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METALINGUISTIC ABILITIES AND LEARNING CONTEXT VARIABLE IN EFL LEARNERS

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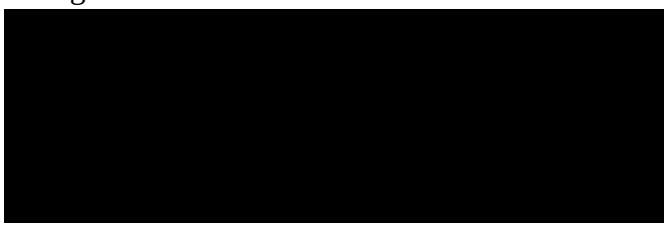

ABSTRACT

The purpose of this research paper is to examine the influence that the learning context has over Catalan/Spanish native English as a Foreign Language (EFL) students in the acquisition of metalinguistic abilities as well as the accuracy of the learners' metalinguistic explanations. Subsequently, an investigation with two tests – a written and an oral one – was performed with sixty participants in their baccalaureate years, who were divided into three groups according to their English exposure outside the school context. The findings conclude that formal learning correlated positively with better metalinguistic abilities – specially with metalinguistic knowledge – although without significant differences with informal learning and that metalinguistic knowledge's rule verbalisation is simplified, though formal learning shows advantages in respect to informal learning or the absence of further learning context in the use of metalanguage.

Keywords: learning context, metalinguistic abilities, formal learning, informal learning, metalinguistic knowledge.

RESUMEN

El propósito de este trabajo de investigación es examinar la influencia que el contexto de aprendizaje tiene sobre los estudiantes nativos catalanes/españoles de Inglés como Lengua Extranjera (ILE) en la adquisición de habilidades metalingüísticas, así como en la precisión de las explicaciones metalingüísticas de los estudiantes. Subsecuentemente, se realizó una investigación con dos pruebas, una escrita y otra oral, con sesenta participantes cursando bachillerato, quienes fueron divididos en tres grupos según su exposición al inglés fuera del contexto escolar. Los hallazgos concluyen que el aprendizaje formal se correlaciona positivamente con mejores habilidades metalingüísticas – especialmente con el conocimiento metalingüístico – aunque sin diferencias significativas con el aprendizaje informal y que la verbalización de reglas del conocimiento metalingüístico se simplifica, aunque el aprendizaje formal muestra ventajas con respecto al aprendizaje informal o la ausencia de un contexto de aprendizaje adicional en el uso del metalenguaje.

Palabras clave: contexto de aprendizaje, habilidades metalingüísticas, aprendizaje formal, aprendizaje informal, conocimiento metalingüístico.

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1 INTRODUCTION

In exploring the interface of language and cognition, metalinguistic abilities are essential to the process of learning a language effectively. By examining how learners reflect upon and employ linguistic structures, metalinguistic skills emerge and these mechanisms underlie complex language use and comprehension of the inner functioning of languages. Some contemporary academics have addressed this subject matter, giving rise to theoretical approaches and practical implementations to verify them; nonetheless, it is still an undervalued line of investigation that requests for more consideration.

Research conducted around this topic is fundamental and has been applied to pedagogy and didactics; specifically, on the association between metalinguistic abilities and linguistic proficiency as well as instruction. Consequently, earlier studies correlate English proficiency to metalinguistic capacities and denote that the type of instruction received affects directly their procurement. Also, studies about metalinguistic abilities have been crucial in the development of theories and the distinction between metalinguistic awareness and metalinguistic knowledge. However, these aptitudes have not been inspected in further scopes. Therefore, this thesis has two central purposes: firstly, to investigate the context-specific learning in which metalinguistic skills are developed and their influence in Catalan/Spanish native and English as a Foreign Language (EFL) students and secondly, to uncover if the context variable also affects the accuracy of metalinguistic knowledge verbalisation.

This paper will be divided into two main sections. The first part will provide a theoretical approach to metalinguistic capacities and their relation to explicitness and implicitness as well as the distinction between metalinguistic awareness and knowledge and the learning-context variable, all supported by earlier research. The second part will focus on the practical experimentation of the first part, displaying two research questions and the methodology of the study to then analyse the results and compare them with previous research, providing empirical conclusions.

2 LITERATURE REVIEW

2.1 Implicit and explicit distinction

Although many researchers advocate for the distinction between implicit and explicit, it has been difficult to reach a consensus both in the field of cognitive psychology and Second Language Acquisition (SLA) concerning the issue of being two separate systems or a single one (Ellis, 2009a). Focusing on SLA, which is the field this literature review will analyse, the dichotomy between implicit and explicit will be favoured and must be explained for further understanding. In accordance with Schmidt's (1994) considerations, an additional distinction will be established between implicit and explicit learning, knowledge and instruction.

2.1.1 Implicit and explicit learning

This terminology makes reference to the "processes of learning" (Schmidt, 1994, p. 20); in other words, it describes two ways in which the brain obtains and stores information. In the field of SLA, Krashen (1981) was a pioneer in the development of this separation, stating that they are "independent systems for developing ability in second languages, subconscious language acquisition and conscious language learning" (p. 1). This explanation was expanded by Schmidt (1994), who proposed a deeper description of conscious and subconscious learning. Many researchers – such as Hulstijn (2005), Williams (2005), Ellis (2009a) and Rebuschat (2015) – agree that the defining characteristic that distinguishes implicit from explicit learning is precisely consciousness. Consequently, it is pertinent to talk about Schmidt's (1994) examination of conscious and unconscious and apply its distinctions as the criteria to distinguish implicit and explicit learning, which will be the terms preferred in this paper. The four features to consider, hence, will be intentionality, awareness, attention and control.

Intentionality refers to whether there is a deliberate intent or not to learn something (VanPatten & Smith, 2022). According to Hulstijn (2005), it is a matter of how the learner processes the input received:

> Explicit learning is input processing with the conscious intention to find out whether the input information contains regularities and, if so, work out the concepts and rules with which these regularities can be captured. Implicit learning is input processing without such an intention, taking place unconsciously. (p. 131)

On the one hand, implicit learning implies no intention of learning or, as remarked by Schmidt (1994), "the learning of one thing when the learner's primary objective is to do something else"

(p. 16). On the other hand, explicit learning entails the purpose of engaging actively with the input and being able to extract the aimed information. Therefore, it can be stated that implicit learning means learning incidentally, while explicit learning means learning intentionally. However, both terms need to be distinguished, as noted by Hulstijn (2003), Paradis (1994) and Williams (2009). Implicit learning encompasses learning incidentally, which accounts for its intentionality, but requires more factors. In other words, incidental learning is an indispensable condition for implicit learning to occur, while implicit learning is the sum of incidental learning and the remaining three features that will be explained later. Correspondingly, intentional learning is one of the preconditions for explicit learning to originate, but not the only one.

Regarding awareness and attention, their division is based on Schmidt's (1994) distinction of two types of awareness depending on their degree. Awareness as noticing will be categorised as attention, while awareness as metalinguistic awareness will remain with the original term. Attention, then, is the basic degree of awareness – which involves the perception of the stimuli in the input – while awareness implies a higher degree of analysis related to metalinguistic awareness. In Ellis' (2009a) words, "the former involves conscious attention to 'surface elements', whereas the latter involves awareness of the underlying abstract rule[s]" (p. 7). These terms are relevant to the discussion about the differences between implicit and explicit learning to assert their levels of attention and awareness separately.

Starting with awareness, SLA researchers concur that the main difference between implicit and explicit learning is that the first excludes metalinguistic awareness; put differently, when learning implicitly, learners do not engage in deep reasoning and remain unaware of both the process of learning and the knowledge they acquire, being unable to verbalise it. Nevertheless, explicit learning means otherwise: learners actively engage with the process of learning, being aware of both having learned and of what they have learned and being able to articulate it in terms of rules (Ellis, 2009a).

