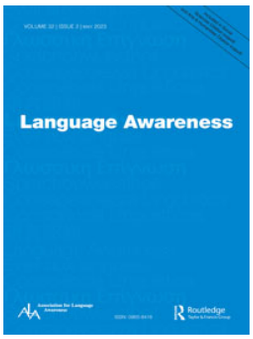


Language Awareness

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rmla20

Fostering crosslinguistic knowledge about language in young learners: effects of explicit L2 Spanish grammar learning on L1 English grammar

Marion Martínez, Leesa Clarke, Lorna Hamilton & Christopher J. Hall

To cite this article: Marion Martínez, Leesa Clarke, Lorna Hamilton & Christopher J. Hall (2023): Fostering crosslinguistic knowledge about language in young learners: effects of explicit L2 Spanish grammar learning on L1 English grammar, Language Awareness, DOI: 10.1080/09658416.2023.2228196

To link to this article: https://doi.org/10.1080/09658416.2023.2228196

Published online: 27 Jun 2023.

LANGUAGE AWARENESS
https://doi.org/10.1080/09658416.2023.2228196

Routledge
Taylor & Francis Group

Fostering crosslinguistic knowledge about language in young learners: effects of explicit L2 Spanish grammar learning on L1 English grammar

Marion Martínez[a], Leesa Clarke[b], Lorna Hamilton[b] and Christopher J. Hall[b]

[a]Independent Scholar; [b]York St John University

ABSTRACT

This study explored the effects of learning activities which encouraged positive crosslinguistic influence from L2 Spanish to L1 English grammar in young learners. The learners ($N = 82$) were studying Spanish as their compulsory foreign language at an English state primary school in the UK. As part of ten timetabled Spanish classes over a period of six months, 40 pupils, aged 10–11, engaged in self-study activities involving aspects of Spanish grammar. The activities incorporated thematic content and metalanguage based on the grammar, punctuation and spelling exam (GPS), a national English grammar test taken at the end of primary education. A control group of 42 children engaged in self-study activities with no focus on grammar. L1 English grammar knowledge pre- and post-intervention was assessed using GPS scores. At post-test, a small, non-significant positive effect on attainment in L1 English grammar was observed. Although preliminary and involving only a small effect, the results are promising, showing that engagement with Spanish grammar activities might lead to better performance on English grammar. These findings are consistent with recent research which has established that the cognitive maturity required to develop and deploy metalinguistic awareness is present in children at a younger age than previously assumed.

RESUMEN

En esta investigación se exploraron los efectos de las actividades de aprendizaje que alentaron la influencia interlingüística positiva del español como L2 al inglés como L1 en aprendices jóvenes. Los aprendices estudiaban el español como idioma extranjero obligatorio en una escuela primaria pública inglesa. Como parte de diez clases de español programadas en un período de seis meses, 40 alumnos entre los 10 y 11 años se dedicaron a actividades de auto aprendizaje que trataban aspectos de gramática española. Dichas actividades incorporaban contenido temático y metalenguaje basado en el GPS (*Grammar, Punctuation and Spelling*), un examen de gramática inglesa que se presenta al finalizar la educación primaria. Durante estas sesiones, un grupo de control de 42 niños participó en actividades de autoaprendizaje que

ARTICLE HISTORY
Received 26 July 2022
Accepted 15 June 2023

KEYWORDS
crosslinguistic influence; foreign language learning; language awareness; literacy development; L1 grammar; young learners

CONTACT Christopher J. Hall c.hall@yorksj.ac.uk

no se centraron en la gramática. Se evaluó el conocimiento gramatical de L1 antes y después de la intervención usando el puntaje del GPS. En una prueba posterior, se observó un efecto pequeño no significativo en su desempeño en la gramática del inglés. Los resultados, aunque preliminares y con un efecto pequeño, son prometedores y muestran que la participación en actividades de gramática española podría conducir a un mejor desempeño en gramática inglesa. Estos resultados son consistentes con los estudios recientes que han establecido que la madurez cognitiva requerida para desarrollar y hacer uso de una conciencia metalingüística está presente en niños a menor edad de la que se suponía con anterioridad.

PLAIN LANGUAGE SUMMARY

Research has shown that the structure of a person's first language (L1) can shape their second language (L2) knowledge; but not much work has been done the other way round. Our study explored L2-to-L1 influence in the context of a Spanish L2 class in a primary school in the UK, where children have to take a national English grammar test (the 'GPS'). We wanted to know whether children's explicit study of Spanish grammar might be associated with enhanced knowledge of English grammar. To test this, we designed self-study activities on Spanish grammar which used similar terms and concepts to those covered in English grammar classes. Forty pupils aged 10-11 did the activities as part of their regular Spanish classes (the 'experimental group'). We matched this group with 42 pupils who spent the time on reading and vocabulary activities (the 'control group'). In order to detect any effect of the Spanish grammar activities on pupils' English grammar knowledge, we examined their GPS scores before and after the activities and compared them with those of the control group. We found that after doing the activities, the experimental group performed better on the GPS than the control group. We interpreted this as preliminary evidence that children at this age might be able to use grammatical knowledge from their L2 to understand the grammar of their L1. It is possible that our findings could be due to differences between the groups which we did not control. More research on this important topic is needed.

Introduction and background

Children around the world are starting to learn additional languages in school at ever younger ages (e.g. European Commission, 2012). For many of these children, the dominant additional language is English, but for those pupils in Anglophone primary schools, a variety of Modern Foreign Languages (MFL) are offered. French remains the most popular second language (L2) taught in England, with Spanish growing year by year (Collen, 2020), whereas in the USA Spanish comes first, followed by French, but with Mandarin Chinese also widely taught (ACIE, 2017). At the same time that governments have been attempting to strengthen MFL teaching in the face of ongoing Anglophone monolingual complacency and neglect, they have also been attending to concerns about national literacy levels. In 2013, the UK government introduced a statutory national examination in English grammar, punctuation and spelling (GPS) for England at primary level, with a view to raising literacy levels. In the light of these parallel developments in policy and practice, there is clearly potential to exploit overlap and forge mutually beneficial links between successful foreign language learning and improved first language (L1) literacy. To date, however, this potential has not been

adequately recognized or tapped in educational policy, or subjected to rigorous empirical enquiry in applied linguistics.

The project reported here addresses this gap by exploring the possibility that studying grammar in a foreign language can positively affect the development of children's L1 skills. In a ten-session intervention over six months, 10-11 year old pupils in an English state primary school who studied Spanish as their compulsory foreign language analyzed aspects of Spanish grammar which incorporated thematic content and metalanguage based on the national GPS tests. Pre-intervention mock GPS scores were compared with post-intervention real test results to assess the effect of L2 instruction on L1 knowledge. As far as we know, this is the first time that such cross-linguistic effects have been tested using GPS test results in England.

In what follows we review relevant literature on the transfer of knowledge between languages in children and the nature and role of language awareness and literacy development in the school context, before providing a sketch of the national and local context of the study. Following this we discuss the design and methodology of the study, report and interpret the results of the intervention, and reflect on what they suggest for pedagogical practice, professional development, and national educational policy.

Cross-linguistic influence from L2 to L1

Most research on cross-linguistic influence (CLI) in language development and use has concentrated on the effects the L1 has on learning a subsequent language (Jarvis & Pavlenko, 2008; McManus, 2022; Yu & Odlin, 2016) and the issue of whether the language systems of bi- or multilinguals are stored in memory separately or in an integrated fashion (Dijkstra & Van Heuven, 2002; Meade et al., 2018; Nicol, 2001). Relatively little is known about how the L2 influences L1 learning and use, and most of the findings that have been reported have focused on bilingual users rather than learners in instructional settings (e.g. Cook, 2003). Much of this work has been dedicated to the issue of L1 attrition: the loss or impairment of L1 knowledge resulting from various factors, including the dominant use of one or more subsequently learned languages (Ecke, 2004; Yılmaz, 2019). Rather less attention has been paid to the issue of how learning an L2 may enhance L1 knowledge, although there is considerable evidence for CLI between all an individual's languages, independently of acquisition order and proficiency level (e.g. Hall & Ecke, 2003; McManus, 2022) The benefits of bi- and multilingualism for a person's metalinguistic abilities have also been robustly demonstrated in the past couple of decades (Bialystok et al., 2012). Despite the paucity of research, the belief that learning another language can have positive effects on the L1 is commonly held by educators. As Cook (2003, p. 11) put it: 'It seems obvious that in some sense knowing another language benefits your use of your first language; language teaching classically invoked the concept of 'brain-training' to justify the teaching of Latin for example'. Indeed, Holliday (2012) summarizes some of the twentieth century research finding positive effects of Latin (but also MFL) on English-speaking American elementary and secondary schoolchildren's L1 vocabulary and grammar.

