which have allegedly affected participation and learning. Upon analysis of those utterances, two main findings are worth reporting. The first one is language use. A number of participants (n=32; 7%) say that using the language, as a social practice afforded by interaction, facilitates both the learning of language and the development of confidence because "*aprender inglés no solo consta de teoria si no de practica* [*sic*] *tal como lo hizimos con este proyecto*" [learning English is not only about learning theory, but about practicing like we did with this project] (respondent #824770). Few participants, however, explicitly state otherwise and say that language use does not promote any new learning; it only serves to consolidate knowledge. Despite their view, the latter also acknowledge the importance of practice and, in that sense, it remains clear that language use does play an essential role in language education for all 32 participants.

Notably, two learners bring attention to an interesting issue concerning language use. Whilst one respondent talks about how their teachers' using English only positively affects their learning, another respondent specifically mentions that having a language

use policy of "English when we can, Spanish when we have to" is important. These learners' utterances are especially significant as they suggest two points. First, despite placing importance in language use, learners might have disagreements as to what languages should be used in class. Second, provided there is enough input, using the learners' L1 in addition to the target language may positively affect learning, especially as it might allow participation space for those learners who report feeling like they lack enough command of the English language to participate in class and engage in learning – as it has happened in this study.

The second main finding concerns learning languages through engaging with non-linguistic content to complete a real-world task, a subject which a few participants (n=22; 4.8%) raise. In doing so, all 22 respondents say that it is a good idea to learn English through researching a specific non-linguistic topic and, particularly if such content is meaningful to them, learning takes place because interest and engagement are promoted. It should be noted that, in many responses, participants expressed appreciation for having some freedom to choose their topics of study, as can be seen in utterances such as "*el tema que eligimos fue de nuestro agrado y creo que eso ayudo* [*sic*] *para interesarnos mas* [sic] *y aprender*" [the theme we chose was to our liking and I believe this helped us be more interested and learn] (respondent #827293). Moreover, respondents often mention that having to present their findings is another aspect of the experience which is conducive to learning. According to them, not only does preparing for the presentation afford them an opportunity to learn through practice, but also the actual presentations afford learning as students share knowledge with each other.

## 6.4 Summary of findings

A summary of findings can be seen below in tables 2, 3, and 4, which respectively refer to RQ1, RQ2, and RQ3.

**Table 2. Summary of Findings – RQ1**

**RQ1 - What are participants' value judgements about their PBLL experience?**

| Themes | Findings |
| --- | --- |
| Positive | ▪ Overall experience described as "good", "great", "fun", "cool", "nice", "interesting", "pleasant", "dynamic", "wonderful" and "creative"<br>▪ Interest in continuing to learn through PBLL because model is seen as useful and efficient<br>▪ If compared to previous experiences, PBLL is seen as better than other models used<br>▪ Experience is positive because<br>- PBLL is seen as affording learning vocabulary and developing confidence;<br>- teachers are perceived to have become more motivated and committed;<br>- PBLL is seen as affording opportunities to work with others and use English;<br>- there was a perceived atmosphere of mutual support in class, and meaningfulness and relevance of content in PBLL are appreciated |
| Negative | ▪ Perceived feeling of confusion in class<br>▪ Lack of explaining/lecturing perceived as affecting learning negatively |
| Mixed | ▪ Experience described as "good" or "interesting", but<br>- it lagged behind expectations because learners expected to learn more English, not only practice it;<br>- there was a perceived need for more interaction, better planning, pre-teaching language and rethinking management of groupwork;<br>- learners would like to have more hours of instruction weekly<br>▪ Experience described as "fun", but at times also "boring", "difficult" or "stressful" |

**Table 3. Summary of Findings – RQ2**

**RQ2 - What are participants' perceived learning outcomes?**

| Themes | Findings |
| --- | --- |
| Language | ▪ Vocabulary learning (meaning, use, and pronunciation) |
| | ▪ Changes in attitude toward language, e.g. more confidence, more motivation and a newfound sense of ownership |
| | ▪ Development of aural skills in speaking (fluency), pronunciation, and communication skills |
| | ▪ Increased knowledge about the language (accuracy in vocabulary use, grammar, and metalinguistic awareness) |
| | ▪ Development of cognitive language learning strategies |
| Non-linguistic content | ▪ Learning content central to the project |
| | ▪ Non-linguistic content mentioned alongside linguistic content |
| Competences | ▪ Overall development of 21st century skills |
| | ▪ Learning to work in teams, as well as learning about the value of team work |
| | ▪ Development of self-awareness |
| | ▪ Development of creativity |
| | ▪ Learning to edit videos, manage one's work and speak in public |

