

Esperanto as a tool in classroom foreign language learning in England

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Abstract

Previous work has examined the potential of Esperanto as a pedagogical tool in classroom foreign language learning in England, where limited language input of sometimes as little as one hour per week is the norm. The work reviewed here focuses on child learners aged 6 to 12 and was carried out between 2006 and 2016. Two Esperanto-based language awareness programmes have provided primarily descriptive insights, suggesting that learning Esperanto may result in greater metalinguistic awareness and more positive attitudes to other languages and cultures. However, the language awareness programmes were implemented without matched comparison groups and therefore could not reveal whether the learning of Esperanto would lead to different results than the learning of other languages. Classroom-based research that included matched comparison groups has sought to address this issue. Specifically, three studies investigated the questions of whether learning Esperanto as opposed to learning other languages would help enhance children's metalinguistic awareness and thus contribute in turn to more successful learning in a limited-input classroom context. On the one hand, results indicate that for novice child learners, Esperanto was easier to learn than French, and that learning Esperanto may have a levelling effect that compensates for individual differences between children. On the other hand, the findings also show that these apparent advantages of Esperanto did not translate into measurably greater benefits for the development of metalinguistic awareness, or greater subsequent success in learning another foreign language. Moreover, learning Esperanto could not compensate for low language learning aptitude. In view of these sobering results, a number of proposals are made on how to take forward the research agenda. They include further research into the potential benefits of using form-focused instruction (based on any language) with children as well as the effects of learning Esperanto in novice adult learners.

Keywords Child foreign language learning, child L2 learning, instructed L2 learning, Esperanto, metalinguistic awareness, language learning aptitude

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Foreign language learning in state schools in England is characterised by what second language acquisition (SLA) researchers refer to as minimal or limited input, since exposure to the language to be learned often does not go beyond one or two hours per week during term time (Tinsley & Board, 2016). In a limited-input context, explicit learning is particularly effective. Explicit second language (L2) learning¹ makes use of and results in explicit L2 knowledge, that is, potentially conscious knowledge about language (Anderson, 2005; R. Ellis, 2004; Hulstijn, 2005). Explicit knowledge is reflected in an individual's metalinguistic awareness, which can be defined as the ability to focus on and manipulate language form, to treat language as an object of inspection and analysis, and to make comparisons between languages (Baker, 2006; Bialystok, 2001; Gombert, 1992).

Metalinguistic abilities typically develop in parallel with literacy skills in children who receive schooling (Birdsong, 1989; Karmiloff & Karmiloff-Smith, 2002). Research with young L2 learners suggests that even though implicit learning appears to be the default mechanism, children aged around 7 may already begin to draw on explicit knowledge and learning (Harley, 1998; Milton & Alexiou, 2006). In other words, young children can and do develop metalinguistic awareness (Bialystok, 2001; Bialystok, Peets, & Moreno, 2014; Bouffard & Sarkar, 2008), and they may well be able to learn explicitly, especially if they are exposed to explicit instruction (Lichtman, 2013, 2016).

In contrast with explicit learning, implicit learning is an automatic, non-conscious and powerful mechanism that results in knowledge which can be accessed quickly and without effort (Dörnyei, 2009; N. Ellis, 1994). However, implicit learning is also a slow process that, crucially, relies on intensive exposure to input over a prolonged period of time. By contrast, explicit learning is potentially fast and efficient. It is characterised by conscious awareness on the part of the learner as s/he attempts to understand material, seeks to analyse input, or tries to solve production or comprehension problems, for example, via deliberate hypothesis-testing (Dörnyei, 2009; Schmidt, 2001). Explicit learning is resource-intensive, though, since it requires focused attention and relies on the processing and maintenance of information in working memory. It is for this reason that (more) mature learners whose cognitive abilities are (more) developed, i.e. adults and adolescents, are relatively better able to learn explicitly than young children.

Foreign language learning in many L1 English-speaking countries is faced with a conundrum: Very little curriculum time is dedicated to language teaching and learning and thus children are exposed to minimal L2 input only. At the same time, children tend to rely predominantly on implicit learning, i.e. a slow process that requires both extensive and intensive input to be maximally effective. We have argued that it may be possible to solve this predicament if young learners'

explicit learning abilities could be kick-started at an early stage. Furthermore, we have hypothesised that making use of Esperanto as a 'starter language' could be helpful in this context because a language that is regular, transparent and easy to acquire may be particularly useful in raising metalinguistic awareness and fostering the development of metalinguistic abilities in novice L2 learners (Tellier, 2012).