Furthermore, the role of attention is also important to comprehend implicit and explicit learning. Attention will be subdivided into two – peripheral and focal – in line with Schmidt's (1994) research, each of which will be indicative of implicit or explicit learning. Peripheral attention relates to intentionality as it is a "learning in which the primary focus of attention is elsewhere," normally when the focus is intended on meaning (Schmidt, 1994, p. 18). Therefore, it describes the type of attention used when learning implicitly, as the learner attends peripherally to all the input available, which can be acquired and learned accidentally. Focal attention or noticing, however, conforms to what was previously described as attention and

ascribes to explicit learning, as the learner consciously and intentionally directs the attention to specific parts of the input.

As for control, we distinguish between using an automatic or passive processing of the input, intrinsic to implicit learning, or a controlled or active processing, appertaining to explicit learning. Having all the previous approaches in mind, it can be said that an automatic procedure refers to the incidental, unaware and peripheral processing of the input, while a controlled one refers to the intentional, aware and focal processing of the input (Schmidt, 1994). In brief, the learner has control over the process of learning or not. As the concepts of implicit and explicit learning have been explained, the following step will be to describe their possible results.

2.1.2 Implicit and explicit knowledge

Knowledge refers to the "end-products of learning" (Schmidt, 1994, p. 20); that is to say, the outcomes of learning reflected in the information the learner has access to. There are myriad opinions surrounding the issue of whether the type of learning directly influences the type of knowledge that arises from it, more specifically, if implicit and explicit learning derive into implicit and explicit knowledge respectively. While some SLA researchers agree that a particular learning process does not necessarily result in its specific knowledge (Ellis, 2009a; Williams, 2005), others such as Rebuschat (2015) and Hulstijn (2005) correlate implicit learning with implicit knowledge and explicit learning with explicit knowledge. For this thesis, the last stand will be assumed. Returning to implicit and explicit knowledge, Ellis (2009b) encapsulates their distinction with this definition:

> Explicit knowledge is conceptualized as involving primarily 'analyzed knowledge' (i.e. structured knowledge of which learners are consciously aware) and secondarily as 'metalanguage' (i.e. knowledge of technical terms such as 'verb complement' and semitechnical linguistic terms such as 'sentence' and 'clause'). Implicit knowledge is characterized as subsymbolic, procedural and unconscious. (p. 38)

Still following his line of research on this topic, the criteria he proposes to distinguish both types of knowledge will be revisited and supported with research from other authors, mainly in accordance with Schmidt's (1994) findings displayed previously. His findings will be divided into the following sections: awareness, verbalisation and control.

Firstly, to explain awareness in relation to the type of knowledge, the definition of the term given in the preceding section has to be taken into account. Going back to the description

proposed, awareness is related to metalinguistic awareness; that is, realising having learned and its results. Concerning the outcomes, the learner acquires "intuitive [or] conscious awareness of what is grammatical" (Ellis, 2009a, p. 11). While the first one refers to the ability to identify errors without being able to know why they are ungrammatical, the second one implies the skill of noticing the error and explaining it. Hence, the first one stands for implicit knowledge and the second one for explicit knowledge. Schmidt (1994) and Hulstijn (2005) had already realised this distinction asserting that explicit knowledge conveys being consciously aware of the linguistic properties and rules underlying the information one knows.

Consequently, this leads to verbalisation: when the learner is aware of the rules of the target language, this knowledge can be verbalised and reported, while implicit knowledge being intuitive, cannot (Schmidt, 1994; Hulstijn, 2005). This type of knowledge is labelled as declarative and procedural knowledge, which are the equivalents of explicit and implicit knowledge respectively. As Schmidt (1994) alleges, "procedural knowledge [is] knowledge of how to do things, as opposed to declarative knowledge, knowledge of facts" (p. 21). Thus, while implicit knowledge is mainly perceived in language use, explicit knowledge is anticipated in tasks that demand detailed explanations or more cognitive effort (Ellis, 2009a). At this point, the definition given at the beginning of the section about explicit knowledge has to be unfolded. As mentioned before, explicit knowledge combines analysed knowledge – demonstrated through the explanation of awareness – and metalanguage. Ellis (2009a) states that "verbalising a rule or feature need not entail the use of metalanguage" (p. 13). In other words, learners can be highly precise or explain the rule more vaguely, using less linguistic technicities, meaning that they have explicit knowledge of the rule but can be more or less metalinguistic accurate in their description (Ellis, 2009a). This topic will be developed to a greater extent when disclosing metalinguistic knowledge.

With respect to control, "explicit and implicit knowledge are often associated with effortful and automatic processing, respectively" (Hulstijn, 2005, p.131). Otherwise stated, implicit knowledge is available automatically as the knowledge is internalised, but explicit knowledge requires controlled processing and reasoning. This fact is related to what was previously mentioned regarding verbalisation: as implicit knowledge can be accessed rapidly, it emerges in communication whereas explicit knowledge is only available through cognitive processing, depending upon time to plan and conceptualise (Ellis, 2009a). This results in different output processing, in which fluency is notable for implicit but not for explicit knowledge (Schmidt, 1994; Green & Hecht, 1992). As previously mentioned, implicit and

explicit learning and knowledge are somehow interconnected and besides this, they tend to be influenced by the type of instruction received.

2.1.3 Implicit and explicit instruction

Though the learner's attitudes are the defining factor of learning, instruction entails an extrinsic intervention, typically that of the teacher or the course materials (Ellis, 2009a). Therefore, depending on the type of intervention – whether indirect or direct – the instruction will be implicit or explicit. Indirect intervention limits the role of the teacher, creating a learner-oriented instruction in which learning is experienced through communication in the target language, being reactive by nature (Ellis, 2009a). Thus, implicit instruction could be defined as the one that intends to draw attention to specific linguistic patterns or features that emerge naturally and from which the learner is supposed to infer the underlying rules while focusing on meaning instead of form (Housen & Pierrard, 2005; Ellis, 2009a). The approach it follows according to its characteristics is a focus-on-form (FonF), as the attention is shifted from meaning to a particular form when a problem arises in communication, so the teacher intervention is minimal (Long, 1998). On the contrary, direct intervention is teacher-centred as well as syllabus-based, in which the instruction is prearranged and structured, being inherently proactive (Ellis, 2009a). Accordingly, explicit instruction implies that the learning revolves around the rules of the target language; that is to say, the instruction's objective is for the learners to "develop metalinguistic awareness of the rule […] deductively (i.e. by providing the learners with a grammatical description of the rule) or inductively (i.e. by assisting learners to discover the rule for themselves from data provided)" (Ellis, 2009a, p. 17). In this sense, it follows a focus-on-forms (FonFs) approach – commonly known as the traditional approach – in which attention is focalised on the target forms, which are normally presented in controlled tasks, isolated through the use of technical language to convey the rules that conform them (Long, 1998; Housen & Pierrard, 2005; Green & Hecht 1992). Nevertheless, it can also happen that direct intervention is implicit and indirect intervention is explicit (Ellis, 2009a). The issue of the benefits of implicit or explicit instruction will be reviewed in the following section to establish connections between this topic and metalinguistic awareness and knowledge. Based on the information gathered, a summary of the findings has been developed in *Figure 1:*