**Table 4. Summary of Findings – RQ3**

**RQ3 - Which factors have affected the participants' learning experience of PBLL?**

| Themes | Findings |
|---|---|
| People | ▪ Learners perceived as both resource and hindrance to learning |
| | ▪ Teachers perceived as a resource for learning |
| Physical resources | ▪ Physical resources likely did not affect learning as much as people |
| | ▪ Having all necessary resources helped learning take place |
| | ▪ Not having a book seen as a hindrance to learning |
| Time | ▪ Learning with PBLL takes more time |
| | ▪ Perceived need for more exposure to the language and time to practice because more time equals better learning |
| | ▪ Disagreement on whether the time they had was enough |
| | ▪ Reported issue of lack of time might have been a problem of time-management |
| Practices | ▪ Using the language seen as mediating language learning |
| | ▪ Practicing the language perceived not to afford learning new things |
| | ▪ Exposure to the language seen as essential for learning |
| | ▪ Engaging with meaningful content seen as affording language learning |
| | ▪ Presenting projects at the end as affording learning |

# 7 DISCUSSION

Having looked at learners' perceptions of PBLL in a Mexican high-school context, this study has shed light on learners' experiences as regards their value judgement of the model, the perceived outcomes achieved, and the factors which they believe affected learning. On the basis of the findings outlined in the previous chapter, this section shall now turn to a discussion on the relevance and implications of those findings by bridging them with previous research on PBLL, as well as by linking them with key concepts of SCT/Ec-SCT.

As has been discussed, learners' experiences were overwhelmingly positive, and an interest in continuing to learn through PjBL was expressed. Such findings corroborate those by Petersen and Nassaji (2016) and Miller et al. (2012), who also report a majority of learners expressed a positive value judgement of PBLL, as well as those by Poonpon (2017), who reports learners conveyed a preference for using PjBL in future learning events. Interestingly, Thomas (2000) points out that "the tendency to report positively about an experience is heightened […] for students when the activity is provocative and fun" (2000, p. 19), which is likely the case for some participants in this study since words like "fun" were used often to describe learner experience in overall terms. Furthermore, Thomas (2000) additionally claims that the novelty aspect of a model or practice might make participants more prone to reporting positive experiences. That could also be the case for some given the reasons mentioned why learners' PBLL experience was positive were precisely the novel aspects of the model (if compared to more traditional language teaching), such as working in groups, using the language in communication, and engaging with content.

Learners' experiences were not all positive, however, and a variety of perspectives was observed throughout, with learners reporting negative as well as mixed opinions of engaging with PBLL, a finding only previously reported by Beckett (2005). In the case of those learners who reported a negative perception of the experience, reasons included a perceived lack of use of traditional teaching techniques, such as lecturing or explicit pre-

teaching of language before an activity, which are not usually employed in instances of PBLL. Such a finding suggests some learners might have resisted the model precisely for the reason why others enjoyed it: its element of novelty. This apparent contradiction, in turn, sheds light on the complexity of learning, as discussed by van Lier (2010), and serves as further evidence that, although learning is a social phenomenon, it is individual in its realization and, as such, experiences will vary.

If one analyses the body of research on learners' value judgements of PBLL, one will observe that all studies which looked at learners' perceptions after only a single exposure to the model, including the present study, reported mostly positive experiences. However, studies such as Beckett's (2005), which looked at learners' perspectives of PBLL across a spam of two years of exposure to multiple instances of the model, report a majority of learners had negative opinions. Beckett (2005) speculates that their findings might be explained by a possible mismatch between the philosophical, cultural, and educational beliefs of Asian learners and those behind PjBL (which was originally conceived of in the USA). Whilst that is likely a factor also affecting learner experience, one would be remiss not to hypothesize, on the basis of the analysis above, that more familiarity with PjBL might negatively affect learners' value judgements of it – or, in other words, perceptions might grow more negative once they get more used to the model and the novelty fades.