The idea that Esperanto could serve as a preparatory tool for subsequent L2 learning in the classroom is not new in itself. In the early 20th century, academics began to speculate on the possible pedagogical advantages of Esperanto, if taught and learned before or alongside other languages (Lodge, 2004/1905; see also Masson, 2006). Benefits such as heightened metalinguistic awareness, more positive attitudes to language learning, improved L1 literacy, and greater self-esteem were predicted (Corsetti & LaTorre, 1995; Fantini & Reagan, 1992; Markarian, 1964; Symoens, 1989). However, there has been very little empirical research which has put these hypotheses to the test. Early work by Fisher (1921) and Halloran (1952) conducted in Britain reported that children who learned Esperanto for a year were more successful after four years of learning French than children who had studied French for five years. Similarly, Williams (1965a, 1965b) claimed that secondary school-age learners performed better in French if they had learned Esperanto for a year first. Like Halloran, Williams posited that the effects of learning Esperanto might be most pronounced in children whose verbal intelligence scores were low. He cautioned, however, that his conclusions were impressionistic (Williams, 1965a, 1965b).

It is indeed worth noting that early studies on the teaching and learning of Esperanto in schools had a number of methodological shortcomings. Not only is reporting often brief or anecdotal, but studies were carried out in a wide range of educational contexts which cannot be compared easily (Symoens, 1992), including selective grammar schools (Halloran, 1952) and non-selective secondary modern schools (Williams, 1965b), elementary schools (Formaggio, 1990) and secondary-level schools (Thorndike & Kennon, 1927). Researchers reviewing early work from today's perspective point out that studies often had poorly defined aims (Fantini & Reagan, 1992) or were somewhat superficial (Corsetti & LaTorre, 1995). Moreover, several of the early studies employed an experimental research design, but lacked methodological rigour, with experimental and control groups not always comparable (Maxwell, 1988).

More recent studies are few and far between. Bishop (1997), for instance, in his research in the Australian school context, gathered teacher ratings of pupil performance. Participating secondary-school teachers considered language students who had been exposed to Esperanto in primary school as more motivated than language students who had not learned Esperanto prior to commencing secondary school. The Esperanto students' L2 speaking skills and their overall L2 achievement were also rated more highly by the teachers when compared with the ratings allocated to other students. The participating teachers did not know which students had or had not learned Esperanto (Bishop, 1997).

In summary, while the findings of existing work as well as theoretical considerations lead to promising hypotheses and potentially encouraging conclusions, there are relatively few up-to-date empirical investigations into the potential of Esperanto as a starter language. The work reviewed in the following sections has gone some way towards addressing this gap. We begin with a review of two language awareness projects with broader educational aims before moving on to classroom research with a quasi-experimental or cross-sectional design which was specifically aimed at comparing the effects of learning Esperanto with the effects of learning other languages.

Language awareness projects drawing on Esperanto

The *Springboard to Languages* (S2L) project (Tellier, 2012) was aimed at developing language awareness in primary-school pupils, based on the hypothesis that the teaching and learning of Esperanto in conjunction with targeted language awareness activities can enhance children's metalinguistic awareness, which, in turn, is expected to facilitate the subsequent learning of other languages. In addition, the project sought to develop pupils' global and cultural awareness via links between English schools and schools overseas that likewise offered the teaching and learning of Esperanto to their pupils. The S2L project was evaluated from 2006 to 2011 by two independent researchers, Amanda Barton and Joanna Bragg, on whose five unpublished reports the brief summary presented here is based (for a full summary, see Roehr, 2012).

In essence, the evaluation was an extended case study conducted over five phases, with each phase comprising one school year. The evaluation combined quantitative and qualitative methods, with greater emphasis on the latter. The main research instruments were questionnaires and interviews. The constitution and size of the participant sample varied between phases, although it always consisted of primary-school children from up to three schools in England. The focus was on pupils in Key Stage 2, that is, children in Year 3 (ages 7–8), Year 4 (ages 8–9), Year 5 (ages 9–10), and Year 6 (ages 10–11). Children were exposed to Esperanto (all phases), French or Spanish (Phases 2–4) and completed questionnaires (Phases 1–4), while a sub-sample of children was also interviewed (all phases).

The questionnaires and interviews were used to investigate four variables in the children: attitudes, metacognition, metalinguistic awareness, and, in the first two phases of the evaluation, knowledge of the foreign language(s) taught. The questionnaire data revealed an overall picture and allowed for some quantitative analyses to be conducted, whereas the interview data yielded more specific insights into children's knowledge and thoughts as well as into some of the reasons and emotions informing their ideas. Questions about attitudes primarily focused on components such as enjoyment, confidence and motivation, as well as on cultural awareness. Children's metacognition, which essentially refers to thinking about one's own thoughts, was examined by asking them about their metalinguistic awareness, that is, whether they thought they were able to spot patterns in languages and/or whether they believed they understood how

languages borrow from each other. Children's self-reports were complemented by a number of tasks aimed at examining their actual metalinguistic awareness. The tasks included translation tasks involving known and unknown languages, a cognate-identification task involving vocabulary from known and unknown languages, a task requiring the understanding of basic metalinguistic terminology, and a plural-formation task involving nouns from known and unknown languages. In Phases 1 and 2, the metalinguistic tasks were complemented by a small number of language tasks based on the language(s) the children were taught at the time. These tasks mostly focused on simple, discrete items of vocabulary and grammar, and required, for instance, simple translation into English, plural formation, or answering basic reading-comprehension questions.

