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**PLASTICITY PERIOD EFFECTS IN SECOND LANGUAGE ACQUISITION AND
SPEECH BEHAVIOUR PROFILES: THE AGE FACTOR AND DECODING SKILLS
CHANGING.**

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Theoretical: The age factor always is considered above other factors, by most research, evidencing the children as the true experts in the acquisition of L2, which is becoming seriously a controversy.

Method: instrument: tests battery to assess verbal behaviour components in the language specific context (second language), regarding all the phonological levels awareness;

Participants: 82 natives (Portuguese language- monolinguals) and to 61 second language learners (different language speakers), from several school levels and with ages between 7 and 30 years old;

Results and Discussion: Will be discussed results regarding the general decoding competence and the phonological awareness and consciousness. The results may suggest that the different ages in the speech perception and production apply to different strategies, discussing the theoretical of the critical period for the languages acquisition.

Concepts and misunderstandings into second language learning context

Acquisition vs. Learning

Implicit vs. Explicit learning

Awareness vs. Consciousness learning

Automatism vs. fossilization

Critical period hypothesis for language acquisition

Participants (Part II)

* Case sample: 61 participants, mean age 16;

19 (31,1%) children (7 and 12 years old), 22 (36,1%) adolescents (13 and 18 years old) and 20 (32,8%) adults (19 and 30 years old), distributed by several educational levels: Basic, High and Higher School;

* Control sample: 82 subjects, mean age 15,2;

35 (42,7%) children (7 and 12 years old), 26 (31,7%) adolescents (13 and 18 years old) and 21 (25,6%) adults (19 and 30 years old), distributed by several educational levels: Basic, High and Higher School

Results (Part II)

Legend

- Independent variables

* “Languages spoken at home” – group I (Romance languages), group II (Slavics languages) and group III (Multilinguals and Bilinguals – proficient speakers of more than one language) – not considered other participants(creoles, iranina, chinese and arabic speakers) due to their numeric representativity.

* “Age Groups”: I (7-9 years old), II (10-12), III (13-15), IV (16-18), V (19-23) and VI (24-30).

- Dependent variables

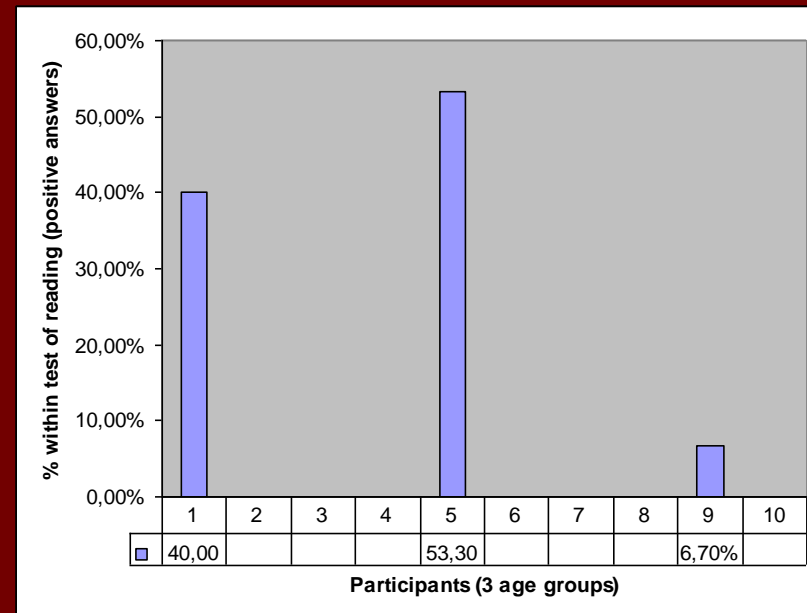
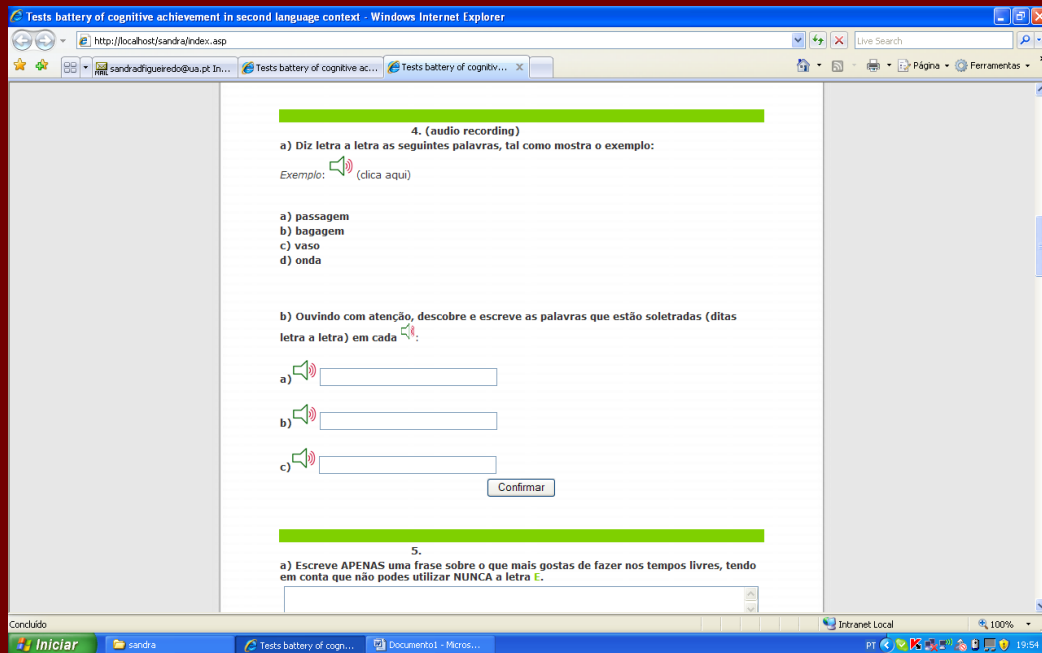
* Reading (test 4 b – reading of 4 words)