Moving on from a discussion on value judgements, a few considerations must be made on the elements which learners perceived to have affected their learning experience. First, it was noteworthy that people were said to affect learning much more often than physical resources, which could mean they were likely understood as particularly relevant for mediational processes. Although it could be the case that participants focused more on the roles which others had because people had greater significance for learning, other explanation could also be accurate. It could have been the case, for instance, that participants focused their answers on people more because, as one participant explained, they had all necessary physical resources. Furthermore, given the developmental sequence of object-, other-, and self- regulation discussed by Lantolf and Thorne (2007), it could be argued that a number of learners in that context have likely

already developed enough command of the English language (or, for that matter, developed any other skills sets that could make up for their lack of command) so that they do not feel overwhelmed by the language and can then notice and discuss the part people play in the learning process. Whatever the case is, however, such a finding is particularly relevant in that it makes clear that people have key roles in PjBL.

According to participants, people played the role of both a resource and a hindrance to learning in their PBLL experience, with students having been perceived as both and teachers having only been perceived as a resource. Whilst the ideas of student as resource or student as hindrance have been identified in previous PBLL research (e.g. Mali, 2017), and even if previous studies have somehow acknowledged the role teachers play in PjBL, especially when lack of pedagogical scaffolding is mentioned (e.g. Mali, 2017; Miller et al., 2012), no other studies have reported the perceived role of teachers as resources. Such a finding may serve as a more explicit reminder that, despite being a student-centered educational model, teachers still play an important role in facilitating learning opportunities in PjBL and learners acknowledge that.

Another important consideration should be made on the issue of time. Participants in this study suggest that PBLL takes more time than traditional language learning and that managing time in instances of PBLL is challenging, all of which has previously been found in studies by Beckett (2005), Miller et al. (2012), Poonpon (2017) and Mali (2017). In that sense, lack of time has repeatedly been found to be a factor which perceivedly affects the learners' experience negatively. However, participants in the present study found not only that having more time is necessary to complete the tasks proposed, but also explicitly stated more time of exposure is crucial for better learning, a finding which has not been previously raised in PBLL research and which is in line with Krashen's (1981) hypothesis of language acquisition, especially as concerns the importance of linguistic input. Arguably, then, since PBLL is said to take more time, and considering more time of exposure likely affects learning positively, a key point should be made that having an appropriate amount of time is a crucial factor behind successful instances of PBLL implementation.

A last consideration on the factors which participants perceive to have affected their learning relates to the teaching and learning practices mentioned. Whilst in previous studies on PBLL participants often focused on discussing the role people or time had in their experience, little was said about practices which are perceived to affect learning and overall experience. In the present study, however, participants share what practices they believe mediate learning, and it is meaningful that participants do acknowledge the role of embodied social actions (as discussed by Dant, 2004) in promoting learning, as by doing so they elucidate the active nature of PjBL. Among the practices mentioned, two are especially relevant to examine more closely, namely using the language and engaging with meaningful content.

First, there seemed to be some controversy on the issue of using the target language. Whilst the idea that exposure to the target language is crucial for learning appeared uncontested in the findings, there was no agreement on whether actively using the language affords language learning, with some learners clearly saying that such a practice helped them learn new things and others stating otherwise. This finding, which is representative of a clash of educational values, serves to show that despite the wide acceptance of Swain's (1985) hypothesis of language acquisition, not all learners believe producing comprehensible output is as result-efficient. A supporter of Swain's hypothesis could argue in this case that learners have simply not yet perceived (or been directed to perceive) the *affordances* offered by engaging in language use, and that, in that case, it would be crucial to direct learners to perceive them. Most importantly, however, it is important to consider that such a finding suggests a mismatch of learners' values and beliefs (Beckett, 2005) which, if not attended to, can affect learner experience. Another example of a mismatch can also be observed on the disagreement expressed by participants on the role different languages play in learning an additional language, with some participants having praised an "English-only" policy common to more traditional EFL/ESL teaching, and others having praised a "choose-which-language-to-use" policy, which reflects more of a translingual perspective (Garcia and Wei, 2014). Although it might be tempting to argue for one policy or another, that does not fit within the scope of this thesis. What is important to note here, once again, is that such a diversity of results

serves as a demonstration of the variety of views and multi-layered complexity of educational contexts, as discussed by van Lier (2010).

