Short-term effects of age and exposure on writing development

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The aim of this paper is to analyse the development of the three domains of vocabulary, fluency and syntactic complexity in the writing of four groups of EFL learners (N=115) in a school context in the short term. Learners started instruction at two different ages (8.9 –ES– and 11.9 –LS–) and their written production was measured after 200 school hours and after 200 school hours plus 100 extra-school hours of exposure (hereby 200 +100).

As previous studies have shown (Celaya, Torras & Pérez-Vidal 2001, Navés, Torras & Celaya 2002), with the same amount of exposure older learners (LS) are significantly better in the three domains.

Although there is a trend showing a steady improvement between the groups for fluency and lexical complexity as learners get older and receive more exposure, the question whether the older learners are and the more exposure they receive, the more proficient in writing they will be is disconfirmed for all the domains in the short term. However, younger learners with greater exposure (G2) perform similarly to older learners with less exposure (G3).

Greater exposure to the language or age alone do not seem to account for the differences found between groups in the short term.

It has often been claimed that learners who begin to acquire an L2 early in life do better in the long run than those who begin as adults (Harley, 1986; Singleton, 1999, 2001, 2002). However, evidence from naturalistic and instructional settings show that this view is only a

general tendency and that an early start is not a sufficient condition to be competent in the target language. Muñoz et al. (2002) conclude that an early start without sufficient exposure does not produce significant positive effects in the learning of a second language.

Mainstream research in SLA views comprehensible input as a necessary but not a sufficient condition for successful learning to occur. The debate about the role of input in the development of the learners' interlanguage grew with the early work of Krashen, Long, & Scarcella, 1982. Later work by Cummins, 1980 points out that basic interpersonal communication skills (BICS) take from 1 to 2 years, but that cognitive academic language proficiency skills (CALP) require from 5 to 7 years, necessitating direct teaching of the language in the academic context. This need for input in the target language has already led researchers to look for alternatives, like content-based or the so-called bilingual programmes, to provide extra exposure as a way of compensating for the so limited exposure language learners get from traditional foreign language instruction (see Muñoz 1997).

Exposure has been shown to play a crucial role in the acquisition of an L1 as well as of a second language. Studies in L1 acquisition show a pattern in which, with more hours of exposure, the learner's lexicon is expanded by, first, using nouns, then predicates and finally closed-class items (Harris & Chasin, 1999; Maital et al., 2000; D'Odorico et al., 2001). L2 research shows a similar pattern for the acquisition of a second language although hours of exposure in the first stages do not lead to a vocabulary explosion as it happens with the L1 but the gains are more gradual: nouns and adjectives seem to be more readily learnable than verbs and adverbs, which only appear after having received a considerable amount of exposure (McShane, 1991; Broeder, Extra, & Van Hout, 1993).

Different measures have been used to analyse the written production of second language learners (for a comprehensive discussion see Wolfe-Quintero, Inagaki, & Kim, 1998, who reviewed 39 empirical studies and classified them into four groups: fluency, accuracy and syntactic and lexical complexity). Empirical studies in second language writing show that in an instructional setting, LS outperform ES all way through the educational curriculum (Torras &

Celaya, 2002; Torras, Celaya & Pérez Vidal, 2001 Navés, Torras & Celaya, 2002; Doiz & Lasagabaster, 2001 and Cenoz 2001). This advantage is clearly seen in the high number of L1 resources used by early starters (Olsen, 1999), which contrasts with the very few L1 features late starters use (Miralpeix 2002).

Research question:

1. Will the older learners with more exposure (G4) consistently outperform their peers with less exposure (G3) and will G3 in turn outperform younger learners (G1 and G2)?
2. Will younger learners with more exposure (G2) consistently outperform their peers with less exposure (G1)?
3. Which developmental patterns will be found in writing performance depending on the starting age and the amount of exposure?

Method

Four groups of learners (N=115) started instruction at two different ages (8–ES– and 11–LS–) and their written production was measured after 200 school hours (G1 and G3) and after 200 school hours plus 100 extra-school hours of exposure (G2 and G4).

	Exposure 200 h.	Exposure 300 h (200+ 100)
ES	G1 (N= 29) 10.9	G2 (N= 28) 10.9
LS	G3 (N=30) 12.9	G4 (N=28) 12.9

Learners were asked to write a composition in English for 15 minutes on the following topic “Me, my past life and my future”.

