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Research Projects for Europe

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The younger, the better?: A usage-based approach to learning and teaching of English in Danish primary schools

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Abstract: This project investigates early learning and teaching of English in Danish primary schools. Encouraged by recent calls for research to apply a complex multi-factor research design to investigate early foreign language (FL) learning (Edelenbos & Kubanek 2009; Lindgren & Muñoz 2013), the project investigates the impact of starting age of learning, i.e., the age factor, and a range of contextual factors (the quantity and quality of exposure to English inside and outside the classroom) and socio-affective factors (children’s motivation and attitudes towards learning, and parents’ education, (perceived) proficiency in the FL, their attitudes towards language learning, and their use of the foreign language professionally) in children’s rate of L2 learning and short-term English language proficiency.

Keywords: age factor in second language learning, role of contextual and socio-affective factors in early language learning, Usage-based approach to language learning

The project was motivated by a recent educational law in Denmark which stipulated that as of August 2014 English as a FL should be introduced in 1st grade instead of 3rd grade, which had been the norm since 2002. This law change in Denmark reflects educational policies implemented across Europe over the last decade whereby the age at which children start learning FL, predominantly English, in school has dropped (Enever 2011; Eurydice 2012).

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Previous research on early language learning carried out in different European countries (e.g., García Mayo & García Lecumberri 2003; Muñoz 2006; Unsworth et al. 2014), has consistently shown a rate advantage for late starters over early starters, thus aligning with research in naturalistic settings. This research, however, also reveals that “age does not yield the same type of long-term advantage as it does in a naturalistic language learning setting” (Muñoz & Singleton 2011: 19). One explanation may be that FL learning relies more on explicit learning mechanisms at which older pupils excel (DeKeyser & Larson-Hall 2005). While cognitive constraints may play a role, the different outcomes found in instructed FL vs. naturalistic L2 contexts point to the crucial role of usage-derived contextual factors. These factors include the quantity and the quality of exposure to the FL inside the classroom (e.g., Singleton & Ryan 2004; Mihaljević Djigunović 2009; Tragant Mestres & Lundberg 2011; Tragant & Muñoz 2012) and outside the classroom (e.g., Housen, 2002, 2003, 2012; Moyer 2004, 2005; Cziér and Kormos 2009; Kuppens 2010; Muñoz 2011; Lefever 2012; Lindgren and Muñoz 2013). In addition to contextual factors, research into the role of socio-affective factors, especially learners’ motivation and attitudes, in early FL learning tend to show that younger learners are more motivated and have more positive attitudes than older peers, but that both factors diminish with time (e.g., Nikolov 1999; Jantscher & Landsiedler 2000; Maclntyre et al. 2002; Mihaljević Djigunović & Lopriore 2011). Finally, research has examined the role of parents and found that parents’ education, parents’ (perceived) proficiency in the FL (e.g., Chambers 1999; Hewitt 2009), their involvement and attitudes towards language learning, the opportunities they provide for the child to meet the language through exposure and interaction, and their use of the foreign language professionally all have an impact on early FL learning (Muñoz & Lindgren 2011; Lindgren & Muñoz 2013).

The present project investigates the possible impact of all of these factors on the development of Danish children’s English proficiency. We thus examine contextual factors from two spheres of usage: the quantity and quality of exposure inside the classroom and the quantity and quality of exposure outside the classroom, and two clusters of socio-affective factors: the learners’ motivation and attitudes, and the parents’ education, (perceived) proficiency in the FL, attitudes towards language learning, and use of the FL professionally. The project is theoretically founded in usage-based approaches to L2 learning which view language learning as usage-driven and experientially-based, and consider language structure as emerging ontogenetically from repeated usage in particular contexts (e.g., Eskildsen & Cadierno 2007; Ellis & Cadierno 2009; Eskildsen 2009, 2012, 2014; Cadierno & Eskildsen 2016). Methodologically, the project follows recent recommendations in the field (e.g., Muñoz & Singleton 2011) and uses a
mixed-method approach, involving both quantitative and qualitative methodologies (i.e., ethnography and conversational analysis).