However, there is little research on L2-to-L1 influence in younger children, especially those aged 7 to 11 (up to the end of primary education in England's national curriculum). An exception is the study by Murphy et al. (2015) which examined the influence of learning a L2 in primary school on developing L1 literacy skills. The study compared the effect of learning Italian, a language with transparent grapheme-to-phoneme correspondence rules

(GPC), with French, which has less transparent GPC. Italian also has a simpler phonological system; English has more opaque GPC and more complex phonology than either. For example, Italian has five vowels which are consistently represented by the five corresponding letters; English and French have three to four times as many and these can be represented by several different letters and combinations of letters (e.g. *dough*, *toe*, *owe*, *flow*; *sous*, *où*, *goût*, *roue*). After 15 weekly hours of L2 instruction, mostly involving vocabulary tasks, the children showed benefits in several L1 literacy measures compared with controls, and the Italian group outperformed the French group on these measures. The authors attribute this result to heightened phonological awareness, speculating that learning more transparent phonological-orthographic mapping in L2 led to 'the children's phonological representations of known [L1] words [being] somehow more elaborated or more explicitly represented' (p. 1150). They argue that this is consistent with the findings of an earlier study by Murphy and Pine (2003), which investigated the effects on L1 linguistic representations of bilinguals vs monolinguals of different ages, including children and young adults. Murphy and Pine focused on the role of control over attentional resources, and concluded that the bilingual sample had explicit knowledge of the L1 which resembled that of older monolinguals. On the basis of data from an experiment in which mono- and bilingual undergraduates learned Old English plural morphology, they posited that 'bilinguals naturally focus their attentional skills on linguistic structure *during learning* (and not just in task performance)' (p. 164).

In parallel with this psycholinguistically-oriented work on CLI from L2 to L1, there has been growing interest in how such interlingual opportunities might be harnessed in school contexts. Turner and Turvey (2002) reported the benefits of cross-language collaboration experienced by two student teachers of English and French in an English comprehensive school. As part of a broader European Union project, Burley and Pomphrey (2002, 2003) explored an 'intercomprehension approach' to language education within the context of a UK university's teacher education course. They presented qualitative evidence for the value derived by English and MFL student teachers from dialogue between the subject areas. Gunning et al. (2016) focused on collaboration on reading strategy instruction between teachers of L1 French and L2 English for 11-12 year old pupils in an elementary school in Quebec. While noting the obstacles presented by lack of shared terminology and curriculum knowledge, the participating teachers reported raised language awareness for both themselves and their students.

Language awareness and literacy development in the school context

When children start formal education in England at the age of 4 or 5, their cognitive skills are still maturing and their literacy skills will be only embryonic in form. Although many linguistic and cognitive abilities emerge naturally and subconsciously on the basis of innate predisposition and experience, literacy development requires explicit learning (Liberman et al., 1989). By the time children reach the age of 7 (the start of key stage 2 in the educational system of England), most children learning alphabetic writing systems will have developed the ability to decode letters and will be able to use reading strategies independently (Horowitz-Kraus et al., 2017), but their lexico-grammatical resources will still be expanding and becoming entrenched as advanced cognitive and conceptual abilities continue to develop. Murphy et al. (2015) interpret the facilitative L2-to-L1 effects they found in primary

school children as a function, in part, of the dynamic state of their L1 language skills: 'Because the primary school learner's linguistic system and literacy skills in the L1 are not yet fully established or overly entrenched, it may be more permeable to the facilitating influence of the L2 in heightening language awareness' (p. 1151).

Language awareness, and more specifically metalinguistic awareness (Simard & Gutiérrez, 2017), is identified in much of the Second Language Acquisition literature with the construct of language analytic ability, which can also serve literacy development and the development of explicit knowledge of L1 grammar. Roehr-Brackin and Tellier (2019, p. 1115), for example, affirm that 'in many respects, the construct of language-analytic ability can be linked with the notion of metalinguistic awareness, defined as the ability to focus on and manipulate language form, as well as the ability to treat language as an object of inspection, reflection, and analysis' (see Roehr-Brackin, 2018, for alternative approaches). Language analytic ability and the broader concept of metalinguistic awareness with which it is associated are recognized as key components of language learning aptitude (e.g. Carroll, 1981; Kormos, 2013). It was long assumed, however, that young children could not as easily deploy conscious awareness in learning and relied instead on implicit learning modes. But recent evidence suggests that language analytic ability is available earlier than previously thought. Roehr-Brackin and Tellier (2019), for example, conducted a longitudinal study with 8-9 year old English L1 children learning L2 French and found that, although aptitude and language analytic ability had not yet stabilized, they were strongly associated with learning gains, with language analytic ability the most powerful predictor.

This clearly has implications for language pedagogy, both in MFL and L1. The assumption that children were not yet cognitively mature enough to be able to leverage metalinguistic awareness in language learning led to a focus on implicit teaching methods. But again this conclusion has been questioned by recent evidence. Lichtman (2016), for example, compared children and adults on an artificial language learning task, varying the training between implicit and explicit methods. She found that both age groups benefitted equally from explicit instruction. On the basis of their own research, Roehr-Brackin and Tellier (2019, p. 1111) suggest that 'experiencing explicit, form-focused instruction may foster the role of language-analytic ability even in children as young as 8-9 years'.

In line with evidence for gains in explicit L2 grammatical knowledge following explicit instruction (e.g. Macaro & Masterman, 2006; White & Ranta, 2002), current research-based foreign language teaching guidance (e.g. Ofsted, 2021; TSC., 2016) advocates making use of an explicit learning process within the language classroom. The process recommended involves form or grammar being taught explicitly then practised, as opposed to implicitly where learners assimilate language through rich input. This does not constitute a return to decontextualized rote grammar rule learning, but instead involves form-meaning mapping which makes grammar essential for understanding meaning. McManus (2019) has shown how awareness of form-meaning mappings in L1 can benefit the learning of cross-linguistically complex features in L2 (i.e. those attested in both languages but behaving differently in each). McManus and Marsden (2017) also found that explicit L1 grammar instruction and practice benefitted L2 grammatical knowledge. This approach is particularly conducive to learning in current MFL classrooms, where contact time is generally limited to an hour or less per week at primary level (Holmes & Myles, 2019), precluding opportunities for extensive input.

In sum, there is a substantial body of research on CLI within the contexts of second language acquisition and the organization of the bi-/multilingual mind, but rather less on the effects of knowledge about L2 on L1, particularly in young children. A few studies have demonstrated how language awareness raised during L2 learning can result in benefits for L1 literacy development, and recent research has specifically suggested that young children can develop metalinguistic awareness, resulting in learning gains, through explicit instruction. These findings, together with calls for cross-language collaboration in schools, provide the academic context for this study. Within this context, our focus is on the potential for what we might call 'cross-linguistic knowledge about language' (CLKAL) in primary classrooms: namely, knowledge about language (KAL) which captures commonalities as well as differences between two or more languages.

The study

Rationale

Since the inclusion of GPS in the national literacy exams in England, literacy levels have improved (DfE, 2019a; Safford, 2015). Coupled with the inclusion of foreign language study as a mandatory part of the curriculum for 7-14 year olds in English primary schools, it appears that, overall, children's knowledge of how language works is increasing, particularly when compared to previous generations who did not benefit from compulsory foreign language learning at primary level or extensive and systematic English grammar instruction. It is also important to acknowledge that primary teachers' confidence in using grammatical knowledge may also be increasing (Jones & Coffey, 2017, p. 32). Yet any improvements noted, in either literacy or language learning, have been limited. The present study directly responds to calls for further research into both areas made in two major national reports: (1) recommendations made in the *Foreign Languages Pedagogy Review* (TSC., 2016) for more research into MFL pedagogy in compulsory education, specifically within the UK context; and (2) a headline finding from the 2020 British Council *Language Trends* survey calling for more research into understanding 'the cross-curricular role which languages could play in improving literacy' (Collen, 2020, p. 3).

Any new research into L2 pedagogy focusing on the UK context would do well to address the following issues: (1) how to optimize limited time allocation and therefore language exposure in a timetable heavily weighted towards core subjects (i.e. mathematics and English); and (2) how to challenge negative perceptions of foreign language learning, along with growing concern about the damaging effects of global English and the assumption that 'English is enough' (Collen, 2020, p.16). By examining primary MFL as a context for language analysis which impacts on literacy, this study considers how utilizing L2 within a literacy strategy could benefit children's L1 language skills at the same time as raising the profile for foreign language study in the UK. It further develops the research by Lichtman (2016) and Roehr-Brackin and Tellier (2019) into early language analytic ability at the upper primary school age and is in accordance with a move to more explicit and direct teaching of languages at secondary school. Moreover, it also addresses the general need for evidence-informed policy in this area, as argued by Wyse and Torgerson (2017). Although primarily motivated by a desire to respond to developments in UK education policy, this study is also intended as a contribution to our broader theoretical understanding of CLKAL and the question of whether, and how, it might impact on the development of L1 skills.

Context

In this section we provide a brief overview of current educational policy and practice in England, and note the rapid changes that are planned or underway (indeed, some of which have been implemented since the data for this study were collected).

In England, children begin formal schooling and thereby receive literacy instruction from 4-5 years of age, with teaching of an additional language introduced, according to the national curriculum, when they are 7-8 years of age DfE (2014). The commencement of literacy instruction is therefore earlier than in many other European countries, where formal education typically begins later. The National Curriculum for England (DfE, 2014) sets out the programmes of study and attainment targets for all subjects across four key stages (KS) which span primary and secondary compulsory education. KS1 corresponds to ages 5-7; KS2 to ages 7-11; KS3 to ages 11-14; and KS4 to ages 14-16. MFL is a compulsory subject at KS2 and KS3 and therefore bridges the primary and secondary school settings. The national KS2 compulsory Standard Attainment Tests (SATs) for numeracy and literacy taken at the end of primary education include a test in English grammar, punctuation and spelling (GPS) which was introduced in 2013 for all Year 6 children (ages 10–11). The test includes a 20-question paper for spelling and a 50-question paper for grammar and punctuation with new versions set annually. The GPS scores for grammar and punctuation are not disaggregated. The following are examples of test items on grammar from the 2017 test (STA, 2017):

(a) Which sentence uses the word *round* as an adjective? Tick one.