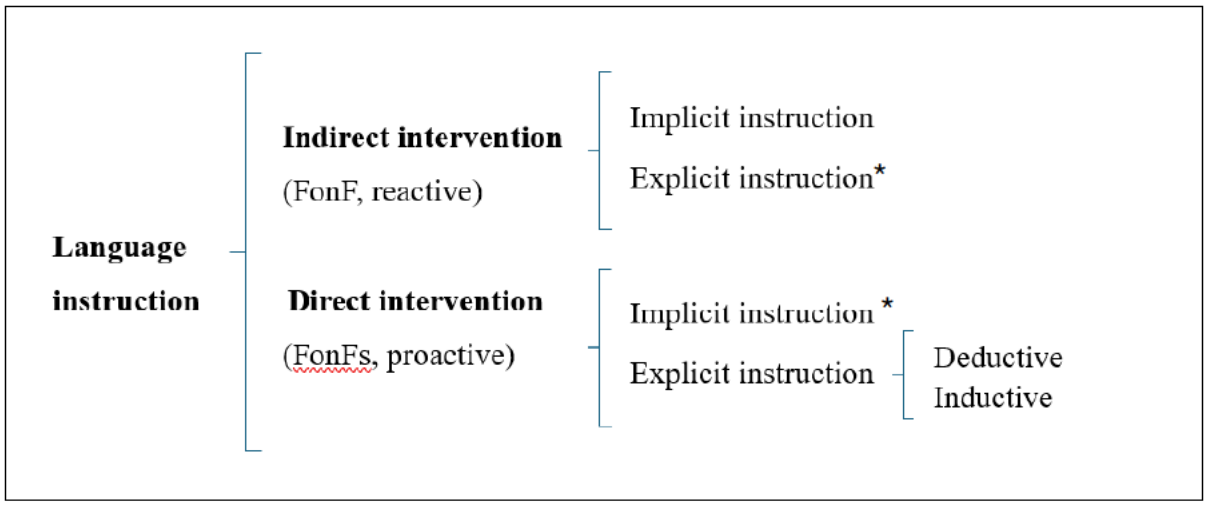


Figure 1:Types of instruction [1]

2.2 Metalinguistic awareness and knowledge

For this section, it is worth emphasising the importance of the master's thesis carried out by Wilhelmsen (2022), as her working definitions were the most accurate for this paper. To define metalinguistic awareness (MLA) and metalinguistic knowledge (MLK), we will recall the definitions provided for implicit and explicit learning and knowledge and their practical implications as well as review previous studies that relate these concepts to instruction.

2.2.1 Association with implicit and explicit knowledge

As a starting point, MLA will be steadily associated with implicit knowledge and MLK with explicit knowledge, as some researchers have already done (Elder, 2009; Wilhelmsen, 2022). Returning to the definition of explicit knowledge (Section 2.1.2), it is shaped by analysed knowledge and metalanguage; the more metalanguage the learners use, the more MLK they have. Moreover, MLK gathers the predominant characteristics of explicit knowledge – such as being declarative and accessible through cognitive processing (Paradis, 1994; Hulstijn, 2005; Wilhelmsen, 2022) – being "analytical rather than intuitive in nature" (Elder, 2009, p. 114). For this reason, it is analogous to explicit knowledge. Conversely, MLA is related to implicit knowledge as it is also intuitive in its judgements about grammaticality (Ellis, 2009a; Elder, 2009), without the capacity to verbalise the rules underlying it or even be consciously aware of them. Once this correlation has been stated, more precise definitions will be provided for metalinguistic awareness and metalinguistic knowledge.

From a theoretical perspective, MLA is the "ability to direct attention to the form and function of language" (Wilhelmsen, 2022, p. 11), while MLK is the competence to verbalise

[1] The asterisks (*) for explicit and implicit instruction denote that they are not prototypical but still can happen.

and state the rules of the target language. The definition of MLA must be comprehended differently from the definition of awareness given in implicit and explicit learning (Section 2.1.1). During the process of learning implicitly, learners do not attend to the structure of the target language, meaning that it excludes metalinguistic awareness. Nevertheless, when comparing MLA and MLK, the former refers to the ability to reflect on language during a task – temporary attention – and to notice the grammaticality of an utterance intuitively, without verbalising a rule or resorting to explicit knowledge (Wilhelmsen, 2022). For this study, the practical definition of MLA will be noticing errors in grammar and providing the correction, though not knowing the origin or the reason behind this judgement; that is, making intuitive judgements about the grammatically of an utterance without explicit understanding or expression (Wilhelmsen, 2022). As for MLK, it combines MLA to the point of identifying and correcting the error and includes the verbalisation of the rules behind it, providing a conscious judgement.

The majority of studies result in learners' levels of MLA outperforming MLK (Green & Hecht, 1992; Elder & Manwaring, 2004). Put differently, learners' ability to correct errors (MLA) surpassed their competence to verbalise the rules (MLK). According to Ellis (2009b), Elder and Manwaring (2004) and Green and Hecht (1992), this outcome could be the result of relying exclusively on explicit knowledge to convey the rules – as the only source of MLK – which is less available than implicit knowledge, used in error correction – that is, in MLA. Paradis (1994) also expounds that applying the correct grammatical rule (MLA) can be automated as learners employ their implicit knowledge, but the capacity to verbalise the rule (MLK) cannot become procedural, as it demands a conscious examination of the knowledge the learner already has. In addition, Wilhelmsen (2022) declared that MLA and MLK, although separate concepts, are interconnected:

> MLA is arguably a prerequisite for the development and expression of MLK, as MLA is the ability to focus on the factors of language which MLK may consist of. The two concepts differ in the sense that MLA is a skill of attention, while MLK is explicit knowledge that may or may not be expressed, and when it is, it coincides with MLA. (p. 16)

Simply stated, it can be argued that the desired final step for MLA is to verbalise the rules to move from an intuitive judgement to a conscious one, therefore giving rise to MLK. Once the relationship between learning and MLA and MLK has been stated, the paper will move on to their relationship with the types of instruction.

2.2.2 Relation with implicit and explicit instruction

Together with research about MLA and MLK individually, studies about their relationship with the types of instruction and their outcomes have been conducted. Most research findings concur that the more explicit the instruction is, the better results in MLK tests the learners exhibit. Norris and Ortega (2000) suggested that explicit instruction is more effective than implicit instruction on average, but either explicit instruction focuses on form or forms (Section 2.1.3), the results are not significantly different. In the trials made by Renou (2001) and Elder and Manwaring (2004), a FonFs approach that engaged in explicit instruction of grammar rules was determinant to achieve higher levels of MLK in contrast with a focus-on-meaning oriented towards communication in the target language. Although it is not clear if the focus-on-meaning instruction refers to the FonF approach in this thesis (Section 2.1.3), it is clear that it involves implicit rather than explicit instruction, agreeing with Norris and Ortega (2000). In a more recent study, Gutiérrez (2016) also acknowledged that explicit instruction leads to an improvement in MLK. White and Ranta (2002) offered a different perspective, which related explicit instruction to better levels of MLA. Their test demonstrated that this type of instruction triggered a better correction of the possessives his/her. As it did not involve the verbalisation of the rule, it analysed MLA but not MLK. Moreover, Elder (2009) and Serrano (2011) also favoured explicit instruction for the gaining of MLK, but the results were not as significant as the ones found by other researchers. They hypothesised that exposure to grammar-based instruction would result in better performance on MLK tests, yet it was not statistically significant and merely indicated a slightly favourable correlation between them. Despite this, Serrano (2011) mentioned that her results could be influenced by the type of instruction given in Spain, which typically focuses on grammar. On that account, both the rule group and the comparison group did not differ on the basis of their daily instruction, so the results could be biased. The following section will differentiate the classroom context, in which instruction takes place, and the out-of-school context, providing a further analysis on the topic.

2.3 School and out-of-school context: formal and informal learning

The learning context also plays a role in the discussion of implicit and explicit learning. The distinction between implicit and explicit learning has been established at the beginning of the paper (Section 2.1.1). However, when the context in which they occur is heeded, the preferred terms are informal and formal learning, respectively. Therefore, this terminology is not determined by how the learners process information but from the circumstances that surround them (Pemberton et al., 2004). The reason behind this is that implicit and explicit learning can

occur in both contexts, but informal learning is always external to the classroom and formal learning materialises in the academic context. Thus, formal and informal learning are presented as opposites: if "formal learning is typically institutionally sponsored, classroom-based, and highly structured" (Marsick & Watkins, 1990/2015, p.12), informal learning entails otherwise.