The main findings arising from the five-year evaluation suggest that overall the S2L project seemed to have achieved its main aims of enhancing the participating children's metalinguistic awareness as well as fostering some cross-cultural awareness. With regard to metalinguistic awareness, the pupils who were assessed throughout the five phases showed, on average, considerable facility when confronted with metalinguistic tasks requiring them to access unknown languages or to transfer knowledge between languages. When comparison groups were available, it was found that children who were participating in the S2L programme often performed as well as, and on occasion even outperformed, peers who were older, had more experience of learning languages, or had been exposed to a language taster programme. This finding suggests that S2L was successful in raising pupils' metalinguistic awareness, although it should be borne in mind that any comparisons with other groups of children must be interpreted with caution, since variables such as children's general ability, their home background, or the specific characteristics of the teaching context were not controlled.

With regard to the (limited) information available on children's cross-cultural awareness, it appears that pupils generally developed positive attitudes towards speakers of other languages, especially when the S2L programme was combined with activities such as correspondence or exchanges with pupils in primary schools abroad. Children tended to believe that they needed to know other languages, and often reported that they enjoyed meeting people from other countries. With regard to children's attitudes more generally, an overall positive picture emerged over the five phases of the evaluation. More often than not, a majority of the children who had experienced the S2L programme reported enjoyment of their language lessons, thought that learning a language was fun, and looked forward to learning other languages. It is noteworthy, however, that there was some fluctuation in attitudes in evidence, both for S2L cohorts and pupils learning other languages. On occasion, a minority of pupils had positive attitudes, with a majority opting for a 'not sure' response instead. This was particularly the case with respect to the question of whether they felt they had learned a lot in their language lessons.

Questions relying on children's metacognition, that is, questions which effectively asked pupils to assess their own metalinguistic awareness, often resulted in uncertainty, especially in the first three phases, where it appeared that slightly older children (age 10) might be better able to make the required judgements. Nevertheless, the responses from the S2L cohorts in the last two phases, though given by younger children (ages 8-9), were generally more positive. Children's knowledge of the language(s) taught was only assessed in the first two phases, and only to a very limited extent. On average, pupils performed well on the tasks they were given. However, bearing in mind the research design of the evaluation, it is not possible to say whether participation in the S2L programme had any influence on pupils' performance.

The S2L programme was also used in the context of a Comenius-funded project in partnership with primary schools in Germany and Hungary. This project was implemented in Years 2, 3 and 4 (ages 6-9) of an English primary school and evaluated by Amanda Barton as an independent researcher. The brief summary presented here is based on her unpublished report from 2010. The aims of the programme were the same as reported above, i.e. to enhance children's metalinguistic awareness through the teaching and learning of Esperanto in preparation for further foreign language learning, and in particular to encourage the development of multilingual and multicultural competence, including the enhancement of motivation to learn languages, and the encouragement of tolerance of and respect for others. Throughout the programme, the instrumental benefits of Esperanto as a potential *lingua franca* came to the fore, with the children at the participating English primary school using the language to successfully communicate with their peers abroad. The evaluation of the project followed a pre-test/post-test design, thus allowing for some comparisons to be made between children's knowledge and attitudes at the beginning and end of the S2L programme, although it should be noted that parts of the data-gathering instrument - a questionnaire - administered to the pupils were not exactly the same at pre-test and at post-test. In addition, no inferential statistical analyses were undertaken, so the findings, though quantitative in nature, are entirely descriptive. In sum, the evaluation found that the objectives of the project were mostly met. The participating children benefited in terms of knowledge gained, especially with regard to their metalinguistic awareness and factual knowledge about other countries in Europe. With regard to the development of positive attitudes, responses to some of the questionnaire items changed little between the start and end of the programme, while others showed the expected positive trajectory, among them children's greater appreciation of differences between people and cultures and their positive take on this, and their understanding that English is not inherently superior to or more important than other languages.

While the main findings reported in the evaluations of the two language awareness projects drawing on the S2L programme look promising, we must note the methodological shortcomings. Like other language awareness projects and their associated evaluations (for example, Barton, Bragg, & Serratrice, 2009; Jones, Barnes, & Hunt, 2005; Svalberg, 2007), the stated aims are primarily and broadly educational. Accordingly, the programmes offer participating schools and

their pupils opportunities they may not otherwise have, for example, engaging with new languages and other cultures. This results in the acquisition of knowledge, the enhancement of metalinguistic and intercultural awareness, and the development of positive attitudes among the participating children. This is clearly commendable and highly desirable from an educational perspective. However, language awareness projects and their associated evaluations typically do not include any experimental comparison or control, and they thus do not allow for the testing of competing models or for the falsification of hypotheses. In other words, a positive outcome is almost guaranteed because something (for example, a language awareness programme of some kind) is almost invariably better than nothing (no language awareness programme).