- The dog ran round in circles.
- There was a round of applause.
- The castle had a round tower.
- The team has already made the final round.

(b) What is the subject of the sentence below?

On Tuesday, Mary plans to meet Aidan in Liverpool.

Tick one.

- Tuesday
- Mary
- Aidan
- Liverpool

These examples demonstrate how the GPS requires test-takers to draw on explicit language awareness, through their understanding and deployment of metalinguistic concepts such as *sentence, adjective,* and *subject*.

Official statistics show that GPS test results have been rising since the test was introduced (DfE, 2019a), but it is not clear to what extent this is accompanied by an increase in literacy more fully construed. Educational linguists have criticized the decontextualized nature of the exam questions and have expressed concerns that this is leading teachers to 'teach to the test' (CLiE, 2019). More fundamentally, there is considerable disquiet among teachers and applied linguists about the value of the tests and the social injustices they may perpetuate (Cushing, 2021).

There is, however, evidence of teacher support for increasing pupils' explicit knowledge about grammar (Bell, 2016; CLiE, 2019) and certainly no immediate sign of a change in government policy on the role of metalinguistic knowledge in both literacy and MFL teaching. Learning a foreign language has been a statutory part of the primary school curriculum in England at KS2 since 2014. Knowledge about Language and language learning strategies are 'cross-cutting' strands in the government's KS2 *Framework for Languages* (DfES, 2005), a non-statutory guide used by schools which shows how learning objectives in the core strands of oracy, literacy and intercultural understanding progress over the four years. One of the key recommendations from the *MFL Pedagogy Review* (TSC, 2016) is that teachers of languages should know and build on the grammar taught in the KS2 curriculum for English. The study reported here explores whether there are grounds to suggest that this interdisciplinary relationship should be bidirectional, in case MFL grammar learning can also be tapped into for L1 literacy development.

Research question and hypothesis

Given this context and the urgent need for more empirical evidence to guide research, policy and practice, we formulated the following research question for this study:

- To what extent is explicit study of Spanish grammar by English-speaking primary school students associated with increased explicit knowledge of English grammar?

To address this question, the following hypothesis was tested:

- Students who have received explicit guided self-study in Spanish grammar will show improved performance on the grammar and punctuation subtest of the GPS test at the end of Year 6, in comparison with students who received guided self-study in non-grammatical aspects of Spanish.

Method

Study setting

The study was carried out in an English state primary school where Spanish has been taught since 2005. Just over 600 pupils attend the school, and there are three classes per year group. Classes are mixed-ability, single-year groups and typically include 27–30 pupils. At the most recent government inspection before the study was conducted, the school was graded as 'Outstanding'. The number of students at the school qualifying for free school meals (a conventional indicator of low parental income) was low (7%). Six per cent of the school population had English as an additional language. The school is based in a village located a few miles from a city in Northern England. Spanish was clearly embedded in the curriculum and viewed positively by staff and students, with weekly timetabled classes and a successful exchange partnership with a primary school in Madrid. At the time that the study was carried out, pupils began learning Spanish in Year 1 (5-6 years old), delivered for one hour per week, either by a teaching assistant with degree-level knowledge of Spanish or two Specialist Spanish primary language teachers, one of whom is a native Spanish speaker. English GPS is taught throughout Key Stages 1 and 2. In Year 6 formal GPS instruction was given by the

class teacher for forty minutes a week, in addition to being embedded in many other parts of the curriculum, as is typical in primary education in England.

Design

An intervention design was used, with pre- and post-test measures (see Figure 1). The pre- and post test measures were drawn from L1 English and L2 Spanish assessments which were already in place at the school (see details below). The English measures were used to test the central hypothesis, regarding the impact of the Spanish learning activities on English grammar. Spanish attainment levels were used only to establish that the intervention had no discernible deleterious effect on overall Spanish attainment. The pre-test measures were collected at the start of the academic year (September) and the post-test measures in May of the following year. An active control group was used. Children in the control group worked on skills (vocabulary and reading) which differed from those targeted in the intervention, ensuring no direct impact upon either English or Spanish grammar knowledge. Children received the intervention or control materials in the form of self-study activities to complete within their weekly Spanish lesson. A self-study approach was used to allow each of the three classes to be divided equally into intervention and control groups, thus ruling out a class teacher effect. The Spanish teacher was able to direct and monitor the intervention group working on the grammar-based tasks and the control group working on the reading and vocabulary tasks at the same time. This arrangement differed from the usual teacher-led classroom activity forming each lesson, in which: the class teacher generally focused on presentation and practice of different skill areas; grammar formed only a small part of the curriculum; and cross-linguistic comparison of grammar features was not routine.

Participants

All children from the three classes that formed the Year 6 cohort were invited to take part in the study. The children were aged between 10 years 1 month and 11 years 0 months at the time the study commenced. A total of 85 students participated in the study; however, data from three children were removed due to missing data at baseline. The final sample therefore comprised 82 Year 6 pupils (46% girls).

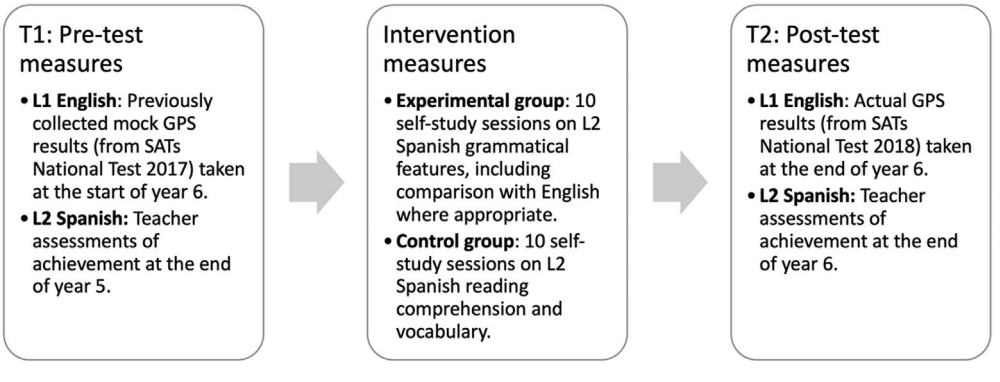


Figure 1. Study design.

Pupils had received approximately 162 h of Spanish instruction over the course of their education prior to participating. Students in each class were pseudo-randomly allocated to either the experimental group ($n = 40$) or the control group ($n = 42$). Matched pair randomisation based on ability was used across the three classes in order to initially allocate students to the intervention or to the control group (Hanan, 2015). To ensure that age and gender were also balanced, where there were imbalances, participants of similar ability were redistributed across groups. This ensured that the groups were well matched on T1 ability, age, and gender.

The study was approved by York St John University Research Ethics Committee (approval number RECII00010) and was carried out with full informed consent from the Head Teacher of the participating school. As the activities were part of normal classroom activity, parent/carer(s) were informed of the study and invited to opt their child(ren) out of the data collection if they did not wish them to contribute to the research.

Pre- and post-test measures

Pre-test measures (T1)

English pre-test measures were taken from existing data: as was normal practice in the school each year, the children were administered the previous year's English GPS test (as a mock test) at the beginning of Year 6 to assess their levels of English spelling and grammar. These scores constituted the pre-test measures of children's grammatical knowledge of English. The full test can be consulted online (STA, 2017).

Spanish pre-test measures were derived from existing teacher assessments, taken through the Year 5 academic year. The children were assessed across five areas: speaking, listening, reading, writing, and grammar. Assessment evidence was gathered from 11 tasks across the year (two listening, one speaking, one reading, four writing and three grammar) and these were used by the teacher to rate children's overall level of Spanish proficiency on an ordinal scale ranging from 1 to 4.

Post-test measures (T2)

The children's scores in the English GPS paper in the Year 6 SATs (STA, 2018), taken three months following the end of the intervention, were used as the English post-test measure. The timing of administration of this paper was determined by the standardised nationwide testing schedule. Results from this test were broken down into achievement scores in spelling (/20) and grammar (/50) separately.

Like the corresponding pre-test measures, Spanish post-test measures were based on teacher assessments across Year 6 and followed the same scoring procedure.

Materials

Intervention materials

Learning activities were developed which required students to work through ten sessions of self-study paper-based worksheets which built on the Spanish knowledge the students had acquired over their seven years of Spanish instruction. The instructions were written in English and answer sheets were provided for students to self-check as they worked

through each task as independent learners. Grammar terminology used in the tasks was consistent with the terminology used by the class teacher and Spanish teacher which was aligned with the matrix and language of instruction used in the official GPS tests. Materials were piloted with the previous year group, establishing that the level of difficulty was appropriate and that the students were able to study independently using the worksheets.

Activities were divided into four categories. The first part involved four sessions dealing with syntax. The second part included three sessions on subject pronouns, verb conjugation, and word order. Part three contained two sessions on punctuation (use of the question mark and exclamation mark) and included the identification of questions and statements. Part four was a session on register and the 2nd person subject pronouns (formal and informal, singular and plural). Worksheets also included extra information in the form of language tips and advice, together with activities for metalinguistic reflection and raising awareness of cross-linguistic variation. All worksheets were accompanied by answer sheets which children were encouraged to use to check their own answers. Comparisons with English grammar were made where appropriate. Extra activities in each task provided for extension and ensured all students had enough time to complete the main questions and check answers. Figures 2 and 3 provide examples of a worksheet and an answer sheet.