The proposed research addresses four main research questions:

1. Will there be differences between earlier (age 7) and later (age 9) starters of English language learning in their rate of learning and short-term L2 English proficiency, i.e., after 2 years of instruction?
2. What is the role of inside-school quantity and quality of exposure to and use of English in children’s rate of L2 learning and short-term L2 proficiency? To what extent is this variable a good predictor of faster rate of learning and higher level of short-term L2 attainment?
3. What is the role of out-of-school quantity and quality of exposure to and use of English in children’s rate of L2 learning and short-term L2 proficiency? To what extent is this variable a good predictor of faster rate of learning and higher level of short-term L2 attainment?
4. What role do children’s motivation and attitudes towards learning and parents’ attitudes, level of education, and (perceived) proficiency in and professional use of English have in children’s rate of L2 learning and short-term L2 proficiency? To what extent are these variables good predictors of faster rate of learning and higher level of short-term L2 attainment?

On the basis of previous research and the tenets of usage-based approaches to learning, the following hypotheses were posited at the outset of study:

1. Later starters (3rd grade pupils) will evidence a faster rate of learning and a higher level of short-term L2 proficiency than earlier starters (1st grade pupils) with respect to all language areas;
2. The quantity and type of exposure inside the classroom (i.e., teaching methodology employed and types of teaching / learning activities in the classroom) will have a stronger influence on children’s rate of learning and L2 short-term attainment than starting age of learning;
3. The quantity and quality of exposure to English outside the classroom will be stronger predictors of children’s rate of learning and L2 short-term attainment than starting age of learning;
4. Children’s motivation and attitudes towards learning and parents’ attitudes, level of education, (perceived) proficiency in and professional use of English will be strong predictors of children’s rate of learning and L2 short-term attainment. No differences between the two groups of children are expected in relation to these variables.

The current sample for the study consists of approximately 280 children taking English classes at 6 different schools. Schools were chosen following a stratified
sampling technique with location as stratification variable. Children were pre-tested at the beginning of their English instruction in the fall of 2014 by means of two proficiency tests: the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4) (Dunn & Dunn 2007) and the Test for Reception of Grammar, TROG-2 (Bishop 2003). The PPVT was used to measure receptive vocabulary skills, while the TROG was used to measure receptive grammar skills. The same two tests were administered to the children after one year and two years of English instruction, that is, in the fall of 2015 and the fall of 2016. In addition, a phonetic discrimination task was administered to the children in the fall of 2015 and the fall of 2016. Finally, in the last round of data collection (i.e., fall of 2016), two oral production tasks (a short interview and a picture-based description) were given to all the children. In addition to these proficiency measures, children were administered two aptitude tests, one testing phonological short-term memory (digit forward/backward, taken from CELF-4, a test developed by Semel et al. 2003) and the other one measuring auditory and memory abilities associated with sound-meaning relationships (a Danish adaptation of the Number Learning task present in MLAT-Elementary, developed by Stansfield and Reed 2005).

The project is led by Teresa Cadierno (University of Southern Denmark). Other members of the project are Søren W. Eskildsen (University of Southern Denmark), Mikkel Hansen (University of Paris 8), Henrik Kasch (Department of Teacher Education, University College of Southern Denmark) and three Ph.D. students – Signe Hannibal Jensen, Maria Vanessa aus der Wieschen and Katalin Fenyvesi. Signe Hannibal Jensen’s project examines the role of quantity and quality of exposure to English outside the classroom; Maria Vanessa aus der Wieschen’s project investigates the role of quantity and quality of exposure to English inside the classroom, and finally, Katalin Fenyvesi’s project taps into the role of socio-affective factors in instructed early language learning. In addition to the project members, the project counts with the expertise of a Research Advisory Board consisting of Carmen Muñoz (University of Barcelona), María Pilar García Mayo (University of the Basque Country) and Alex Housen (Free University of Brussels).

In the following we describe some preliminary results from each Ph.D. project.

1 On the role of quantity and quality of exposure to English outside the classroom

In a study with a subset of the children that participate in the overall project, Hannibal Jensen (2017) examined the types of Extramural English (EE) that young
Danish learners of English engaged in outside the classroom and the extent to which gaming activities correlated with learners’ vocabulary scores, as measured by the Peabody Picture Vocabulary Test (PPVT-4). A sub-sample of 107 children selected from five different schools participated in this study. The children differed in terms of their gender and age, consisting of 49 early starters and 58 late starters. Data about children’s EE habits were collected by means of a one-week language diary that children had to fill out with parental guidance. The diary was a modified version of the one used by Sundqvist and Sylvén (2014). Children reported the minutes spent per day on seven activities: listening to music, reading books, magazines and webpages, speaking in English, writing, watching television, YouTube/internet, gaming, and other. Children were also asked to specify whether the activities had a) only English oral input; b) only English written input; c) both oral and written English input; d) Danish oral input together with English written input; and e) English oral input together with Danish written input.