Unfortunately, it remains unclear whether exposure to Esperanto as part of a language awareness programme is superior to exposure to another language as part of a language awareness programme. Even in the case of the five-phase S2L project evaluation where comparison groups learned French or Spanish instead of Esperanto, we cannot have much confidence in the reported comparative findings because moderating variables such as children's home background, their general abilities and the teaching they experienced were not assessed. We therefore do not know whether any observed benefits in the Esperanto groups were due to exposure to Esperanto, or whether they were attributable to more advantageous home environments, higher aptitude, better teaching, or a combination of these factors. For this reason, classroom research involving two or more cohorts of comparable learners is required to answer the question of whether Esperanto is a more useful tool in classroom foreign language learning than other languages. We now turn to our own recent work which has sought to address this issue head-on.

Classroom research comparing Esperanto with other languages

In what follows, we review the findings of three studies that compared the performance of children exposed to Esperanto with the performance of children exposed to other European languages. Given our focus here, we will be specifically concerned with results pertaining to the development of children's metalinguistic awareness and L2 proficiency.

The first study (Tellier & Roehr-Brackin, 2013a) was quasi-experimental in outlook, employing a pre-test/post-test design. It was carried out with an intact group of children (N = 28) in Year 4 (ages 8-9) of an English state primary school. The children were randomly assigned to two treatment groups: Group E (N = 14) was taught Esperanto, Group F (N = 14) was taught French. All children were tested for language learning aptitude, metalinguistic awareness and L2 proficiency. The research questions were concerned with whether children would make gains on the measures of language learning aptitude, metalinguistic awareness and L2 proficiency, with the relationships between these variables, and, most importantly, with any differences between Group E and Group F.

Children's language learning aptitude was measured by means of a slightly modified version of the MLAT-E(UK), the British English version of the MLAT-E

(Carroll & Sapon, 2002). The test comprised four sections: Hidden Words presents English keywords spelled approximately as pronounced; the child must choose whichever of four correctly spelled words matches the keyword most closely in meaning. Matching Words draws attention to an English keyword in a sentence and asks the child to choose a word that plays the same grammatical role in another sentence given underneath. Finding Rhymes presents an English keyword and four possible rhyming alternatives from which the child must choose the best matching rhyme. Number Learning requires the child to write in figures words for numbers in an invented language spoken aloud by the test administrator; the words are taught immediately before the test.

The test of metalinguistic awareness was a short measure entitled Polyglot which comprised two task types. The first required children to identify pairs of sentences with the same meaning in seven European languages. The second asked children to translate sentences from three European languages into English. Thus, unlike the measure of language learning aptitude which was based on English (three subtests) or an invented language (one subtest), the Polyglot drew on other European languages, most of which the participating children had not been exposed to before; the two treatment languages, Esperanto and French, were included as well. The metalinguistic tasks encouraged the drawing of comparisons between languages, the identification of similarities in form or meaning, and the transfer of knowledge from one language to another.

The tests of L2 proficiency were matched tests for the two treatment languages, Esperanto and French. Subtests focused on core vocabulary and structures taught in the L2 sessions and assessed children's skills in reading, writing and listening. The L2 proficiency tests, the Polyglot test of metalinguistic awareness, and the MLAT-E(UK) were administered at the beginning and end of the school year.

The experimental treatment was based on specially designed matched teaching programmes for Esperanto and French addressing five topic areas – colours, animals, numbers, families, and self – with each area the focus of instruction for about six weeks. In class, each group learned a similar range of vocabulary items and conversational phrases, sang songs to practise idioms, and completed task sheets. The children encountered language input at sentence and text level, so they experienced grammatical structures in use, for example, adjectival agreement, subject-verb agreement, plurals, etc. Activities across the two groups were kept as similar as possible, with allowances made for the morphosyntactic differences between Esperanto and French. Lessons covered all four skills, and the teaching method was predominantly communicative, with incidental focus on form. Both treatment groups were taught by the same specialist language teacher for 45 minutes per week over a period of nine months, which translates into a total of 22.5 hours of instruction provided over one school year. There were no statistically significant differences in language learning aptitude between Group E and Group F at the beginning of the treatment.