Malcolm et al. (2003) proposed four categories to distinguish them: process, purpose, location and setting and content. As for the type of processing and purpose, informal learning is normally tied to implicit learning, as it emerges from everyday activities in which learning is not the objective. This statement is only partially true because, although informal learning almost always implies implicit learning, it is sometimes explicit. Benson et al. (2001) suggested that there was a distinction between naturalistic learning and self-instruction within informal learning: implicit or naturalistic learning entails acquiring the language incidentally while engaging in daily activities in the target language, whereas explicit or self-instructed learning is an intentional "self-initiated learning in isolation from teachers and other learners" (p. 62). For this thesis, only implicit or naturalistic learning will be considered informal learning. Another relevant thing is the setting in which it develops. This category was selected as the main one to distinguish informal and formal learning for this discussion, as explained previously. Informal learning is extramural to any academic space and the norms it is subjected to, such as and strict schedule and curriculum, while formal learning is structured and classroom-based. Finally, the content in formal learning is regulated by a teacher or the educational system and it typically induces explicit and academic knowledge, while in informal learning, the learner acquires implicit and usage-based knowledge in the target language, as the input tends to be more ordinary and less artificial. De Wilde et al. (2020) encapsulate these aspects of formality and informality in the following quote:

> […] today's omnipresence of the English language provides non-English speakers with many opportunities to pick up aspects of the language without any form of explicit teaching or assessment. English is used in many authentic contexts and integrated in many people's daily activities, such as listening to music, watching subtitled television programs, using the internet or social media, or gaming. These exposures do not come with a fixed curriculum, explicit grammar instruction, and formal assessment. People are simply exposed to English through activities where language learning is not the purpose. (p. 171)

Drawing on the collected data, an overview of the conclusions has been depicted in *Figure 2:*

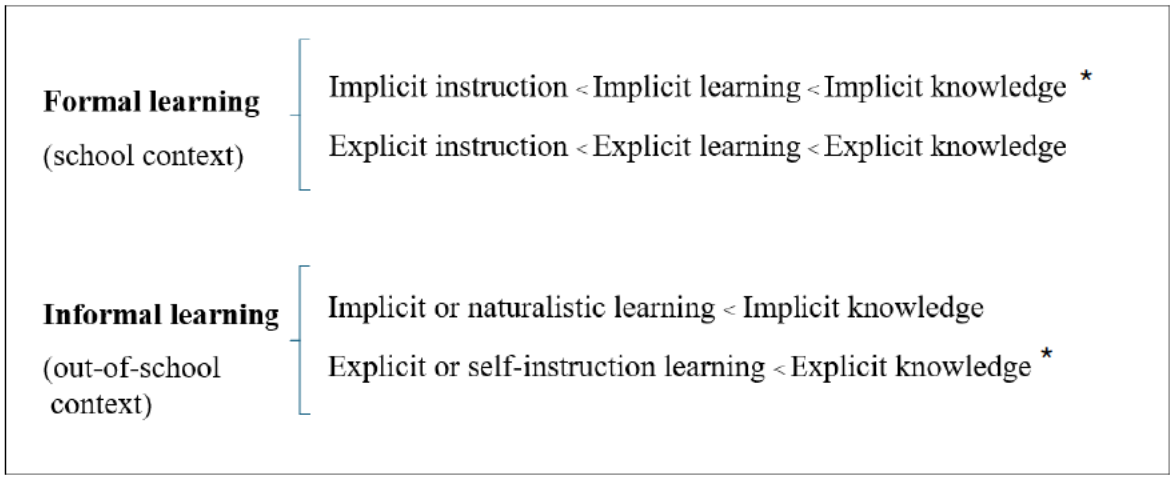


Figure 2: Types of learning in context [2]

2.3.1 Relation with MLK and MLA

For this part, the study by Muñoz and Cadierno (2021) will be essential as it condenses the relation between MLK and MLA and formal and informal learning. The participants included Danish learners, who live in an English-speaking context that promotes informal learning, and Spanish students, accustomed to formal learning. The disparity between them stems from the years and type of instruction and the activities they choose to improve the target language. In Spain, students receive explicit FonF English instruction since they are young and enrol in extracurricular classes to supplement their proficiency. Since classroom education accounts for most of the English input received, "the resulting knowledge is predominantly explicit and declarative rather than implicit" (p. 187), which simultaneously evolves into MLK. Conversely, Danish students are more fluent in practically all linguistic domains and language use overall because they engage in more daily activities in English and receive instruction later at school with a more implicit FonF, thereby not enrolling in extracurricular programmes. The results demonstrated that Danish participants "attained significantly higher levels on all the tests except for the MKT" (p. 199), including the grammaticality judgement task that analyses MLA, in which they also had an advantage with respect to Spanish participants. Muñoz and Cadierno (2021) elucidated that Danish learners rely more on implicit knowledge and "may have learned the target construction incidentally through cumulative higher exposure to the correct versions in out-of-school English-related activities" (p. 200). Concurrently, Spanish students outperformed on the MLK test, probably due to the nature of their formal learning and explicit knowledge. Succinctly, as Elder (2009) declared, classroom context or formal learning is better

[2] The asterisks (*) for implicit instruction and explicit or self-instruction learning denote that they are not prototypical but still can happen.

for the development of MLK "rather than acquired systematically via naturalistic exposure" (p. 137).

3 RESEARCH QUESTIONS

In relation to the literature review and the concepts that have been explained, two research questions appeared as the initial point of the study.

1. Does formal learning lead to better MLK and MLA than informal learning?
2. Are MLK explanations given by the participants accurate with the use of technical language or elementary with simplified metalanguage?

4 METHODOLOGY

4.1 Participants

Participants were selected from a school in Catalonia in their 1st and 2nd baccalaureate years (between sixteen and eighteen years old), whose contact with English dates back to the age of six. The instruction in their formal setting consists of three hours of English with a deductive FonFs approach and two and a half additional hours in their baccalaureate years included in the school's Cambridge Project, an extracurricular but compulsory subject for those who do not have the B2 certificate. In the beginning, eighty-one participants enrolled in the study; however, some stepped down and only sixty remained. The participants were divided into three groups according to their exposure to English outside school. The first group (G1) included twenty-two participants who have exposure to English at school, at home and in a language school. The second group (G2) was composed of eighteen participants, whose exposure was at school and home. Finally, the third group (G3) included twenty participants who only received exposure to English at school, as the time they spent at home with English input (less than one hour) was not enough to make a difference. In order to acknowledge their participation in the study, the participants had to sign a consent form stating their willingness, mainly because some of them were still under eighteen. Furthermore, the consent form warranted the anonymity of their identities and gave detailed information of the process of the study.

4.2 Instruments

Three instruments were used for this study: a background questionnaire and two tests, a written grammaticality judgement task (GJT) and an oral test. The background questionnaire aimed to gather information about the participants' exposure to English at school and outside of it, both in a language school and at home. The tests' purpose was to analyse the levels of MLK and

MLA in the participants' answers. Firstly, the GJT consisted of ten sentences, of which only two were grammatical. Regarding the ungrammatical sentences, the criteria used to select the errors for the GJT were the following: the test was designed to present structures – comprising the fields of morphology and syntax – that are problematic for second-language learners of English. In order to do so, the studies by Ellis (2009b, 2009c) and Avazpour (2012) were reviewed as they examined SLA error analysis and some of their examples were taken. Furthermore, the sentences followed a progression from having easier and more elementary errors that tend to be learned at school to more complex and advanced ones that depend upon knowledge of the rules and metalanguage. Therefore, the task was designed to elicit explicit and, thus, MLK but it also served to see if the participants relied more on implicit knowledge, being categorised as MLA. The reliability of the GJT to elicit MLK is proved by two main factors: time and qualitative examination. By being an untimed task, participants have the opportunity to access conscious knowledge and answer in a non-automatised but controlled way, being encouraged to find the reasoning behind their judgement. Also, participants were given two options under each sentence for them to express their degree of awareness and say if their judgement was based on explicit (MLK) or implicit knowledge (MLA). This option served to realise if they knew the rule underlying the error correction and could verbalise it or if their judgements were based on intuition and could not be verbalised, being influenced by a feeling or by salience and frequency of the structure in their input without knowing the rule. Secondly, the oral task was an individual interview with each participant regarding the GJT. This test aimed to reinforce the answers given in the previous test in relation to their degree of awareness to verify if participants could indeed verbalise their MLK and explain the rule as they asserted in the multiple choice of rule or intuition. This oral task, then, did not evaluate oral proficiency but MLA and MLK awareness and accuracy, respectively.