Control materials

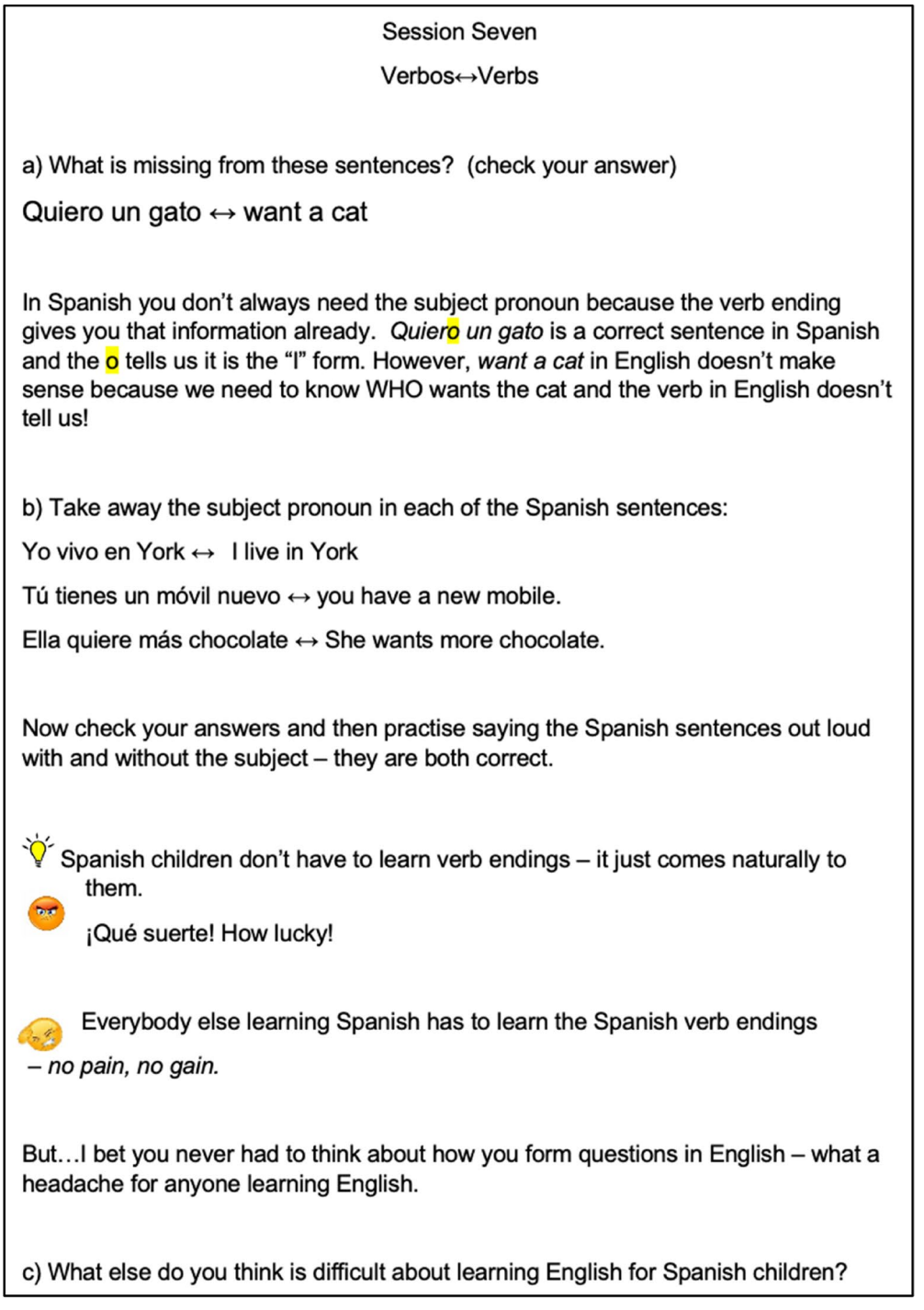
The control group received ten self-study sessions working on exercises in Spanish reading comprehension and vocabulary. For example, students were asked to skim and scan a text in Spanish to find specific vocabulary or expressions or to complete a word search. They were asked to revisit language that they had already been taught as well as using inferential skills to attempt to understand new vocabulary. The activities for the control group were specifically designed to ensure that children were developing their Spanish without explicitly analyzing grammar.

Procedure

All testing and intervention took place at the school during school hours allocated to Spanish language study. In their Spanish lessons, both the experimental and control group students were given printed self-study materials to work through independently in the ten minutes of self-study time allocated in each lesson. The materials they were given were differentiated according to which group they had been assigned to. Pupils were encouraged to work on their own and at their own pace. Children who finished early were allowed to do an activity on their school laptops which was not related to the study. The Spanish teacher was on hand to assist the children if needed. Observation by the teacher confirmed that students were on task and most students were able to complete the activities in the allocated time.

Data analysis

Statistical analyses were conducted using IBM SPSS version 25. Complete datasets for the GPS spelling and grammar subtests were available at pre- and post-tests. Three children had missing Spanish proficiency scores at pre-test. Little's test indicated that these values were


Session Seven

Verbos↔Verbs

a) What is missing from these sentences? (check your answer)

Quiero un gato ↔ want a cat

In Spanish you don't always need the subject pronoun because the verb ending gives you that information already. *Quiero un gato* is a correct sentence in Spanish and the o tells us it is the "I" form. However, *want a cat* in English doesn't make sense because we need to know WHO wants the cat and the verb in English doesn't tell us!

b) Take away the subject pronoun in each of the Spanish sentences:

Yo vivo en York ↔ I live in York

Tú tienes un móvil nuevo ↔ you have a new mobile.

Ella quiere más chocolate ↔ She wants more chocolate.

Now check your answers and then practise saying the Spanish sentences out loud with and without the subject – they are both correct.

Spanish children don't have to learn verb endings – it just comes naturally to them.

¡Qué suerte! How lucky!

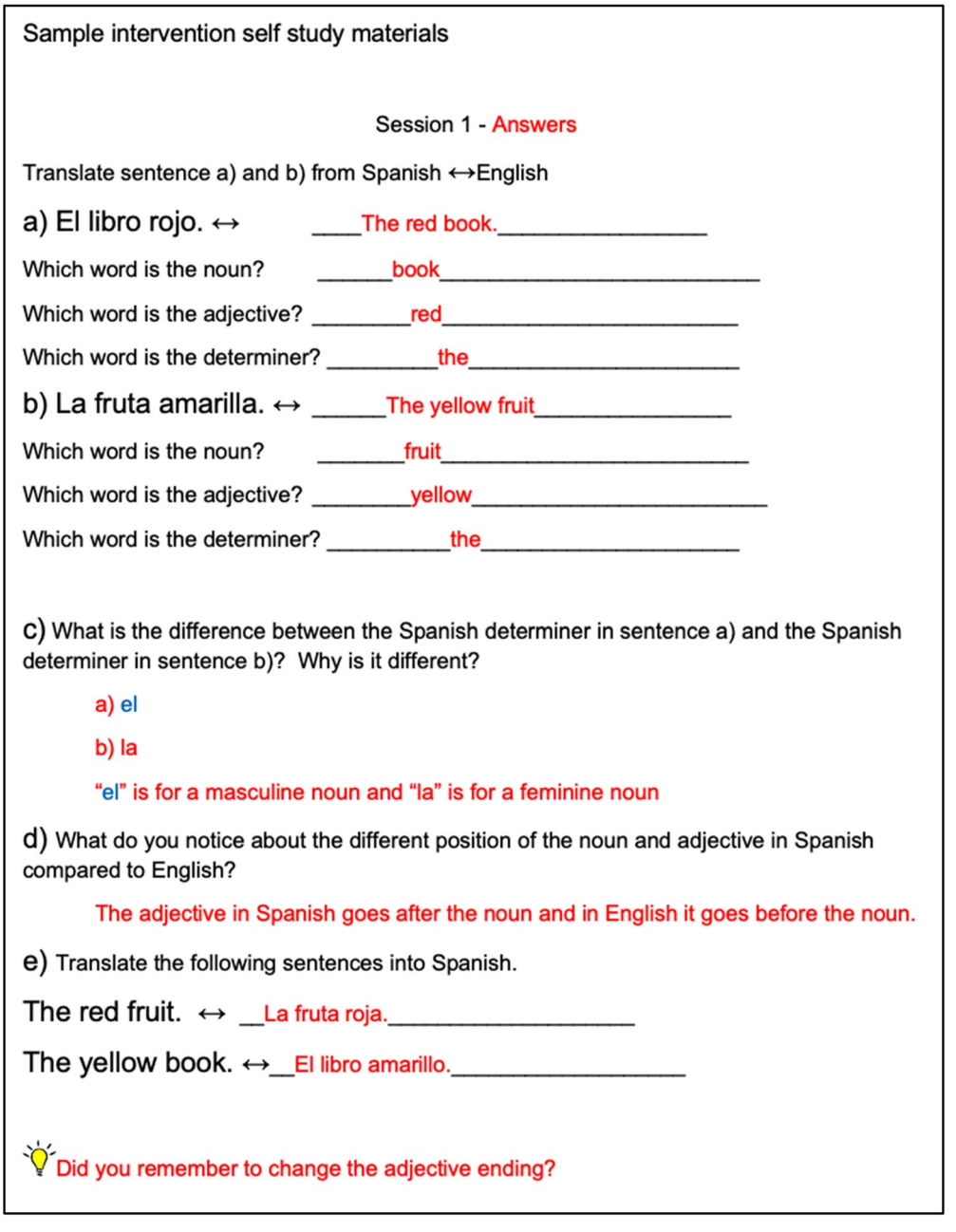
Everybody else learning Spanish has to learn the Spanish verb endings – *no pain, no gain.*

But…I bet you never had to think about how you form questions in English – what a headache for anyone learning English.

c) What else do you think is difficult about learning English for Spanish children?