The results revealed that both treatment groups progressed on measures of all variables. Both Group E and Group F showed statistically significant gains in terms of metalinguistic awareness, although the effect size was larger in Group E. Both groups also made statistically significant gains in terms of proficiency in the L2 they were taught. While this was expected, it is worth noting that the effect size in Group E was again very large, and a statistically significant difference in gains achieved by the two treatment groups was found, with Group E displaying an improvement of 45%, compared with the less dramatic improvement of 14% attained by Group F. Thus, at the end of the school year, Group E was more proficient in Esperanto than Group F in French. A plausible explanation for this result is that in the given limited-input context, learning Esperanto was easier for the participating children than learning French.

The results further pointed towards seemingly greater homogeneity in Group E compared with Group F. With regard to language learning aptitude, solid gains by individual children tended to be the norm in Group E. By contrast, Group F children showed more marked individual differences, with dramatic gains, minor gains, as well as a number of negative gains in evidence. Correlational analyses yielded further evidence for greater homogeneity of performance in Group E. In Group F, language learning aptitude was significantly associated with metalinguistic awareness and with L2 proficiency. In Group E, all three variables, i.e. aptitude, metalinguistic awareness and L2 proficiency, showed inter-correlations at post-test. One can speculate that the interplay between the three variables may be cyclical: improved aptitude and metalinguistic awareness foster L2 proficiency, while growing proficiency in Esperanto likewise promotes the development of metalinguistic awareness as well as language learning aptitude, a variable that is still dynamic in children.

The second study (Tellier & Roehr-Brackin, 2013b) had a cross-sectional design and was aimed at comparing children's performance on a dedicated test of metalinguistic awareness following experience with different L2s in the classroom. The research question addressed in the study asked about the long-term effects of being exposed to Esperanto and a European L2, compared with being exposed to various European and/or non-European L2s, on children's metalinguistic awareness. An intact cohort of pupils (N = 225, excluding bilingual children) in Year 7 (ages 11-12) of an English state secondary school participated in the study. In Year 7, all the children were exposed to classroom instruction in French. In Years 3 to 6 of primary school, the children had learned different combinations of languages, depending on their respective primary school. Languages the children had experienced included French, German, Italian, Japanese, Latin and Spanish. For the purposes of data analysis, the children were divided into seven groups, based on the primary schools they had previously attended and, thus, the prior L2 input they had received in the context of curriculum-based language instruction. Group 1 (N = 35) had learned Esperanto (Years 3 and 4) and a European L2 (Spanish in Years 5 and 6). Groups 2 to 7 (N = 168) had learned different combinations of European and non-European L2s, but not Esperanto. Groups 1 to 6 were intact classes from six different primary schools; Group 7 comprised children from 20 other primaries.

All participating pupils completed a test of metalinguistic awareness specifically developed for English-speaking children and piloted extensively prior to the study (for full details on the test, see Tellier, 2013). The test is a paper-and-pen measure comprising 11 tasks covering domains relevant to both L1 and L2 learning, for instance, lexical semantics, morphology and syntax, ambiguity, and basic metalinguistic terminology. The test addresses concepts such as grammatical gender, case, verbal and adjectival agreement, cognates, and similarities and differences between languages. Translation also features as a specific metalinguistic skill that requires deliberate analytic comparison of two languages. The translation tasks were designed to encourage children to employ knowledge of any language(s) they had (including their L1) and make use of opportunities for positive transfer.

Section 1 of the test (Tasks 1-5) is based on a number of European languages including Esperanto; Section 2 (Tasks 6-11) is based on a constructed language designed for the purpose of the test. Tasks 1-4 assess children's ability to make comparisons between different L2s via cognate recognition and/or translation; Task 5 asks children to match a syntactically ambiguous English sentence with appropriate pictures illustrating the meaning expressed by the sentence. Task 6 tests children's understanding of metalinguistic terminology, focusing on parts of speech. Task 7 deals with accusative case marking, while Task 8 addresses children's understanding of a word order rule. Task 9 requires children to spot the common features in lists of words and create two more words which could belong to the same word class. Task 10 focuses on subject-verb agreement, while Task 11 deals with grammatical gender and gender marking.

The results revealed no significant differences in performance on the test of metalinguistic awareness between Group 1 and Groups 2 to 7 taken together. Thus, children who had been exposed to Esperanto and a European L2 did not outperform children who had been exposed to European and non-European L2s, suggesting that exposure to Esperanto did not convey any (long-term) advantages in terms of overall metalinguistic ability that could not be attained equally well via input in other L2s. This cautious conclusion in support of the null hypothesis can be complemented by a slightly different interpretation, however. In principle at least, it is possible that the more recent input in Spanish (Years 5 and 6) and French (Year 7) may have obscured any advantages the children in Group 1 might have gained; in other words, almost three years had passed since the children were last exposed to potentially facilitative input in Esperanto. Two further results seem to add weight to this alternative interpretation: Group 1 significantly outperformed Groups 2 to 7 taken together on one of the eleven metalinguistic tasks (Task 1). In addition, and arguably more importantly, Group 1 exhibited by far the lowest standard deviation of all groups for the metalinguistic awareness test as a whole. This finding suggests that having been exposed to Esperanto for two years may have had a lasting levelling effect, making children of different abilities more equal in terms of metalinguistic awareness.