Compositions were transcribed, tagged using CLAWS4, post-tagged and analysed using 37 writing measures.

The non-parametric one-way ANOVA, the Kruskal-Wallis test to check whether significant differences were found amongst the four groups. Significant differences were found

for most of the measures as shown in table 2 in the appendix. Six series of Mann-Whitney test were performed between each pair of groups to see where the differences between the groups were.

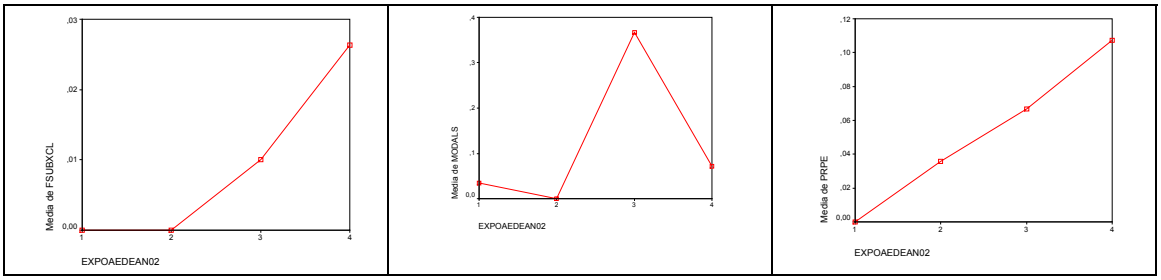
Results and discussion

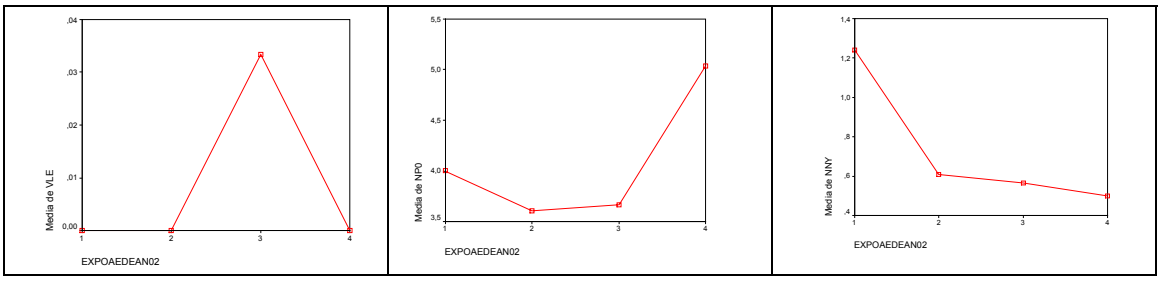
Five patterns of writing development were found as described below.

Pattern I: 1,2,3,4

Pattern I shows no significant writing development amongst the groups. Please note that although the graphics may suggest the contrary, no statistically significant differences were found between the groups as regards

- Syntactic Complexity
  - Ratio of Subordinate per Clause
  - Ratio of Subordinate per Sentence
  - Ratio of Subordinate per T-Unit
  - Total number of Modal verbs
- Syntactic Lexical Measures:
  - Total number of Prepositions
  - Total number of Lexical Verbs
  - Total number of Proper nouns
- Lexical L1 indicators:
  - Total number of Nouns in L1
  - Total number of Adjectives in L1
  - Total number of Pronouns in L1





Pattern II: 1< 234
Pattern I is characterised by the fact that no significant differences are found between G2, G3, and G4 and that these three groups significantly outperform G1 as far as the following syntactic complexity measures and L1 indicators are concerned:

- Nonfinite nodes
- Total number of subordinate clauses
- Total number of finite lexical verbs
- L1 indicators:
    - Total number of L1 words
    - Ratio of lexical L1 words per total number of words in English
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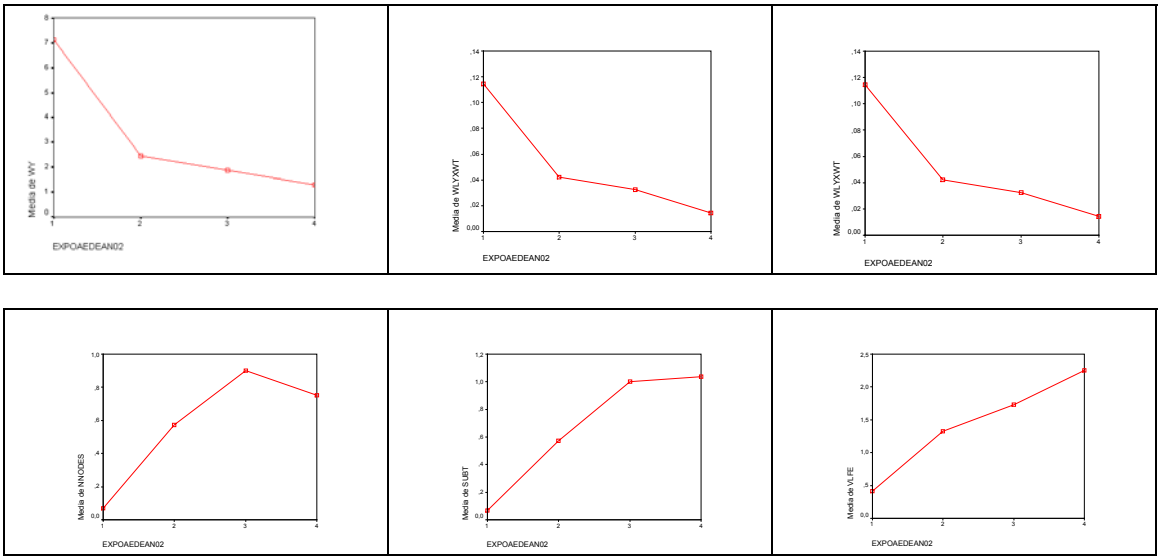
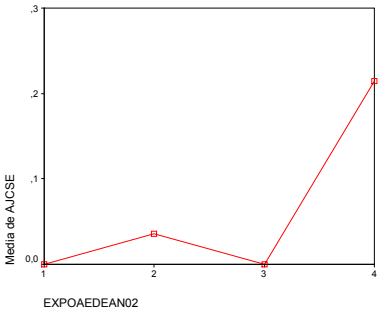


Pattern III: 1,2, 3 < 4
Pattern III is characterised by the fact that G4 significantly outperforms G1, G2 and G3. No significant differences were found between these three groups. In other words, the LS with greater exposure is the only group which shows significant differences in lexical syntactic complexity as measured by graded adjectives and intensifying adverbs.

- Lexical syntactic complexity:

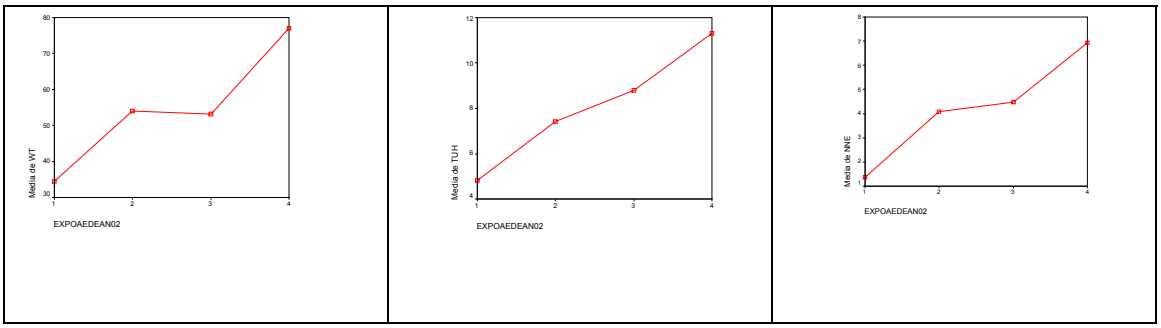
- Total number of graded Adjectives in English
- Total number of Itensifying adverbs in English