Figure 2. Worksheet on verbal Inflection and null subjects.

missing completely at random ($\chi^2 = 1.63$, $p = .812$). The missing values were therefore imputed using expectation maximisation. We first present descriptive statistics for the L1 and L2 measures at both time points, and examine age and gender effects, since these demographic


Sample intervention self study materials

Session 1 - Answers

Translate sentence a) and b) from Spanish ↔English

a) El libro rojo. ↔ ____The red book._____

Which word is the noun? _____book_____

Which word is the adjective? _____red_____

Which word is the determiner? _____the_____

b) La fruta amarilla. ↔ _____The yellow fruit_____

Which word is the noun? _____fruit_____

Which word is the adjective? _____yellow_____

Which word is the determiner? _____the_____

c) What is the difference between the Spanish determiner in sentence a) and the Spanish determiner in sentence b)? Why is it different?

a) el

b) la

"el" is for a masculine noun and "la" is for a feminine noun

d) What do you notice about the different position of the noun and adjective in Spanish compared to English?

The adjective in Spanish goes after the noun and in English it goes before the noun.

e) Translate the following sentences into Spanish.

The red fruit. ↔ __La fruta roja._____

The yellow book. ↔__El libro amarillo._____

Did you remember to change the adjective ending?

Figure 3. Worksheet from activity on adjectives, with answers.

variables have been shown to be associated with language skills in previous research (e.g. McPhillips & Jordan-Black, 2009; Reilly et al., 2019).

We assessed the effect of the L2 intervention on children's L1 performance in Year 6 GPS scores for Spelling and Grammar separately. We were interested in evaluating the effect of intervention on change in children's performance between the two time points, rather than effect on T2 scores alone; in other words, we assessed whether the mean change in each

outcome variable differed between the intervention group and control group. We examined effect sizes alongside alpha-values in all inferential analyses in order to assess the impact of the intervention on children's Spelling and Grammar skills. As a first step, we compared T1-to-T2 change scores in Spelling and Grammar between the two groups using independent-sample *t*-tests, examining effect sizes (Cohen's *d*) as an initial indicator of effect of intervention. Next, we used mixed analysis of variance (ANOVAs) for repeated measures to compare performance on Year 6 Spelling and Grammar tests, with time as a within-participants factor, and group as a between-participants factor. We examined the interaction between time and group.

As a post-hoc analysis, we examined the moderating effect of demographic variables (age/gender) using mixed ANOVA for repeated measures, in order to explore whether the effect of intervention varied across sub-groups of children (i.e. girls/boys; children who were older/younger in the school year).

Results

In this section we begin with some brief qualitative observations about student engagement with the intervention before presenting the analysis of the quantitative data.

Engagement with intervention materials

Overall engagement with the materials was observed to be good during the self-study time with students generally staying on task and focusing on the intervention materials. Teaching staff reported that students found the format of the intervention like a 'test'; this was perhaps due to them being given individual self-study worksheets to work through. One novel feature was the provision of the answer sheet so that they could self-check their answers. Teachers observed that some students felt like they were cheating, whereas others felt it gave them agency over their learning. As would be expected, some students found the tasks more difficult than others; however, there was no indication that any pupils were unable to engage with the activities. The teacher observed that tasks being presented only in the written modality was likely to make it harder to understand what was required, as they would usually be given verbal instructions, or have a task presented or demonstrated to them visually.

Most students clearly had awareness of grammatical differences between Spanish and English, with some showing quite developed levels of language-analytic ability. For example, the following was one child's answers to questions (c) and (d) from the answer sheet on adjectives reproduced in Figure 2:

1. Sentence a is el and sentence b is la this different because one is masculin and one femelin; (d) noun and adjective are the opposite way round adjective noun

Another child answered the following to the question at the end of the worksheet on verbs (reproduced in Figure 3):

2. (c) That when you translate from Spanish, it doesn't always make sence so you have to change the order of some words.

In an activity on verb conjugation, one child responded with the following when asked to explain how English conjugation worked with third person pronouns:

3. It changes to Wants instead of want or wanted The ending is different!

Overall, responses to the activities demonstrated that children were able to engage CLKAL by explicitly comparing English with Spanish grammar. This can be seen in this sample of answers to question (d) on adjective-noun order from a further six pupils:

4. The Adjective comes before the Noun
5. the noun comes first
6. The noun and adjective have swapped. Spanish sentence 'A' actually means says 'The book red.'
7. They are switched round so the noun is first.
8. The adjective comes after the noun in Spanish.
9. they put frut red when we put red frut

The children are showing here that they are aware of commonalities as well as differences between the two languages (i.e. CLKAL): they understand that Spanish words and their translation equivalents in English belong to the same word classes (in this case noun and adjective) but that the order of the two differs across the languages (noun first in Spanish, adjective first in English).

Statistical analysis

Descriptive statistics for the measures of L1 English spelling and grammar, and of L2 Spanish language skills, taken at pre-test (T1) and post-test (T2), are reported in Table 1; the distribution of scores on tests of spelling and grammar at each time point is displayed in Figure 4. None of the tests of L1 spelling, grammar or L2 Spanish skills differed significantly between the intervention and control groups at T1 or T2. It is noteworthy that children's scores on the Spelling GPS subtest did not improve from pre- to post-test in either group. In contrast, Grammar scores showed improvement from T1 to T2 in both groups. Teachers' ratings of children's Spanish attainment remained relatively stable over the course of the study, confirming that the intervention had no deleterious effect on it.

Effect of intervention

Change scores in performance in L1 Spelling and Grammar from pre-test to post-test were computed by subtracting T1 scores from T2 scores. There was no difference in change scores

Table 1. Descriptive statistics (mean (standard deviation)) for GPS scores; median (range) for Spanish score) for pre- and post-test measures of L1 spelling and grammar and L2 skills, split by intervention group.

	Intervention Group n = 40	**Control Group n = 42**	**Group difference (t)**	**Effect size (Cohen's d)**
Time 1 (end of Year 5)				
GPS Spelling (/20)	14.15 (4.99)	13.14 (5.84)	.84 ($p = .40$)	.19
GPS Grammar (/50)	28.33 (8.75)	29.05 (10.14)	.35 ($p = .73$)	.08
Spanish score[3]	2 (1-4)	2 (1-4)	$U = 741.50$ ($p = .69$)	
Time 3 (end of Year 6)				
GPS Spelling (/20)	13.55 (5.00)	12.81 (5.26)	.65 ($p = .52$)	.21
GPS Grammar (/50)	35.23 (7.56)	34.26 (9.32)	.51 ($p = .61$)	.11
Spanish score[3]	2 (1-4)	3 (1-4)	$U = 786.00$ ($p = .58$)	

[1]Raw score; [2]Summed z-scores; [3]Teacher rating (1–4).

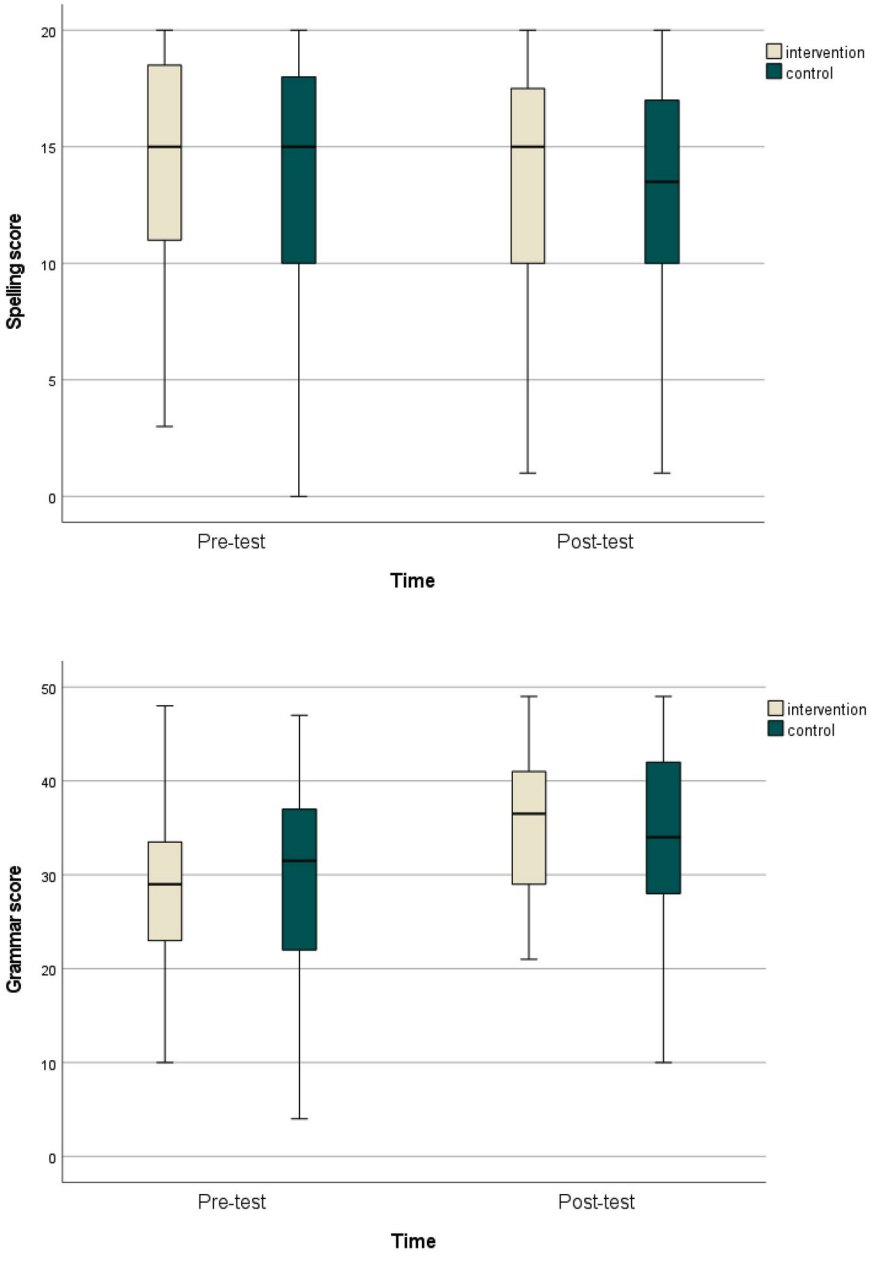


Figure 4. Boxplots showing children's scores on the tests of spelling (above) and grammar (below) at pre- and post-test, separated by group (intervention/control).