The third and final study to be considered (Tellier & Roehr-Brackin, 2017) investigated whether and to what extent instruction in Esperanto as a starter language could help foster primary-school children's development of metalinguistic awareness and, by extension, their ability to engage in successful (explicit) L2 learning in a limited-input setting. The study also aimed to establish whether primary-school children exhibiting lower aptitude would benefit in particular. The research questions asked (1) whether 8 to 9-year old English-speaking children's metalinguistic awareness would be raised with the help of (a) exposure to a constructed, transparent L2 (Esperanto) as a starter language and (b) dedicated focus-on-form activities in the context of such exposure, compared with children exposed to non-constructed, less transparent L2s (German, Italian), (2) whether the children would derive benefit in their subsequent learning of a non-constructed, less transparent L2 (French), and (3) whether children exhibiting lower aptitude would derive benefit in their subsequent learning of a non-constructed, less transparent L2 (French). These questions were addressed in a quasi-experimental study with a pre-test/immediate post-test/delayed post-test design with intact groups of English-speaking children in Year 4 (ages 8-9) of five English primary schools.

The instructional treatment was delivered in two parts over one school year. During Part 1 of the treatment, which comprised a total of 20 hours delivered over 16 weeks, the children (N = 178) were exposed to one of four initial language programmes in German, Italian, Esperanto or Esperanto with a dedicated focus-on-form element. In Part 2 of the treatment, which likewise comprised a total of 20 hours over 16 weeks, the children remained in their four groups, but were all exposed to French. As one of the five participating schools withdrew from the project at the end of Part 1, the number of participating children was smaller in Part 2 (N = 116). In both Part 1 and Part 2 of the treatment, children received 75 minutes of language input per week, consisting of a 60-minute L2 lesson taught by the same language teacher specifically employed for the project and 15 minutes of follow-up work with their usual class teacher. All teaching and learning materials were developed specifically for the study to ensure comparability across the various programme languages in terms of targeted vocabulary and structures as well as content-based progression throughout the school year. The L2 lessons covered all four skills. The instructional approach was story-based, and it employed specially designed project books that were linked to the participating schools' curriculum objectives in science (Part 1) and geography (Part 2). Lesson content focused on the topic of natural habitats, including the characteristics of animals, nutrition, the life cycle, simple classification of animals according to their characteristics (Part 1), and then on travel, clothing, weather and country names (Part 2).

In Part 1 of the treatment, exposure to Esperanto (Group E) was compared with exposure to two L2s that are currently taught in the English primary-school system. Italian (Group I) and German (Group G) were chosen because of their differing typological distance from French, the L2 taught in Part 2. In addition, Esperanto, Italian and German were compared with Esperanto plus a dedicated focus-on-form element (Group E+). While Group E+ experienced the same

content-based input as the other three groups, children in this group engaged in focus-on-form activities in place of one or two revision and practice activities used by the other groups. Specifically, Group E+ spent 20 minutes of the 60-minute language lesson and 5 minutes of the 15-minute follow-up session on form-focused tasks. This set-up allowed for the comparison of a primarily inductive approach (Groups E, I, G) with a more deductive approach (Group E+). In Part 2 of the treatment, all groups were exposed to the same instruction in L2 French with a dedicated focus-on-form component.

The participating children were tested for metalinguistic awareness at the beginning (pre-test) and end (post-test) of Part 1 of the instructional treatment. Moreover, the children were tested for L2 French proficiency at the beginning of Part 2 of the instructional treatment (pre-test), at the end (immediate post-test), and again eight weeks later (delayed post-test). The children were also tested for language learning aptitude at the beginning of Part 1 of the instructional treatment. The test of language learning aptitude was the same as in the first study described above (Tellier & Roehr-Brackin, 2013a), and the test of metalinguistic awareness was the same as in the second study described above (Tellier & Roehr-Brackin, 2013b). The test of L2 French proficiency was a paper-and-pen measure comprising four sections aimed at assessing children's attainment in French reading, writing, listening and grammar.