Second, engaging with meaningful content was perceived by participants as affording language learning, which could serve the purpose of strengthening claims on the efficiency of models such as CLIL, wherein content provides the backdrop for language learning (Coyle, Hood and Marsh, 2010). Such a finding is especially significant given the learning outcomes observed by participants. Since CLIL aims to develop communication skills, content, competences, culture, and cognition (the 5Cs, as outlined by Attard Montalto, Walter, Theodorou and Chrysanthou, 2015), by having perceived linguistic, content, and competence-related outcomes, participants further support the claim that PjBL lends itself well to CLIL contexts (Banegas, 2016). One might reason that the findings presented are not enough to support such a claim, especially since culture and cognition aims were not mentioned by students; nevertheless, it is crucial to consider that learners not having mentioned such types of outcomes does not mean such *affordances* do not exist. Furthermore, it is also important to acknowledge that choices in coding and thematization were made which excluded, for instance, the theme of culture from the final reporting. However, the development of cultural competence can be observed throughout, especially as participants discuss the value of group work – which is cultural –, or their learning how to use words adequately – focus on the word "adequate", which implies a cultural benchmark of adequacy.

Finally, and on the subject of perceived outcomes, the present study further corroborates findings by Poonpon (2017) and Miller et al. (2012), who state learners found PjBL to afford the development of language skills. Furthermore, this study validates findings by Beckett (2005) and Mali (2017), who report PjBL's perceived potential to promote competence development. Despite there being similar findings to previous PBLL studies, some of the language skills and competences developed (e.g. confidence development, vocabulary development, learning how to work in groups) are unique to the present study, as is the finding that PBLL also affords content learning – an idea which had been previously hinted at in the literature, but not yet presented as a finding in PBLL research.

It has been noted that participants have focused in on linguistic outcomes more often than on content or competences, and it is relevant to consider possible reasons why that happened. One could assume that a higher frequency of occurrence indicates, in this case, that there was more language learning than there was content learning or competence development. However, as Vaismoradi et al. (2013) report, frequent occurrence "might simply reflect greater willingness or ability to talk at length about the topic" (2013, p. 401). It would not be unreasonable to argue that, having come from a more traditional learning environment, participants might have reported language outcomes more often because that is what they have likely been directed to perceive previously in their language classes. As such, and coming from that background, several participants might still believe language classes are for learning languages – which might also be the case for those participants who reported not having learnt enough English. Furthermore, they may be unable to perceive the other *affordances* offered for learning more than just language due to having had limited PBLL experience. As an alternative theory, it could also be the case that several *affordances*, being relational with abilities, were not perceived because they lie beyond one's ZPD's upper limit, i.e. even with support from another person, they would not be able to notice them at that point in time.

## 7.1 Implications for research and pedagogy

On the basis of the discussion above, a few implications have been identified and will now be reported. As regards research, three points should be made. First, further research needs to be conducted on how learners' perspectives of PBLL change over time. As has been hypothesized, it is possible that perspectives grow more negative as time goes by and as the novelty aspect of PjBL fades. Since PjBL has been found to yield results (e.g. Shafaei and Rahim, 2015; Al-Balushi and Al-Aamri, 2014; Kettanun, 2014), it has become more widely implemented across diverse contexts. However, given its process orientation, achieving good results at the expense of a rich, enjoyable experience is not enough. What is more, if perceptions grow more negative over time, outcomes could also be affected. Therefore, failing to observe how learners' perceptions of PjBL change over time could potentially harm the model's sustainability, which justifies a call for

longitudinal studies on learner's perceptions of PjBL, including in the context of Mexican UdG high schools. Second, given learners are not the sole stakeholders of education, it would be interesting if other perspectives were also examined so as to compare them with learners' and identify points of agreement and disagreement between stakeholders. Having established that mismatches in educational values and beliefs between stakeholders (e.g. two learners, or learners and teachers) could affect learning, if those are identified through research, they could be tackled more easily. Lastly, and especially in the context of the present study, it would also be interesting, if data is available, to conduct scholarly research on the outcomes achieved by learners through a pretest-posttest design study. By doing that, one could compare how learners' perceptions of the learning outcomes achieved actually compare to reality, which could further validate some of the present study's findings. Additionally, the same could be done in other CLIL contexts so more data is available to possibly further support the claim that PjBL suits CLIL education well.