between the intervention and control groups on Spelling (intervention $M = -0.60$ ($SD = 3.21$); control $M = -0.33$ ($SD = 3.55$); $t(80) = .36$, $p = .36$; $d = 0.08$).

For the Grammar subtest, there was a greater change between T1 to T2 in the intervention group than in the control group, representing a small effect (intervention $M = 6.90$ ($SD = 4.27$); control $M = 5.21$ ($SD = 4.47$); $t(80) = 1.74$, $p = .042$; $d = 0.39$).

Repeated measures analysis of variance allowed an evaluation of the interaction between time and group on change in performance from T1 to T2. For the Spelling subtest, there was no main effect of time ($F(1, 80) = 1.56$, $p = .216$; partial $\eta 2 = .02$), group ($F(1, 80) = 0.62$, $p = .421$; partial $\eta 2 = .01$) and no time x group interaction ($F(1, 80) = 0.13$, $p = .722$; partial $\eta 2 = .00$).

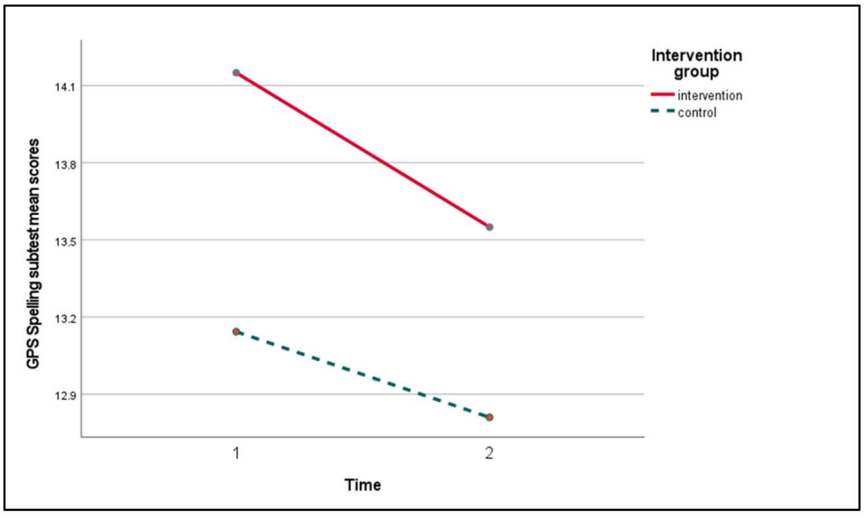
For the Grammar subtest, there was a large effect of time ($F(1,80) = 157.14$, $p < .001$; partial $\eta 2 = .66$). There was no main effect of group ($F, 180) = .004$, $p = .960$; partial $\eta 2 = .00$). The interaction between time and group represented a small, non-significant effect ($F(1,80) = 3.04$, $p = .085$; partial $\eta 2 = .04$), such that children in the intervention group showed slightly greater improvement in grammar scores from pre-test to post-test in comparison with children in the control group. Change from pre- to post-test performance by intervention group is depicted in Figure 5 for Spelling (Figure 5(a)) and Grammar (Figure 5(b)) respectively.

Post-hoc moderation analysis

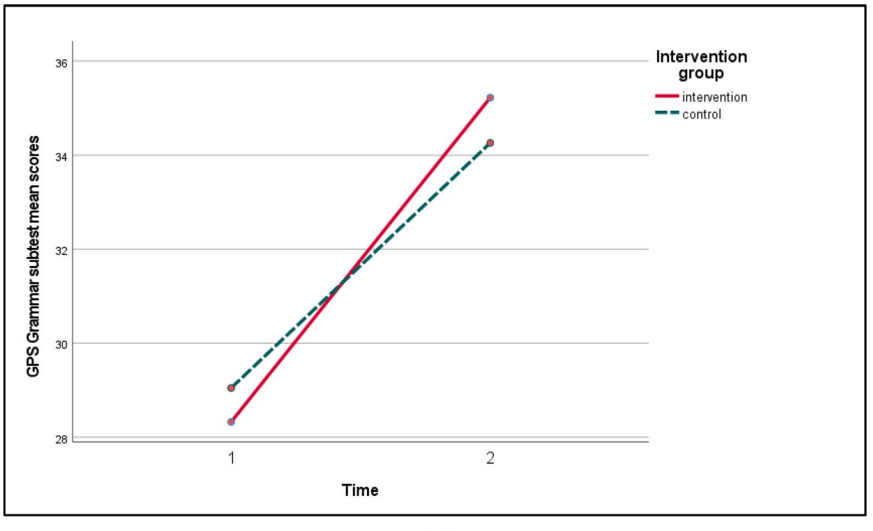
In order to assess whether the effect of intervention on children's Grammar scores differed according to demographic variables, we ran two further mixed ANOVAs for repeated effects, adding children's age (younger/older in school year) or gender (female/male) respectively as an additional between-participants factor. The critical interaction term indicated no moderation of the effect of intervention by age (time x group x age group: $F(1,78) = 0.26$, $p = .615$; partial $\eta 2 = .00$). There was a trend for boys in the intervention group to show more improvement in grammar than girls in the intervention group; the interaction represented a medium effect but was not statistically significant (time x group x gender: $F(1,78) = 2.37$, $p = .100$; partial $\eta 2 = .06$).

Discussion

In this study, we aimed to assess the effect of a self-study grammar intervention in L2 (Spanish) on 10- to 11-year-old children's progress in mandatory tests of L1 (English) Spelling and Grammar. From the beginning of Year 6 of primary education (pre-test) to the mandatory assessments at the end of Year 6 (post-test), there was no improvement in children's Spelling scores. Children in both groups showed improvement in performance on the Grammar and Punctuation subtest from pre- to post-test, and there was a trend for children in the intervention group to show greater improvement over the course of study. The effect of intervention on attainment in L1 English grammar at post-test was small and not statistically significant. Further analysis found that response to the intervention was not moderated by age or gender, although there was a trend for boys to show more progress than girls in the intervention group. Taken together, these findings suggest that at least some pupils engaging with the L2 Spanish grammar activities might have been able to use this experience to enhance their performance on a test of L1 grammar. The fact that grammar scores increased from T1 to T2, but that spelling scores did not, suggests that any effect of the intervention on GPS performance across participants was grammar-specific. Furthermore, the stringent design of the control group, in which all aspects of the intervention were matched aside from the focus on grammar, give us some confidence to conclude that the positive trend in the results for children in the intervention group was indeed an effect of the intervention.



(a)



(b)

Figure 5. **(a)** Performance on GPS spelling subtest from pre-test to post-test by intervention group. **(b)** Performance on GPS grammar subtest from pre-test to post-test by intervention group.

We therefore interpret these results as tentative confirmation of Murphy et al. (2015) findings for primary school children learning Italian and French. Consistent with earlier work by Murphy and Pine (2003), they concluded that young children are able to deploy their knowledge of other languages in their development of L1 literacy. Our data suggest that children aged 10-11 can benefit from explicit information about, and practice with, L2 Spanish grammar in an assessment of their declarative knowledge of L1 English grammar, thus complementing McManus and Marsden (2017) findings for a similar effect from L1 to L2.

The findings of Lichtman (2016) and Roehr-Brackin and Tellier (2019) suggested that children under 9 and as young as between 5 and 7 could benefit from explicit L2 instruction

and could develop explicit knowledge of L2 structure, confirming that language-analytic ability can develop on the basis of explicit instruction. Our data appear to suggest that slightly older children might be able to benefit from explicit self-study materials and, moreover, use the experience as a basis to develop CLKAL and apply it to L1. It is worth considering, however, that the nature of the intervention activity may have led to differing levels of impact on students. The intervention materials were presented in a self-study format that required students to work through and manage their learning independently. This would naturally favour those students with more fully developed autonomous learning skills. Learner autonomy has proved to be a complex concept to measure empirically with any degree of confidence, due to its multifactorial nature (Komljanec & Šebalj, 2020). Furthermore, there is no simple age-based developmental trajectory that can predict how an individual learner's autonomous learning skills will develop. However, research supports the notion that higher academic achievers exercise greater autonomy over their learning (Gülnihal & Balçıkanlı, 2019). It is clear that complex factors such as self-motivation, confidence, self-regulation, and metacognition all contribute to increasing a student's ability to manage their own learning and their development depends on a complex interplay of individual differences (e.g. Schunk, 2012).