The results revealed that all children made progress in terms of metalinguistic awareness, regardless of which language programme they followed in Part 1 of the instructional treatment. An analysis that included all children who participated in the two administrations of the test of metalinguistic awareness in Part 1 of the study showed that Group E+ exhibited the greatest gains between pre-test and post-test, significantly outperforming Group I and marginally Group G. Conversely, exposure to Esperanto alone did not result in statistically greater gains than exposure to German or Italian. This seems to suggest that the focus-on-form component that was part of the treatment in Group E+ was the crucial ingredient for accelerating children's development of metalinguistic awareness. Learning Esperanto in itself and without a dedicated focus-on-form element was not sufficient for attaining statistically greater gains in metalinguistic awareness than learning a less transparent L2 such as German or Italian, or at least not for the duration of 20 hours of exposure over 16 weeks. Overall, this finding indicates that children were seemingly less able to induce metalinguistic generalisations from language exemplars, regardless of whether they came from a more or less transparent language, than they were able to acquire metalinguistic generalisations deductively. Thus, targeted focus-on-form activities with teacher guidance in the context of a transparent L2 appeared to have made the difference. Given the design of the study, we currently do not know whether such activities in the context of another L2 would have led to the same result. A re-run of the analysis including only the children who completed all measures used in the study led to no statistically significant differences in metalinguistic awareness gains. In other words, the significant advantage for Group E+ observed in the larger sample (N = 178) disappeared in the smaller sample (N = 116).

Following exposure to different language programmes in Part 1, the four groups of participating children experienced instruction in L2 French with a focus-on-form component in Part 2 of the study. All groups made statistically significant progress in French between pre-test and post-test with a large effect size. There were no statistically significant differences between groups, either for L2 French proficiency as a whole or for any of the four skills of grammar, listening, writing and reading included in the measure. This suggests that it made no statistical difference which starter language children had been exposed to in Part 1 of the study. As there were also no significant differences in terms of metalinguistic awareness gains between groups in the sample that completed both parts of the study (i.e. the smaller sample), this result is perhaps unsurprising. In other words, an absence of significant between-group differences in L2 gains is consistent with the fact that none of the four groups had an advantage in metalinguistic awareness.

The descriptive results obtained in the study indicated that Groups E and E+ appeared to be more homogeneous in their performance on the immediate and delayed L2 French post-tests than Groups G and I. This suggests that exposure to a transparent, easy-to-learn L2 may have had a certain levelling effect, seemingly reducing individual differences between children. The observed homogeneity of performance at post-test appeared to be independent of whether or not a focus on form was provided in Part 1; the crucial ingredient in this case appears to have been the nature of the L2 being learned.

In order to answer the question of whether learning Esperanto might be of particular benefit to children exhibiting lower or as yet less developed cognitive abilities, the role of language learning aptitude in children's achievement of L2 French proficiency was examined. Aptitude had a statistically significant impact on gains in French proficiency, but there were no statistically significant differences between groups. Put differently, language learning aptitude played a role in all groups, and the starter language children had experienced did not make a difference. Therefore, in this study children with lower or as yet less developed language learning aptitude did not benefit from any specific starter language more than another.

General discussion and conclusions

The preceding review was divided into two sections, with the first section focusing on two language awareness projects and their associated evaluations, and the second section focusing on three empirical classroom studies. The main findings arising from the evaluations associated with the language awareness projects indicate that exposing children to an Esperanto-based programme can lead to improvements in metalinguistic awareness as well as in factual knowledge about language(s) and culture(s), and to the fostering of positive attitudes towards other language(s) and culture(s). While these are clearly desirable outcomes from an educational point of view, it must be acknowledged that the projects and their associated evaluations do not offer any insights that are of wider theoretical or practical consequence. The reason for this can be

found in the design of the programmes and their associated evaluations, which did not incorporate matched comparison groups. Thus, all we can conclude from a research perspective is that offering children something is better than offering them nothing, which is to be expected, of course. With regard to the usefulness of Esperanto as a tool in classroom foreign language learning, we can state that Esperanto can indeed constitute the basis of a viable language awareness programme, and that such a programme is more effective than offering no language awareness programme. What we do not know, however, is whether Esperanto is a better tool in classroom foreign language learning than another L2, whether it is a worse tool, or whether it is an equivalent tool.

In order to answer this question, we need to look towards empirical classroom research that includes not only exposure to Esperanto, but also matched comparisons with other languages. The main findings arising from the three empirical studies summarised above offer a rather mixed picture with regard to the superiority or otherwise of Esperanto as a tool in classroom foreign language learning. Esperanto proved to be easier to learn than French for a small group of 8 to 9-year-old primary-school children who received limited input over one school year, with larger effect sizes for gains in Esperanto than gains in French (Tellier & Roehr-Brackin, 2013a). Moreover, descriptive results in all three studies and thus based on a considerably larger sample size suggest that learning Esperanto may have a certain levelling effect that was observable not only in different age groups (8 to 9-year-olds and 11 to 12-year-olds), but also, to some extent at least, in the long term. The small group of 8 to 9-year-old Esperanto learners in the first study showed a closer association between L2 proficiency, metalinguistic awareness and language learning aptitude than the comparison group of French learners (Tellier & Roehr-Brackin, 2013a). In the second study, the 11 to 12-year-old children who had been exposed to Esperanto several years prior to testing showed greater homogeneity in terms of metalinguistic awareness than the comparison groups who had been exposed to different combinations of other European and/or non-European L2s, but not Esperanto (Tellier & Roehr-Brackin, 2013b). Last but not least, the 8 to 9-year-old children who had been exposed to Esperanto or Esperanto plus focus on form as a starter language in the third study showed greater homogeneity in French proficiency than the comparison groups who had been exposed to German or Italian as a starter language (Tellier & Roehr-Brackin, 2017).