4.3 Procedure

The study was conducted at the school on two different days and the order in which it was executed was the following: on the first day**,** the study was explained to the students of baccalaureate and the ones who volunteered to participate signed the consent form and then filled out the background questionnaire, all via Google Forms. Nevertheless, the purpose of the tests was not disclosed, so the participants would not be influenced. On the second day, the two tests were conducted in the same way, first for the 2nd year participants and then for the 1st year participants. The participants were grouped together in the assembly hall to carry out the first

test. They were given the GJT and an explanation of what they were supposed to do. An example was provided for them to understand the multiple choice of a) rule and b) intuition:

> '*She go to school', if you mark it as ungrammatical and you know the rule (that go needs an –es as it is in present simple and the third person singular is marked by an –(e)s at the end) you mark 'a)'; however, if you provide the answer 'goes' but do not know the rule and you only changed it because it sounds better, mark 'b)'*

They had unlimited time to perform the GJT, but they did not spend more than thirty minutes doing it. They were supervised by the researcher and by a school teacher to prevent cheating. As each student began to finish the GJT, they were called individually to another classroom to perform the oral task. They came with their GJT and they were asked about their answers and their explanations of their judgements, which were recorded, to verify their degree of awareness. Both tasks were done on the same day for two reasons. Firstly, since they did not have time to look for the answers or the rules at home or speak with other participants and secondly, since they recalled the judgement they made more easily as there was a minimum space of time between tests 1 and 2.

4.4 Data Analysis

The data collected from the GJT and the oral test was analysed on a scale from 1 to 5 (score), according to the answers provided and grouped in relation to their MLA, MLK or their lack of both.

Ø	**1**	No answer Grammatical when ungrammatical Ungrammatical without noticing the error or marking the wrong element
MLA	**2**	Ungrammatical noticing the error without providing the correction or providing a faulty correction
	3	Ungrammatical noticing the error and providing the correction by intuition
MLK	**4**	Ungrammatical noticing the error and providing the correction with a simple explanation of the rule
	5	Ungrammatical noticing the error and providing the correction with a technical explanation of the rule

Something worth mentioning is that the results categorised in this scale were mainly attributed to the answers displayed in the oral test, as when conducting it, some of the participants'

answers changed from the GJT. The two ways in which this happened were due to them noticing the sentence is ungrammatical instead of grammatical as they stated previously or them being able to explain the rule when they stated it was by intuition or vice versa, that they claimed they knew the rule and at the moment of explaining it, they could not verbalise it.

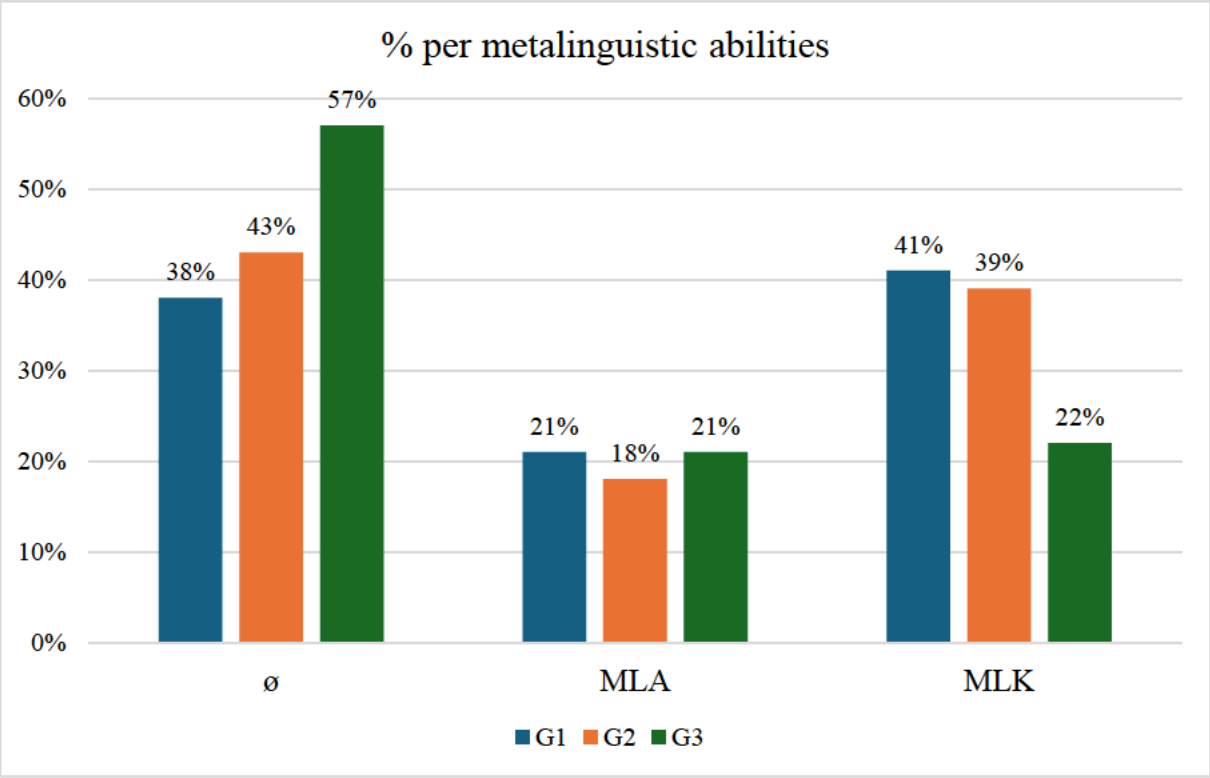
5 RESULTS

5.1 Research question 1: Learning context variable in MLA and MLK

The results obtained from the two tests indicate that G1 and G2 are comparable, since there are no significant differences between their statistics, in contrast with G3, which results are appreciably distinct from G1 and G2 except in MLA levels.

5.1.1 Metalinguistic abilities

G1 shows the best percentage of metalinguistic abilities (awareness and knowledge) with a 62% by a small margin of a 5% in comparison to G2; however, G3 results distance from G1 and G2 in a 19 and 14% respectively [G3: 43% (↑14%) < G2: 57% (↑5%) < G1: 62%]. The lack of both abilities is noticeable in G3 with a significant difference of more than a 10% in comparison to G1 and G2, which only vary in a 5% [Ø: G1: 38% (↑5%) < G2: 43% (↑14%) < G3: 57%]. These results are presented below in *Graphic 1:*



Graphic 1: % per metalinguistic abilities

5.1.2 MLA and MLK

To break down the previous results, it is also necessary to separate metalinguistic abilities into MLA and MLK. On the one hand, MLA statistics are similar for the three groups: G1 and G3 draw with a 21% and the difference between them and G2 is not as considerable as to make a difference [MLA: G2: 18% (↑3%) < G1=G3: 21%]. On the other hand, MLK results demonstrate otherwise: although G1 and G2 percentages are almost equal, G3 level decreases for more than a 15%, having a substantial inferior degree of MLK [MLK: G3: 22% (↑17%) < G2: 39% (↑2%) < G1: 41%]. Consequently, MLA percentages reveal analogous in the three groups but in MLK and in the lack of abilities G1 and G2 even up and also surpass G3 results remarkably. When analysing each group independently, it can be perceived that MLK levels tend to be superior to MLA ones. This is mainly the case for G1 and G2, whose levels of MLK surpass MLA ones for about a 20%; nevertheless, G3 only exhibits a variation of a 1%, being almost imperceptible and not meaningful [G1: MLA: 21% (↑17%) < Ø: 38% (↑3%) < MLK: 41% / G2: MLA: 18% (↑21%) < MLK: 39% (↑4%) < Ø: 43% / G3: MLA: 21% (↑1%) < MLK: 22% (↑35%) < Ø: 57%].