Moving on to the pedagogical implications, two main points should be raised. First, the complexity of educational events discussed by van Lier (2010) and observed in this study calls for complex pedagogical solutions. It is important to consider during both planning and teaching that, due to being active agents, learners' ideas about learning and the nature of knowledge vary, and that those are affected by their cultural background (e.g. where they come from, their socioeconomic status, their family traditions, etc.) and by their schooling background (e.g. how long they have been engaged with PjBL, what models of instruction they have previously been exposed to, etc.). As such, one should understand that, PjBL is a culturally-constructed phenomenon that may not work for every learner, especially if conflicts between values and beliefs are not addressed (Beckett, 2005) and attempts to align expectations are not made. That way, no "one-size-fits-all" solution exists for implementing PjBL/PBLL, and one must carefully look at and acknowledge the richness of realities in the context before them if they are to successfully implement an innovative model like PjBL.

That leads to the second point, which is that if one wants to start implementing PjBL, in addition to carefully considering the allocation of time and providing adequate

scaffolding, they must actively engage learners in discussions on the learning potential of the model, as well as in embodied action that facilitates the perception of the different *affordances*. Although attending to the issue of time allocation is essential, as is scaffolding learning, so that learners can fully benefit from the activities proposed without feeling rushed or overwhelmed, it is only by engaging in action with others and by actively comparing PjBL with other models that learners can start realizing the full potential of PjBL and perceive all the *affordances* offered by it within their ZPD, especially if they are used to learning in a different way that is more language-focused. Moreover, when designing and implementing such activities, special attention should be paid to the relationships built in class as they can represent either a positive or negative *affordance* for learning since people have been found to serve as either resource or hindrance to learning.

## 7.2 Limitations

A few limitations have been acknowledged during the making of this study and should be brought to light. For the purposes of clarity, limitations have been divided into two groups, namely limitations with data collection and other limitations.

Regarding the data collection process, personal links were not sent to each participant, thus making it impossible to track which learners replied whilst also making it possible for learners to reply more than once. Although participating teachers were instructed to administer the questionnaires in class so learners could answer under adult supervision and so the chance of there being multiple submissions by the same respondent could be minimized, there is no guarantee that respondents did not reply to the survey twice. Furthermore, due to not being originally used for academic research purposes, the questionnaire was not fully validated. Despite having been subject to the critical scrutiny of four experts involved with Connect, no pilot phase was ever run. Therefore, there is no way of ensuring full questionnaire validity. Another limitation is that a choice was made to send out the questionnaire in English, despite learners' varying levels of command of the English language, which could have affected their understanding of the questions. Even if learners could choose to respond in whichever

language they preferred, there is a chance they did not understand the question accurately, which, compounded by teacher presence in the room, might have affected how learners answered each question. Finally, the response rate was relatively low. Because it was under 60%, findings are likely not representative of the entire population of students who participated in the pilot (Fincham, 2008).

As concerns other limitations, perhaps the most important one relates to the factist perspective assumed by the present study and the use of self-reported measures. As echoed by Thomas (2000), "self-reported measures are not measures of what happened, but of what participants believed happened, and thus reliance on these measures can be deceiving" (2000, p. 18). Although investigating perceptions was the aim of the study, and although the author assumes the information provided by learners is an accurate representation of their lifeworlds, there is a chance that participants are not being fully honest or are not fully able to represent their reality of what happened through language use. Furthermore, there is also the possibility that even if students had the necessary resources to say everything they wanted, topics were uncomfortable to approach, especially if they relate to feelings or frustrations. Additionally, and from a SCT perspective, given that school practices are social practices, one could argue there is a social component to answering a questionnaire in school, and that component could be participants wanting to please those who they believe might read the data they provide, which could affect the choice of content of their answers. Finally, as regards data analysis, this study included no means of triangulating findings, which in turn affects their validity.

## 7.3 Final words

Despite the limitations above, by looking at learners' perceptions of PBLL, the present study makes a few contributions to the field. The primary contribution of this study is to provide initial empirical evidence on learners' perspectives to discuss the reality of Mexican high school language learners in the state of Jalisco, which could serve the purpose of informing future instances of PBLL implementation in that context. Another important contribution, and that goes beyond the Mexican context, is to shed light on the

complexity not only of PBLL environments, but of learning environments altogether, which, affected by a number of personal and social factors, make the work of education intricate and, at times, challenging. Moreover, the present study has also contributed to support the claim that PjBL lends itself well to CLIL contexts. Lastly, a final and very important contribution is to support the validity of previous research (e.g. Mali, 2017; Miller et al., 2012; Beckett, 2005) whilst also opening up opportunities both for longitudinal research on learners' perceptions of PBLL and for future quantitative research on outcomes of PBLL in the Mexican context.

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