Whereas these findings point towards a superiority of Esperanto in terms of easy learnability and in terms of a levelling effect that can seemingly compensate for differences between individual children, the results from the three studies reviewed also show that these apparent advantages did not translate into statistically significant effects regarding either the development of metalinguistic awareness or overall achievement in subsequent L2 learning when compared with the learning of other European languages. Furthermore, the learning of Esperanto conveyed no benefits to children with lower levels of language learning aptitude when compared with the learning of other European L2s. In this sense, then, we must conclude that although Esperanto may be easier to learn than another European L2, it was not a superior starter language when compared

with two other European L2s. Put differently, the findings to date suggest that learning Esperanto as an end in itself may be advantageous, but there is currently no evidence supporting the argument that Esperanto is a better tool than other European L2s in the foreign language classroom in England.

One possible response to the current state of research is to seek further evidence. Clearly, the findings from three classroom studies with a limited number of children and covering just two age groups cannot be regarded as final and conclusive. In particular, it could be argued that given the positive trends observable from descriptive results, statistical effects might be uncovered with larger participant samples and/or following longer treatment periods. While this line of argument is perfectly valid from a research perspective, it has much more limited traction from an educational perspective. If a starter language has to be taught for a year or longer to be effective (longer treatment is needed to reveal any effect), or if it is only helpful to some children (larger samples are needed to reveal any effect), it has arguably lost much of its practical utility and is therefore no longer of critical interest to teachers, schools or educational policy makers.

Another possible response to the current state of research is to accept the convergent findings regarding the comparatively limited usefulness of Esperanto as a tool and to look instead more closely at other variables that appear to be responsible for beneficial effects in the foreign language classroom. Teacher-led form-focused activities proved to be effective in enhancing 8 to 9-year-old children's metalinguistic awareness (Tellier & Roehr-Brackin, 2017). This finding is in keeping with the results reported in other studies (Hanan, 2015; Harley, 1998; Serrano, 2011; J. White & Ranta, 2002; L. White, Spada, Lightbown, & Ranta, 1991), though research investigating form-focused instruction and explicit learning in children under the age of 10 is still in very short supply. As the results that are available to date point towards a facilitative influence of explicit deductive L2 instruction even in young learners, the specific effects of focus-on-form activities with any commonly taught European L2 in the primary classroom on the development of L2 skills is a line of enquiry worth pursuing, as is the question of how early L2 skills interact with the development of literacy in L1 (Porter, 2014; Sparks, Patton, Ganschow, & Humbach, 2009, 2011; Tellier, 2015).

Yet another possible response would be to look towards findings obtained in studies with cognitively mature learners in order to establish whether and how research with adolescents and adults can cross-fertilise research with children. While a multitude of issues could be raised, let us focus on just two points that tie in directly with the three studies reviewed above. First, there is evidence from work with adolescent and adult L2 learners that prolonged exposure to 'mainstream' form-focused instruction drawing on the well-established deductive presentation-practice-production sequence derived from skill acquisition theory may have a levelling effect. In other words, long-term experience with such instruction may serve as an equaliser with regard to individual differences in language learning aptitude. This has been reported – often as a 'side effect' in research aimed at investigating other issues – for English-speaking adolescent learners of French (Erlam, 2005), English-speaking adult learners of German and

Spanish (Roehr & Gánem-Gutiérrez, 2009), and Spanish-speaking adult learners of English (Rodríguez Silva & Roehr-Brackin, 2016). It is an empirical question whether the same levelling effect might obtain in children, who are still developing cognitively and whose abilities are thus still very much in flux. Second, while the three studies reviewed above did not uncover any evidence for the superiority of Esperanto as a starter language in child learners, there is as yet no research that has investigated this question with novice adult learners, i.e. learners who are cognitively mature but have never learned an L2. Again, it is an empirical question whether the same null effect which we observed in children would obtain in adults, who are potentially faster and more efficient learners due to their cognitive maturity and in whom significant effects might thus be in evidence even after a short period of exposure.

Note

¹ In accordance with conventional use of the term in SLA research, L2 learning refers to the learning of any additional language(s) after the first language(s) has (have) been acquired. L2 can thus refer to the second, third, fourth, and any number of subsequent languages that an individual is exposed to.

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