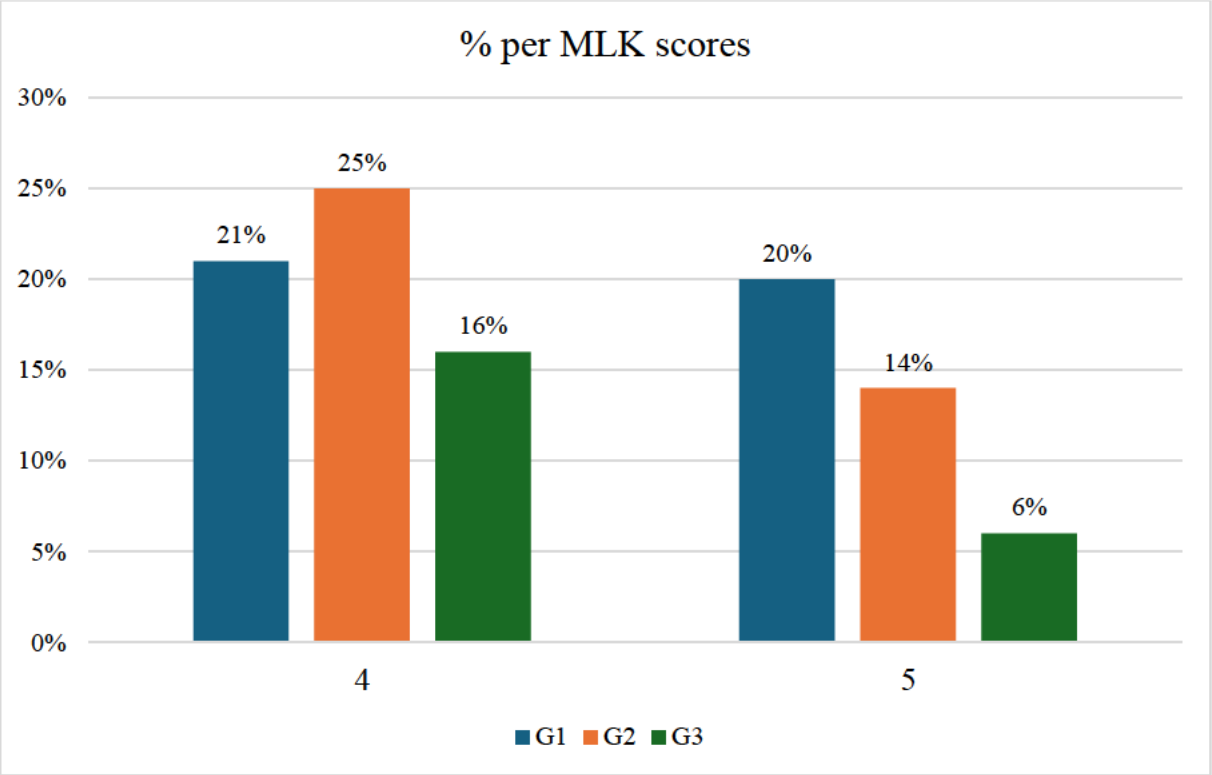
5.2 Research question 2: MLK accuracy in rule verbalisation

The scores for MLK assigned to the participants' answers in the tests demonstrate that score 4 surpasses 5 in general terms taking into consideration all groups; nonetheless, when analysing groups individually, this gap is evident in G2 and G3 and almost imperceptible in G1.

5.2.1 MLK scores

MLK scores 4 and 5 are indicators of the specificity of rule explanations given by the participants. Score 4 exceeds score 5 by a difference of more than a 20% [5: 40% (↑22%) < 4: 62%]. Both score 4 and 5 increase progressively from one group to another; however, their percentage variation makes score 5 more significantly distant between the three groups than score 4. On the one hand, score 4 is greater in G2 in comparison to G1 by less than a 5% and G3 by almost a 10%. The percentage difference between G2 and G1 and G1 and G3 is not significant, but it is abrupt between G2 and G3 [4: G3: 16% (↑5%) < G1: 21% (↑4%) < G2: 25%]. On the other hand, score 5 exceeds in G1 by a difference of 6% with G2 and 14% with G3 [5: G3: 6% (↑8%) < G2: 14% (↑6%) < G1: 20%]. Consequently, G1 stands out in score 5 more than G2 in score 4, leaving G3 with the lower percentage in both scores. When analysing each group independently, it can be perceived that all three groups have more percentage assigned to score 4 than 5, but this difference is not relevant for G1 and considerable for G2

and G3, whose growth is similar [G1: 5: 20% (↑1%) < 4: 21% / G2: 5: 14% (↑11%) < 4: 25% / G3: 5: 6% (↑10%) < 4: 16%]. These results are displayed visually in *Graphic 2:*