Evidence suggests that teachers play a critical role in the development of learner autonomy by guiding students and teaching towards effective learning strategies that students can go on to use independently (e.g. Reinders, 2010). Given the young age of the children targeted by this intervention, it is plausible that many participants would not have the autonomous learning skills required to enable them to learn most effectively from self-study materials. It can therefore be argued that a teacher-led or mixed approach might result in students gaining more from this intervention programme, and most promisingly, this would expand its impact to a wider range of learners. Alternatively, effectiveness might also be improved by giving more support and training on how to work through self-study materials at the start of the intervention.

There are a number of further methodological factors that may have led to the small, non-significant effects demonstrated, and a more extensive study would allow their impact to be assessed. First, the measures used to assess the effectiveness of the intervention, whilst ecologically valid, may not yield a sufficiently precise assessment of its impact. Both the pre-test and post-test measure contained assessment of grammatical skills but also included punctuation which was not targeted by the intervention. Rogde et al. (2021), in their meta-analysis of measures used to evaluate the impact of oral language interventions, found that the pattern of results of multiple studies indicated that large beneficial effects of intervention on trained vocabulary were often found when the knowledge of trained vocabulary was tested, but much smaller effect sizes were evident when the impact was assessed on a standardized vocabulary test. It is possible that a significant and larger effect of intervention may have been found had the pre- and post-test measures been specifically designed to cover the same grammatical constructions or concepts included in the intervention; however this would not provide an indication of generalization of the training to other grammatical constructions and concepts.

Furthermore, there was a delay of approximately three months between completion of the intervention and the post-test measure being taken. It is encouraging that, given this interval, a marginal effect was evident. Further studies should include an immediate

post-test measure as well as a delayed post-test measure, and explore the use of a mix of bespoke and standardized measures in pre- and post-test assessment.

Finally, whilst the sample size was felt to be appropriate for initial assessment of the intervention, a larger scale study in multiple settings would have more power to: (a) detect the impact of the intervention while controlling more robustly for individual differences; (b) distinguish which children benefit most from it; and (c) determine whether more can be done to increase the impact on those children entering the intervention with the poorest grammatical skills. Furthermore, a larger scale study would allow the effectiveness of the approach to be tested with children from a more diverse range of backgrounds.

Implications and future research

These results provide preliminary proof of concept for the idea that pupils can benefit from cross-linguistic knowledge about language (CLKAL) emerging from L2-to-L1 influence and indicate that further consideration could be given to its inclusion in the timetable. For settings like England, where time dedicated to MFL is limited, CLKAL would probably need to be included in literacy sessions (thus, effectively extending MFL time for pupils). Where MFL is well-embedded in primary schools, a CLIL (Content and Language Integrated Learning) approach to CLKAL could be developed, in which students learn about literacy through MFL. The findings here also imply that intentional learning is beneficial, perhaps necessary, for the transfer of knowledge from L2 to L1, consistent with the findings of Murphy and Pine (2003) and Murphy et al. (2015).

As Gunning et al. (2016) reported, it is crucial that MFL teachers have knowledge of the English curriculum and vice-versa, and that terminology be standardized across both subjects. The kind of productive inter-subject dialogue documented by Turner and Turvey (2002) and Burley and Pomphrey (2002, 2003) is uncommon still in teacher education for primary level and is unlikely to become embedded only on the basis of top-down stipulation by government guidelines (e.g. DfES, 2005) or recommendation in professional reviews (e.g. TSC, 2016). A key site for promoting and enabling the necessary knowledge and knowledge-sharing for CLKAL is teacher education. Pre-service teachers in England are expected to learn how to '[h]elp pupils apply knowledge and skills to other contexts' (DfE, 2019b) and there is scope for CLKAL to be incorporated into teacher training courses as part of this.

Conclusion

Despite over half a century of applied linguistic advocacy for an integrated approach to L1 and L2 development through language awareness (Hawkins, 1999), in other words CLKAL, educational policy and practice still keep MFL and English literacy separate. In the light of new impetus for change from several recent influential research and policy reports, the study reported here sought fresh evidence for the beneficial effects of early crosslinguistic awareness-raising. Specifically, it explored the possible effects of young children's explicit L2 Spanish learning on L1 English grammar, for the first time using GPS tests as a measure. Although the results are preliminary and the effect of the intervention was small, without reaching statistical significance in the current sample, they are promising, showing that

Spanish grammar activities might lead to better performance on English grammar in the Year 6 GPS test, at least for some students. Further research is needed in order to shed more light on how children's CLKAL can be developed at this crucial age and whether it can lead to stronger and more pervasive effects on learning outcomes. Next steps would include trialling different interventions, with more teacher-led activities perhaps making CLKAL accessible to a broader spectrum of children, and adjusting L2 grammar content so that it more closely matches, and is more explicitly compared with, L1 grammatical constructions. It will also be worthwhile to consider the use of technology-enhanced learning in future studies and the potential of language learning gamification in both the creation of future intervention materials and in CLKAL input in the classroom.

Acknowledgements

We are very grateful to the staff and students at the school for their part in the project and to Kate Saunders for her valuable contribution to the design and execution of the study.

Disclosure statement

The authors report there are no competing interests to declare.

Notes on contributors

Marion Martínez is an independent scholar and experienced Spanish teacher. She holds an MA in TESOL from the University of Leeds and a BA in German from Goldsmiths' College University of London. Her areas of interest are primary languages and educational policy.

Leesa Clarke is a Senior Lecturer in Languages and Linguistics at York St John University. She has a PhD in psychology from the University of York and she has a broad interest in typical and atypical language and literacy development. Her current research is looking at reading motivation and its impact on reading comprehension, the effects of online learning in schoolchildren with SEND, and fostering engagement in Higher Education amongst students post-pandemic.

Lorna Hamilton is an Associate Professor of Psychology at York St John University. Her research investigates language and literacy development in children, with a focus on the role of 'book language' and reading for pleasure in the development of oral language, reading skills and social cognition. A second strand of research explores the ways in which educational settings can inhibit or facilitate inclusion of neurodivergent children and young people. She is currently Associate Head of School in the School of Education, Language and Psychology at York St John.

Christopher J. Hall is Professor of Applied Linguistics at York St John University. During twenty years in Mexico, he conducted extensive research on crosslinguistic influence in L2 and L3 lexical development, involving L1 Spanish learners of English, French, and German. Since his return to the UK fifteen years ago, he has shifted his attention to the broader social and cognitive status of non-native Englishes, approaching the issues from the perspectives of Usage-Based Linguistics and Global Englishes.

ORCID

Leesa Clarke http://orcid.org/0000-0001-8862-7462
Lorna Hamilton http://orcid.org/0000-0003-0526-8252
Christopher J. Hall http://orcid.org/0000-0001-9038-1238

References

ACIE. (2017). *The National K-12 Foreign Language Enrollment Survey Report*. American Councils for International Education. Online. Retrieved June 30, 2022, from https://www.americancouncils.org/language-research-fle-state-language-us

Bell, H. (2016). Teacher knowledge and beliefs about grammar: A case study of an English primary school. *English in Education*, *50*(2), 148–163. https://doi.org/10.1111/eie.12100

Bialystok, E., Craik, F. I., & Luk, G. (2012). Bilingualism: Consequences for mind and brain. *Trends in Cognitive Sciences*, *16*(4), 240–250. https://doi.org/10.1016/j.tics.2012.03.001

Burley, S., & Pomphrey, C. (2002). Intercomprehension: A move towards a new type of language teacher. *The Language Learning Journal*, *25*(1), 46–51. https://doi.org/10.1080/09571730285200091

Burley, S., & Pomphrey, C. (2003). Intercomprehension in language teacher education: A dialogue between English and Modern languages. *Language Awareness*, *12*(3-4), 247–255. https://doi.org/10.1080/09658410308667080

Carroll, J. B. (1981). Twenty-five years of research on foreign language aptitude. In K.C. Diller (Ed.), *Individual differences and universals in language learning aptitude* (pp. 83–118). Newbury House.

CLiE. (2019). *The SPaG tests – A view from linguistics*. Committee on Language in Education. Online. Retrieved October 19, 2021, from https://clie.org.uk/responses/.

Collen, I. (2020). *Language trends England 2020*. British Council.

Cook, V. (Ed.). (2003). *Effects of the second language on the first*. Multilingual Matters.

Cushing, I. (2021). Grammar tests, de facto policy and pedagogical coercion in England's primary schools. *Language Policy*, *20*(4), 599–622. https://doi.org/10.1007/s10993-020-09571-z

DfE. (2014). *National Curriculum*. Department for Education. Online. Retrieved June 30, 2022, from https://www.gov.uk/government/collections/national-curriculum.

DfE. (2019a). *Phonics screening check and key stage 1 assessments in England*., 2019. Department for Education. Online. Retrieved March 23, 2023, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/851296/Phonics_screening_check_and_key_stage_1_assessments_in_England_2019.pdf.

DfE. (2019b). *ITT Core Content Framework*. Department for Education. Online. Retrieved February 2, 2022, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974307/ITT_core_content_framework_.pdf.

DfES. (2005). *Key Stage 2 Framework for Languages*. Department for Education and Skills. Online. Retrieved October 19, 2021, from https://webarchive.nationalarchives.gov.uk/ukgwa/20080912133215/http://www.standards.dfes.gov.uk/primary/publications/languages/framework/.