Pattern IV: 1 < 2, 3 < 4

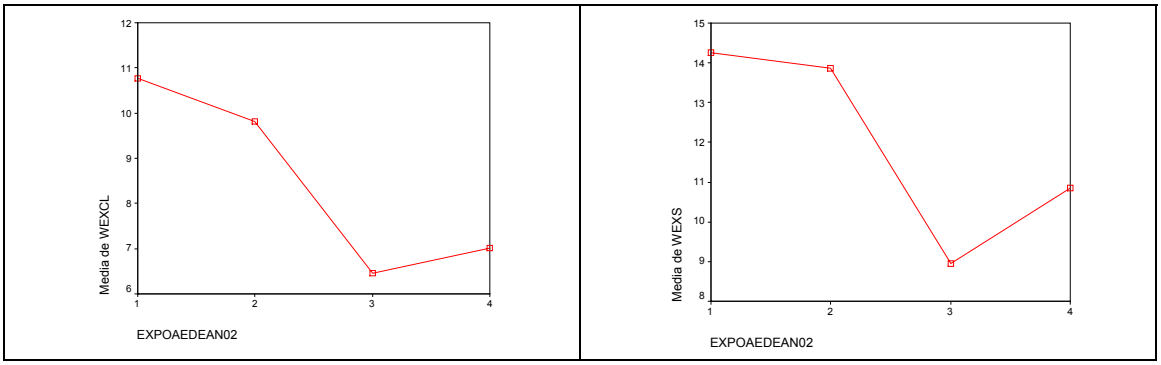
Patter IV is characterised by the fact that G4 significantly outperforms G2 and G3. G2 and G3 in turn, significantly outperform G1 as far as the following fluency, syntactic and lexical complexity are concerned.

- Fluency:
  - Total number of words
  - Total number of words in English
  - Total number of lexical words in English
  - Total number of function words in English
- Syntactic Complexity
  - Total number of T-Units
- Lexical Complexity:
  - Total number of Adjectives in English
  - Total number of Nouns in English
  - Total number of Primary Verbs in English
  - Total number of Conjunctions in English
  - Total number of Determiners in L1
  - Total number of Adverbs in English
  - Total number of Pronouns and Personal Pronouns in English



Pattern V: WEXS and WEXCl: 1, 2 < 3,4 1,2 <3 < 4

In Pattern V there are no significant differences between G1 and G2. Surprisingly enough, G3 performs significantly much worse than younger groups (ES). G4 substantially improves as far as these two measures are concerned. LS have a lower amount of WEXS or WEXCL, the reason being that younger learners use massive amount of L1 words (nouns and verbs in particular).



- Ratio of Words in English per Sentence
- Ratio of Words in English per Clause

Conclusion

1. The question whether the older learners are and the more exposure they receive the more proficient they will be is disconfirmed in the short term. There is no significant steady progress found among the groups: none of the patterns of writing development found reflects this tendency.

2. The development of writing shows two clear tendencies divided into five patterns: the first trend is characterised by almost no significant differences between the groups regarding syntactic complexity (patterns I and II). The second trend shows a steady improvement between the groups for fluency and lexical complexity (patterns III to V)
    - In Pattern I, syntactic complexity seems to be beyond learners' competence. Learners seem to be too young and to have received too little exposure to the language to have started using complexity indicators such as subordination. No significant differences were found among the four groups.
    - In Pattern II, L1 ratios seem to isolates G1 from the rest. (No significant differences were found between G2 to G4). L1-use drastically differentiates the younger children group from their peers with more exposure and from the elder children group.
    - In Pattern III, graded adjectives and intensifying adverbs isolate G4 from the rest. (No significant differences were found between G1 to G3). This measure seems to differentiate better between young low-proficiency learners than syntactic complexity indicators such as modals, non-finite nodes and subordination.
    - In Pattern IV fluency and lexical complexity measures steadily increase except between G2 and G3, for which no significant differences were found. Thus, younger learners with more exposure (200+100h) catch up to older learners with less exposure (200h) in these two domains.
    - Pattern V shows that as learners get more proficient, the amount of words per sentence and per clause unexpectedly decreases. This opposite trend found in Pattern V for WEXS and WEXC is due to the massive use of L1 words and the changing nature of clauses and sentences between the groups.
3. There are no significant differences between younger children (ES) who besides receiving 200 school hours had had an average of 100 extra-school hours (G2) and elder children (LS) who received just 200 hours of school instruction (G3). G2 has

caught up to G3 in all domains but WEXS and WEXCL. Thus younger learners with greater exposure (G2) perform similarly to older learners with less exposure (G3).

4. Greater exposure to the language or age alone do not seem to account for the differences found between groups in the short term. If improvement was due to age solely G3 and G4 would consistently outperform the other groups in all writing domains, if, on the contrary, exposure was the only factor, G2 and G4 would be better than G1 and G3 respectively in all writing domains.

"The amount of exposure to the foreign language of instructed learners is a crucial factor, maybe as crucial as the age at which initial exposure takes place, that is, the age at which pupils begin their instruction in the foreign language" Muñoz (1997:21). This study also suggests that when comparing children's writing, besides the amount of exposure and onset age, children's age differences need to be taken into account to explain lexical, complexity and fluency differences amongst groups.

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