Graphic 2: % per MLK scores

5.2.2 MLK scores per sentence

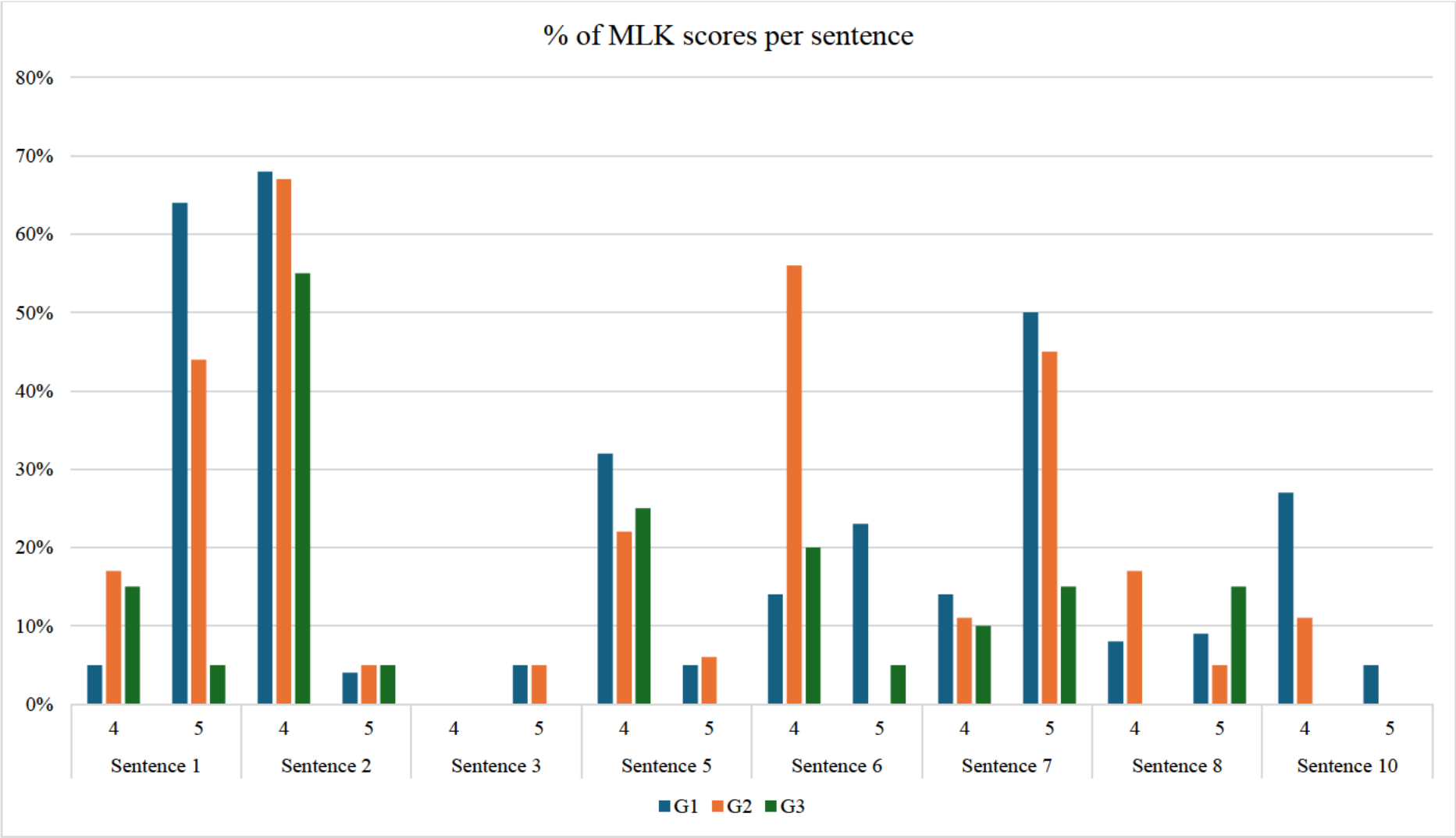
When examining in depth MLK scores per sentence, half of the sentences display a higher degree of score 4 and the other half, 5. Regarding score 4, participants' explanations are more imprecise in sentences two, five, six and ten. In relation to score 5, rule explanations are more specific in sentences one, three, seven and eight. Sentence one was the easiest to explain in technical terms as it portrayed a basic error regarding the grammatical class of a word, which is normally instructed at the elementary level. However, sentence three – also involving an elemental/intermediate error – was the most difficult to detect, although the participants who could notice it were able to explain its underlying rule by using specific explanations. Moreover, sentences seven and eight presented more intermediate/advanced errors that were more complicated to recognise. Although showing better results in score 5 than 4, between 10 and 15% in sentence seven and almost 10 and 20% in sentence 8 of each group relied on semantic explanations or synonymity to exemplify why the sentences were ungrammatical, being vaguer in their rule explanations. To illustrate, some of the participants' answers for sentence seven coincide in their justification: *the sentence means 'I did not finish', so it has to be negative*. Similarly, this strategy was further used in sentence eight: *to' with one o is like 'go*

to' but here it refers to 'very', so it has two o's. Moreover, sentences two, five and six also showed an increase in their complexity; however, it was expected that for sentences two, five and six, participants would have shown better results in score 5, as these errors are recurrently explained in English curriculums, including an interrogative in the past tense, the gender agreement of a possessive with its referent and the use of the past participle verb form in passive voice. On the other hand, the results in sentence 10 were expected, as the error was meant for advanced learners who have a better command of English and its rules regarding the use of the definite article 'the'. (See percentages of MLK score per sentence in *Table 1*)

SENTENCE	SCORE	G1	G2	G3	+
Sentence 1	**4**	5%	17%	15%	37%
	5	64%	44%	5%	113%
Sentence 2	**4**	68%	67%	55%	190%
	5	4%	5%	5%	14%
Sentence 3	**4**	0%	0%	0%	0%
	5	5%	5%	0%	10%
Sentence 5	**4**	32%	22%	25%	79%
	5	5%	6%	0%	11%
Sentence 6	**4**	14%	56%	20%	90%
	5	23%	0%	5%	28%
Sentence 7	**4**	14%	11%	10%	35%
	5	50%	45%	15%	110%
Sentence 8	**4**	8%	17%	0%	25%
	5	9%	5%	15%	29%
Sentence 10	**4**	27%	11%	0%	38%
	5	5%	0%	0%	5%

Table 1: % of MLK scores per sentence

The statistics reveal a tendency to stand out either in score 4 or 5, as when one of the magnitudes increases, the other decreases for all groups. However, this is not the case for sentences one, six and eight. For the first one, G1 and G2 increase exponentially from score 4 to 5 while G3 decreases [G1: 4: 5% (↑59%) < 5: 64% / G2: 4: 17% (↑27%) < 5: 44% / G3: 4: 15% (↓10%) > 5: 5%]. The sixth sentence exhibits that only G1 percentage increments from score 4 to 5 while G2 and G3 follow the reverse process [G1: 4: 14% (↑9%) < 5: 23% / G2: 4: 56% (↓56%) > 5: 0% / G3: 4: 20% (↓15%) > 5: 5%]. For the eight, G1 increase is unsignificant by a 1% while G3 is perceptible from score 4 to 5 and G2 diminishes [G1: 4: 8% (↑1%) < 5: 9% / G2: 4: 17% (↓12%) > 5: 5% / G3: 4: 0% (↑15%) < 5: 15%]. Therefore, G1 percentage alterations are more remarkable and stable than those of the other two groups, as G1 increases form score 4 to 5 in five sentences, G2 in three and G3 in two [G1: 4 < 5: S1, S3, S6, S7, S8) / G2: 4 < 5: S1, S3, S7 / G3: 4 < 5: S7, S8]. (See *Graphic 3* below for visual support)



Graphic 3: % of MLK scores per sentence

6 DISCUSSION

The current study intended to conduct research on metalinguistic abilities – MLA and MLK – and the impact that the learning context – whether formal, informal, or neither[3] – has over them. Additionally, another relevant factor to analyse was included within MLK, concerning the comparison between degrees of metalanguage used by the participants.

6.1 Research question 1: Learning context variable in MLA and MLK

In order to answer research question 1, it was required to determine the contexts in which participants received input in English by means of a background questionnaire. The subsequent tests – the GJT along with the oral test – provided the pertinent information regarding MLA and MLK. Thereafter, participants' metalinguistic abilities were analysed and categorised into three groups according to their learning environment. The results of the study give rise to two findings in relation to this inquiry. Firstly, formal learning (G1) barely benefits learners in comparison to informal learning (G2) in the acquisition of metalinguistic abilities, as the variation in percentage unit of MLA and MLK between both groups is inconsequential. This finding dissents from the majority of studies conducted around the same topic. Contrary to the findings of Muñoz and Cadierno (2021), the group with formal learning (G1) should have outperformed participants whose exposure is mainly through informal learning (G2) in MLK and vice versa in the case of MLA. The fact that G1 did not display significant higher percentages of MLK, also dissents with the findings of Norris and Ortega (2000), Renou (2001), Elder and Manwaring (2004), Gutiérrez (2016) and Ellis (2009a), who also claim that the participants with more explicit instruction – which results in explicit learning and knowledge consequently and thus can be related to formal learning – proved to be better in MLK tests. Additionally, White and Ranta's (2002) results could not be corroborated in this study, as explicit instruction did not lead to more MLA either. Therefore, the results are more in line with Elder (2009) and Serrano's (2011), who also found no considerable distinction between explicit and implicit instruction – related to formal and informal learning respectively – in achievement of MLK. Nevertheless, having a learning context – formal or informal – demonstrates to be highly beneficial in comparison to not having it (G3) for MLK, but not for MLA. Secondly, when analysing each group independently, it can be perceived that MLK levels tend to be superior to MLA ones. Therefore, participants' judgements tend to rely more

[3] The learning contexts referred to in this sentence do not take into account English exposure at school, which all three groups share (background English knowledge).

on explicit knowledge of the rules rather than on merely intuitive guesses. This finding also disagrees with Green and Hecht (1992) and Elder and Manwaring's (2004) studies that assert participants' MLA results outperform those of MLK, which in this study is reversed.