Dijkstra, T., & Van Heuven, W. J. (2002). The architecture of the bilingual word recognition system: From identification to decision. *Bilingualism: Language and Cognition*, *5*(3), 175–197. https://doi.org/10.1017/S1366728902003012

Ecke, P. (2004). Language attrition and theories of forgetting: A cross-disciplinary review. *International Journal of Bilingualism*, *8*(3), 321–354. https://doi.org/10.1177/13670069040080030901

European Commission. (2012). First European survey on language competences: Final report. Online. Retrieved December 02, 2022, from https://op.europa.eu/s/xgJN.

Gülnihal, S.-E., & Balçıkanlı, C. (2019). Does autonomy really matter in language learning? *Journal of Language and Education*, *5*(4), 98–111. https://doi.org/10.17323/jle.2019.8762

Gunning, P., White, J., & Busque, C. (2016). Raising learners' awareness through L1–L2 teacher collaboration. *Language Awareness*, *25*(1-2), 72–88. https://doi.org/10.1080/09658416.2015.1122022

Hall, C. J., & Ecke, P. (2003). Parasitism as a default mechanism in vocabulary acquisition. In J. Cenoz, B. Hufeisen, and U. Jessner (Eds.), *The multilingual lexicon* (pp. 71–85). Kluwer.

Hanan, R. E. (2015). *The effectiveness of explicit grammar instruction for the young foreign language learner: a classroom-based experimental study* [Unpublished doctoral thesis]. The University of York.

Hawkins, E. W. (1999). Foreign language study and language awareness. *Language Awareness*, *8*(3-4), 124–142. https://doi.org/10.1080/09658419908667124

Holliday, L. R. (2012). The benefits of Latin? *Educational Research Quarterly*, *36*(1), 3–12.

Holmes, B., & Myles, F. (2019). *White Paper: Primary Languages Policy in England – The Way Forward*. RiPL. Online. Retrieved October 19, 2021 from www.ripl.uk/policy/Horowitz-Krauset al., 2017

Horowitz-Kraus, T., Schmitz, R., Hutton, J. S., & Schumacher, J. (2017). How to create a successful reader? Milestones in reading development from birth to adolescence. *Acta Paediatrica (Oslo, Norway: 1992)*, *106*(4), 534–544. https://doi.org/10.1111/apa.13738

Jarvis, S., & Pavlenko, A. (2008). *Crosslinguistic influence in language and cognition*. Routledge.

Jones, J., & Coffey, S. (2017). *Modern foreign languages 5-11. A guide for teachers* (3rd ed.). Routledge.

Komljanec, K., & Šebalj, L. (2020). Encouraging learning autonomy development in distance teaching in primary school. *Journal for Foreign Languages*, *12*(1), 277–294. https://doi.org/10.4312/vestnik.12.277-294

Kormos, J. (2013). New conceptualizations of language aptitude in second language attainment. In G. Granena and M. Long (Eds.), *Sensitive periods, language aptitude, and ultimate L2 attainment* (pp. 131–152). John Benjamins.

Liberman, I. Y., Shankweiler, D., & Liberman, A. M. (1989). The alphabetic principle and learning to read. In D. Shankweiler and I. Y. Liberman (Eds.), *Phonology and reading disability: Solving the reading puzzle* (pp. 1–33). The University of Michigan Press.

Lichtman, K. (2016). Age and learning environment: Are children implicit second language learners? *Journal of Child Language*, *43*(3), 707–730. https://doi.org/10.1017/S0305000915000598

Macaro, E., & Masterman, L. (2006). Does intensive explicit grammar instruction make all the difference? *Language Teaching Research*, *10*(3), 297–327. https://doi.org/10.1191/1362168806lr197oa

McManus, K. (2019). Awareness of L1 form-meaning mappings can reduce crosslinguistic effects in L2 grammatical learning. *Language Awareness*, *28*(2), 114–138. https://doi.org/10.1080/09658416.2019.1620756

McManus, K. (2022). *Crosslinguistic influence and second language learning*. Routledge.

McManus, K., & Marsden, E. (2017). L1 explicit instruction can improve L2 online and offline performance. *Studies in Second Language Acquisition*, *39*(3), 459–492. https://doi.org/10.1017/S027226311600022X

McPhillips, M., & Jordan-Black, J. A. (2009). The effect of month of birth on the attainments of primary and secondary school pupils. *The British Journal of Educational Psychology*, *79*(Pt 3), 419–438. https://doi.org/10.1348/978185408X380199

Meade, G., Midgley, K. J., Dijkstra, T., & Holcomb, P. J. (2018). Cross-language neighborhood effects in learners indicative of an integrated lexicon. *Journal of Cognitive Neuroscience*, *30*(1), 70–85. https://doi.org/10.1162/jocn_a_01184

Murphy, V. A., & Pine, K. J. (2003). L2 influence on L1 linguistic representations. In V. Cook (Ed.), *Effects of the second language on the first* (pp. 142–167). Multilingual Matters.

Murphy, V. A., Macaro, E., Alba, S., & Cipolla, C. (2015). The influence of learning a second language in primary school on developing first language literacy skills. *Applied Psycholinguistics*, *36*(5), 1133–1153. https://doi.org/10.1017/S0142716414000095

Nicol, J. L. (2001). *One mind, two languages: Bilingual language processing*. Blackwell.

Ofsted. (2021). *Curriculum research review series: Languages*. Online. Retrieved February 2, 2022 from https://www.gov.uk/government/publications/curriculum-research-review-series-languages/curriculum-research-review-series-languages.

Reilly, D., Neumann, D. L., & Andrews, G. (2019). Gender differences in reading and writing achievement: Evidence from the National Assessment of educational Progress (NAEP). *The American Psychologist*, *74*(4), 445–458. https://doi.org/10.1037/amp0000356

Reinders, H. (2010). Towards a classroom pedagogy for learner autonomy: A framework of independent language learning skills. *Australian Journal of Teacher Education*, *35*(5), 40–55. https://doi.org/10.14221/ajte.2010v35n5.4

Roehr-Brackin, K. (2018). *Metalinguistic awareness and second language acquisition*. Routledge.

Roehr-Brackin, K., & Tellier, A. (2019). The role of language-analytic ability in children's instructed second language learning. *Studies in Second Language Acquisition*, *41*(5), 1111–1131. https://doi.org/10.1017/S0272263119000214

Rogde, K., Hagen, Å. M., Lervåg, A., & Melby-Lervåg, M. (2021). Improvement in oral language interventions: Differences and relation between effects on treatment-inherent measures and effects on standardized tests. *Nordic Journal of Literacy Research*, *7*(2), 1–18. https://doi.org/10.23865/njlr.v7.2814

Safford, K. (2015). *Teaching grammar and testing grammar in the English primary school: The impact on teachers and teaching of the grammar element of the statutory test in Spelling, Punctuation and Grammar (SPaG) in England*. Leicester: UK Literacy Association. Online. Retrieved October 19, 2021, from https://www.researchgate.net/publication/282808557_Teaching_grammar_and_testing_grammar_in_the_English_primary_school_the_impact_on_teachers_and_teaching_of_the_grammar_element_of_the_statutory_test_in_Spelling_Punctuation_and_Grammar_SPaG_in_England

Simard, D., & Gutiérrez, X. (2017). The study of metalinguistic constructs in second language acquisition research. In P. Garrett and J. M. Cots (Eds.), *The Routledge handbook of language awareness* (pp. 205–221). Routledge.

Schunk, D. H. (2012). *Learning theories an educational perspective* (6th ed.). Pearson.

STA. (2017). English grammar, punctuation and spelling Paper 1: Questions. Standards and Testing Agency. Retrieved November 22, 2022, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/614605/STA177733e_2017_key_stage_2_English_grammar__punctuation_and_spelling_paper_1_questions.pdf

STA. (2018). English grammar, punctuation and spelling Paper 1: Questions. Standards and Testing Agency. Retrieved 22 November 2022 from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/709997/STA187970e_2018_ks2_English_GPS_Paper1_questions.pdf.pdf

TSC. (2016). *Modern Foreign Languages pedagogy review. A review of modern foreign languages teaching practice in key stage 3 and key stage 4*. Teaching Schools Council. Online. Retrieved 30 June 2022 from https://ncelp.org/wp-content/uploads/2020/02/MFL_Pedagogy_Review_Report_TSC_PUBLISHED_VERSION_Nov_2016_1_.pdf.

Turner, K., & Turvey, A. (2002). The space between shared understandings of the teaching of grammar in English and French to year 7 learners: Student teachers working collaboratively. *Language Awareness*, *11*(2), 100–113. https://doi.org/10.1080/09658410208667049

White, J., & Ranta, L. (2002). Examining the interface between metalinguistic task performance and oral production in a second language. *Language Awareness*, *11*(4), 259–290. https://doi.org/10.1080/09658410208667060

Wyse, D., & Torgerson, C. (2017). Experimental trials and 'what works?' in education: The case of grammar for writing. *British Educational Research Journal*, *43*(6), 1019–1047. https://doi.org/10.1002/berj.3315

Yılmaz, G. (2019). L1 attrition, L2 development, and integration. In M. S. Schmid and B. Köpke (Eds.), *The Oxford handbook of language attrition* (pp. 304–313). Oxford University Press.

Yu, L. and Odlin, T. (Eds.) (2016). *New perspectives on transfer in second language learning*. Multilingual Matters.