The results of the study revealed interesting gender differences in relation to the types of activities that children engaged in outside the classroom. Boys spent significantly more time on gaming as compared to girls whereas girls spent significantly more time on listening to music than boys. In terms of age differences, early starters spent more time on gaming than later starters but the difference was not statistically significant. Engagement in other EE activities such as reading and writing was negligible, probably due to the fact that children at this early age are not able to fully engage in this type of cognitively demanding activity as they are still learning to do so in their first language.

Regarding what types of gaming activities children engaged in, the study showed that the most popular language mode for gaming was using both oral and written English input, followed by games with only oral English input and games with English text only. Games with Danish input (oral or written) were negligible. Gender differences were also found here: boys reported gaming significantly more than girls in relation to gaming with oral and written English input as well as with English oral input and no text. In addition, gaming with both spoken and written input was significantly related to children’s vocabulary scores for all groups except younger girls who hardly gamed at all, whereas gaming with only written input was significantly related to language performance for older boys only.

The findings in this study are in consonant with previous research conducted in Sweden where boys were also found to game significantly more than girls (Sylvén & Sundqvist 2012; Sundqvist & Sylvén 2014). In addition, the significant correlation between children’s gaming habits and their degree of vocabulary knowledge can be explained by the nature of children’s engagement when playing games and by the central role of input frequency in language learning, as
argued in usage-based accounts of language. In many cases paying attention to the language they are exposed to will help the learners advance in the game. That is, while gaming, children are repeatedly presented with representative samples of authentic input that is relevant for them (Ellis 2009). Moreover, as children’s preferred mode for gaming includes both oral and written English input, the opportunities for repeated language input is particularly rich, thus increasing the probability of children’s noticing and learning language.

2 On the role of quantity and quality of exposure to English inside the classroom

This project has carried out several microanalytic and ethnographic studies of the classrooms in our data to map out interactional practices in the foreign language classrooms for young learners, hitherto uncharted territory in a Danish context. As part of this endeavour, uses of Danish and English have been investigated, and a common pattern is that the teachers use both languages to make sure the children understand what they say but the children predominantly use Danish unless prompted otherwise by the teacher. This applies to both age groups and the majority of the interactional environments documented in the classrooms, including instruction-giving, classroom management, answer to student-initiated questions etc.

Aus der Wieschen and Sert (2016) and aus der Wieschen (2016), however, found that in one classroom with late starters, the teacher kept to English throughout and worked with gestures and reformulations instead of switching to Danish and let the children respond in Danish and talk to each other in Danish in pursuit of their understanding. This is a time-consuming practice, but it makes for elaborate interactional trajectories in which the children must engage with the English spoken to make sense of the interaction. Moreover, the authors found one particularly fruitful practice to elicit student responses in English, namely where the teacher, through incomplete syntactic patterns, continuing prosody and gesturing, invites pupils to complete what he is saying. Interestingly for our overall project, the same teacher did not use the same strategies with the early starters (this is the only case we have where the late and early starters have the same teacher at the same time); with the early starters he followed the general tendency to switch back and forth between L1 and L2. From a usage-based perspective, the primordial point of learning is the situated, meaningful use of and exposure to language in recurring environments, so this teacher’s practice seems to favour the late over the early starters. Interestingly, we know from an
interview with the teacher that he has a target-language-only policy in both his classrooms, but he only seems to follow it consistently with his late starters.

Gesture seems to be an underestimated aspect of developing foreign language, also for young learners. Aus der Wieschen and Eskildsen (2017a) found another demonstrably fruitful use of embodied behaviour in another classroom as in one session at least one pupil learned, over numerous instantiations and an introductory translation, to pronounce and use "swap seats" appropriately in close coordination with a recurring gesture. Embodied resources in general, but in particular the constant (re)use of the same gesture to indicate intersubjectivity or initiate repair, are found throughout out database but a more thorough investigation of this particular aspect, and whether it works differently with early starters than with late starters, is still pending.