6.2 Research question 2: MLK accuracy in rule verbalisation

To address research question 2, the oral test was decisive since, although the GJT was the source of MLK-related data, it did not isolate contribute to the distinction of MLK scores. Participants received either a score of 4 or 5 on the oral test for MLK, which required them to articulate the rule in order to evaluate the degree of accuracy in their explanations. The outcomes of the analysis indicate that generally, participants do not use metalanguage and resource to simpler language to elucidate the rules of their MLK judgements. In line with the literature review, explicit or formal learning (G1) seems to encourage the use of metalanguage in comparison to implicit or informal learning (G2) or not having a further learning context at all (G3), which are predictors of simpler explanations. On the one hand, formal learning and its context stimulate students to obtain complex explicit knowledge as their instruction in English focuses on rule explanations using technical language. Hence, formal learning implies the use of metalanguage during the learning process. Following Serrano (2011) and Muñoz and Cadierno's (2021) research, it is common in Spain for the teacher to focus on grammatical aspects and clarify them with metalanguage. On the other hand, informal learning involves neither instructor nor metalinguistic guidelines and the learning that takes place in a naturalistic context does not promote the use of metalanguage. As a result, the study correlates with earlier findings presented in the literature review and suggests that formal learning is indeed a stronger indicator of metalanguage usage than informal learning.

7 CONCLUSION

The present research aimed to examine the learning environments in which Catalan/Spanish EFL students acquire metalinguistic skills and the extent to which the context contributes to this attainment – whether it has a direct effect or not – and the explicitness of the learners' metalinguistic explanations. As for the first concern, the findings are in discord with most studies, demonstrating that when it comes to the development of metalinguistic abilities, formal learning does not represent a distinctive improvement in fostering these skills over informal learning. In addition, MLK levels prevail over MLA ones because, contrary to earlier discoveries, decisions are more likely to be based on explicit rule knowledge than on instinct. The results for the second research question are more positive in regard to their similarity with

its precedents as the current study reinforces previous investigations that claim MLK descriptions tend to involve non-technical language and plain expression rather than specific metalanguage. Nevertheless, the study shows that informal learning or not having an additional exposure to English outside school are at disadvantage compared to formal learning with respect to the learners' capacity to verbalise MLK technically.

Notwithstanding the compelling results, there were a few noteworthy and potentially significant limitations to the study. To begin with, the data derived from two tests that were interrelated and whose length was not considerably extensive. Correspondingly, results could not be compared with other assessments that, for example, focused on MLA or MLK solely. To continue, the amount of exposure in English participants from G1 and G2 was not scrutinised. Although the background questionnaire included a question about the exposure to English both in a formal learning context– if the participants were enrolled in a language school – and in an informal context, such as at home, this variable would have been difficult to analyse as the responses were inconsistent and non-coincident among participants. Finally, language proficiency is a relevant factor that was not inspected but could have altered the results. As the aim of the study was to focus on the learning context variable, proficiency was not included in the research; however, it could also be a convenient measure to analyse MLK and MLA, even considering the learning context in which the input is in the target language. Future studies could benefit from this research by expanding its scope and analysing more constituents.

Despite these restraints, the study has some positive and applicable pedagogical implications. Comparison between groups' metalinguistic skills demonstrated that learning outside of school is preferable than not learning at all, especially for MLK. Hence, the education system and its institutions as well as teachers from within school should promote the extramural use of English, as it comes with numerous advantages. Also, school curriculums could combine explicit instruction in the classroom with activities related to the daily use of English approaching a naturalistic learning as both contexts seem to benefit MLK acquisition.

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9 APPENDIX

9.1 Consent form

Declaración de consentimiento informado

"Metalinguistic abilities and learning context variable in EFL learners"

Yo _____ acepto participar en el proyecto de investigación titulado "Metalinguistic abilities and learning context variable in EFL learners" realizado por Laura Lorca Martin, adscrita en la Universidad de Barcelona.

Manifiesto que he leído y entendido la información que se me ha proporcionado, que he hecho las preguntas que me surgieron sobre el proyecto y he recibido información sobre el mismo.

Por ello declaro que he recibido información adecuada y suficiente por el investigador sobre:

- Los objetivos del estudio y sus procedimientos.
- La selección de los participantes de acuerdo con los requisitos de la investigación.
- Que la investigación puede no tener un beneficio directo para mí.
- Que mi participación es voluntaria y altruista.
- El procedimiento y la finalidad con que se utilizarán mis datos personales y las garantías de cumplimiento de la legalidad vigente.
- Que tengo derecho de acceso y rectificación a mis datos personales.

Complementariamente, acepto el uso de datos recopilados a continuación:

- Un test de nivel de ingles
- Un cuestionario sobre la exposición que el participante recibe en ingles
- El contenido de una actividad escrita y una grabación de voz sobre el estudio
- La publicación de los resultados de este estudio manteniendo el anonimato de la persona, a excepción de su edad.

Nombre y apellidos:

Fecha:

Firma:

9.2 Background questionnaire

1. Nombre y apellidos
2. Género
3. Edad
4. Curso y clase
5. ¿A qué edad empezaste a estudiar inglés y en qué contexto? (en la escuela, en casa...)
6. ¿Cuántas horas de inglés haces en clase a la semana?
7. ¿Vas a una academia de inglés?
8. Si en la anterior respuesta marcaste "Sí", ¿durante cuántos años y cuántas horas a la semana vas? [Si marcaste "No", escribe aquí "No"]
9. ¿Has hecho algún examen de inglés oficial?
10. Si en la anterior respuesta marcaste "Sí", ¿cuál fue tu resultado (certificado demostrable de B1, B2...) y cuándo realizaste el examen? [Si marcaste "No", escribe aquí "No"]
11. ¿Cuánta exposición al inglés tienes en un contexto no académico?
    a. 0-1 h por semana
    b. 1-2 h por semana
    c. 2-5 h por semana
    d. 5-10 h por semana
    e. +10 h por semana

9.3 Grammaticality judgement task (test 1)

TEST 1: Grammaticality Judgement Task

State if the following 10 sentences are correct (C) or incorrect (I). If incorrect, provide the correction. According to your answer, choose between a) Rule or b) Intuition.

1. Susan is a beautifully woman

a) Rule: I know the rule for my answer and I can explain it
b) Intuition: I do not know the rule, my answer is based on intuition

2. Did he completed his homework?

a) Rule: I know the rule for my answer and I can explain it
b) Intuition: I do not know the rule, my answer is based on intuition

3. We dinner at home with the family

a) Rule: I know the rule for my answer and I can explain it
b) Intuition: I do not know the rule, my answer is based on intuition

4. If I won the lottery, I would spend my life travelling

a) Rule: I know the rule for my answer and I can explain it
b) Intuition: I do not know the rule, my answer is based on intuition

5. Marc studies and her mother works

a) Rule: I know the rule for my answer and I can explain it
b) Intuition: I do not know the rule, my answer is based on intuition

6. The bike was stole

a) Rule: I know the rule for my answer and I can explain it
b) Intuition: I do not know the rule, my answer is based on intuition

7. I have finished yet

a) Rule: I know the rule for my answer and I can explain it
b) Intuition: I do not know the rule, my answer is based on intuition

8. He left to soon

a) Rule: I know the rule for my answer and I can explain it
b) Intuition: I do not know the rule, my answer is based on intuition

9. They live in a house whose roof is full of holes

a) Rule: I know the rule for my answer and I can explain it
b) Intuition: I do not know the rule, my answer is based on intuition

10. I think the people are usually good

a) Rule: I know the rule for my answer and I can explain it
b) Intuition: I do not know the rule, my answer is based on intuition