Finally, bridging the gap to the first subproject where it has been established that extramural English is a crucial resource in the children's L2 development, aus der Wieschen and Eskildsen (2017b) showed how a teacher lets the children bring their favourite music to class and present it. This was compared to another classroom (both 4th grade, first semester) where music is also used but brought in and chosen by the teacher, and it was found that the pedagogical use and outcome of the music and singing in the teacher-controlled environment was confined to a line-by-line translation of the chorus of the song with the teacher reading and selecting a pupil to translate and giving feedback, following the traditional IRF-format (Sinclair & Coulthard, 1975), whereas in the other class, the activity starts with the teacher asking the pupils their opinions about this particular activity, in which one of them brings a song to class and presents it to the class, and the pupil who has prepared and delivered a presentation of the song is instructed to moderate the follow-up discussion in which almost all the other students give feedback and express their opinions, sometimes scaffolded by the teacher. In brief, there is much more pupil-participation in the latter classroom in which the teacher has found one way to out the children's out-of-school use of and exposure to English to good use, and we argue that this latter participation pattern is more conducive to learning.

In sum, the qualitative investigations have revealed that the one teacher in our database who teaches both age groups, makes much more and, it seems, more pupil-centered, use of English in the classroom with the late starters. This indirectly speaks in favor of a later introduction to English. A quantitative study of differences between classrooms at the same age is still pending, as is an investigation of whether the teachers seem to interact differently with high scorers than with low scorers in the proficiency tests.
3 On role of socio-affective factors in instructed early language learning

Fenyvesi, Hansen and Cadierno (2017) examined the extent to which first and third grade children’s English proficiency in receptive vocabulary and grammar developed after one year of instruction, whether there were age- and gender related differences in relation to a wide range of individual factors and whether there was a relationship between such factors and young Danish children’s EFL development. The individual factors that were examined were foreign language classroom anxiety (FLCA), learners’ English competence beliefs (ECB), learners’ motivation and attitudes, and learners’ mindsets, a factor that has not previously been included in research on primary school children’s FL learning. Learners’ mindsets, as proposed by Dweck’s (2000) socio-cognitive theory, refers to whether people believe that success in a given skill depends on an innate ability that they are born with and cannot change much (fixed mindset), or whether it is malleable and can be developed considerably through effort (incremental mindset).

The sample for this study consisted of 276 children (139 boys, 137 girls) who received EFL instruction at six primary schools in Denmark. There were two groups of children, first graders (age=7-8 years) and third graders (age=9-10 years) who both began English instruction in 2014, the year the educational law was changed in Denmark. Children’s English language proficiency was measured by the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4) (Dunn & Dunn 2007) and the Test for Reception of Grammar, TROG-2 (Bishop 2003). Information about the individual factors was collected by means of a questionnaire consisting of 39 items where children indicated their answers on 5-point Likert scales. Questions on how much children liked something (e.g., To what extent do you like to say something aloud before the whole class in English? and To what extent do you like to listen to music in English when you have English lessons?) were represented by smileys (Enever 2011) while questions about how much they agreed with a statement (“I am afraid of making a mistake when I speak English” or “It is fun to learn new words in English”) were represented by dots of increasing size.

The study revealed three main findings. First, early and late starters began English FL instruction with different levels of receptive vocabulary and grammar. For both receptive vocabulary and grammar, late starters started off at approximately the same proficiency level as early starters after one year of instruction. Despite this initial difference in proficiency, however, both age groups made similar gains over one year of instruction, thus suggesting a similar rate of learning for both groups in the short span of one year. Second, the two age groups had different affective profiles. Younger learners exhibited lower levels of FL classroom anxiety...
and more positive English competence beliefs but had a less incremental mindset and relied more on external authorities as a source of motivation. In contrast, older learners relied less on external authorities and showed a more incremental mindset but they also exhibited higher levels of FL classroom anxiety and less positive English competence beliefs (especially girls); finally, only some of the individual factors had an influence on children’s vocabulary and grammar scores, namely, FLCA, ECB, learners’ mindset, and the influence of external authorities as a source of motivation. Other factors such as children’s liking of the English language and the various activities done in class did not affect their L2 performance.

The findings of this study stress the crucial role of individual affective factors in early language learning. They suggest that in terms of their individual factors’ profiles, younger and older learners possess different strengths and weaknesses, and that not all affective factors affect L2 development equally.

References


Eleanor Semel, EdD, Elisabeth H. Wiig, PhD, Wayne A. Secord, PhD