* Reading - Foreign accent (test 11- reading of text)

* “Perception of articulatory profile of sounds” (test 12 – identification of 5 letters/sounds in places of articulation, illustrated in an image).

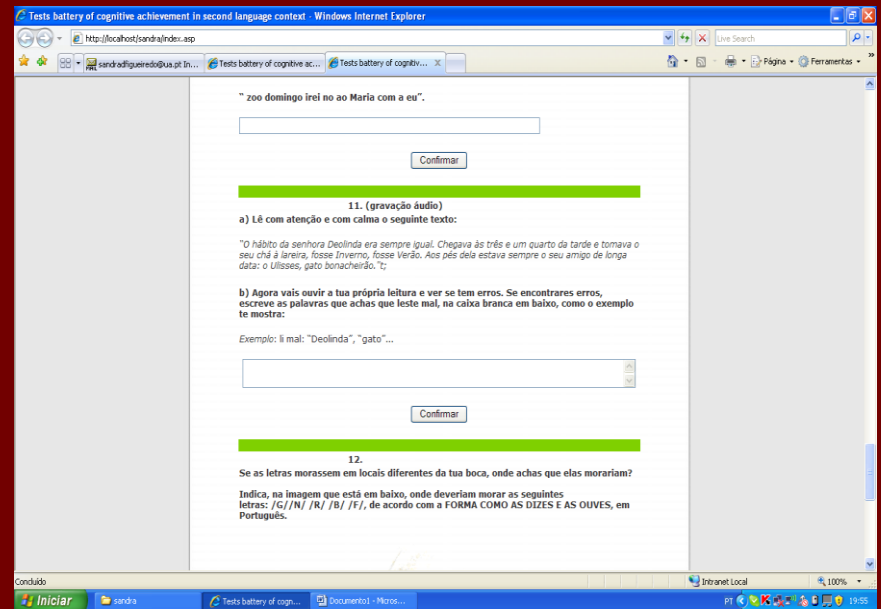
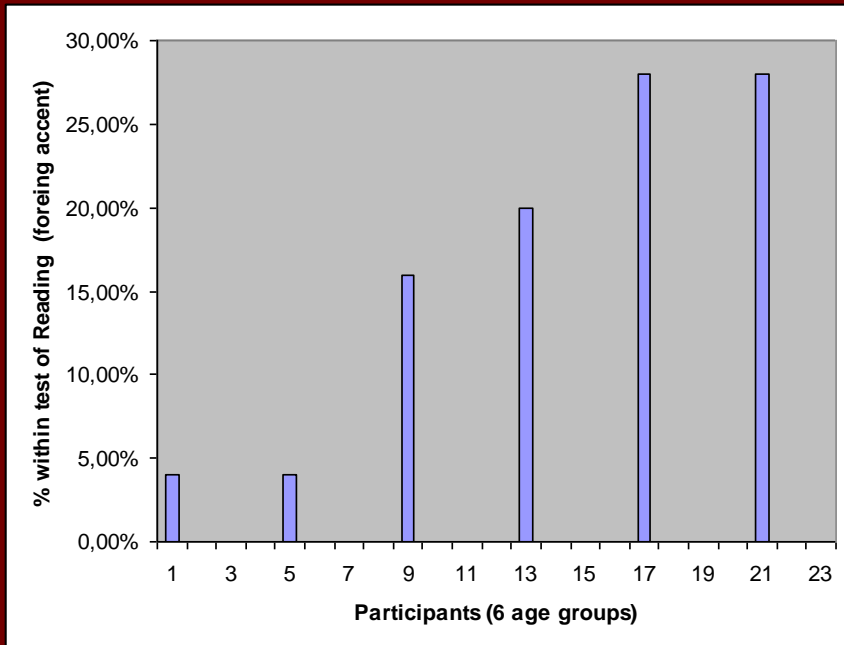
- 1. Test 4 (reading and spelling of 4 words).

According to the variables “Age” and “Reading” (test 4a), we found a non-random distribution ($\chi^2=7,039$; $g.2_{10}$; $p_{.030}$; $\eta=.263$). Regarding differences in “Reading”, between the categories of “Age”, is **the group II (13-18 years old) that presents a reading [as also the segmentation] well succeed (53,3%), and the group III exhibit a reading less positive(43,8%).**



■ 2. Test 11 (reading of a text)

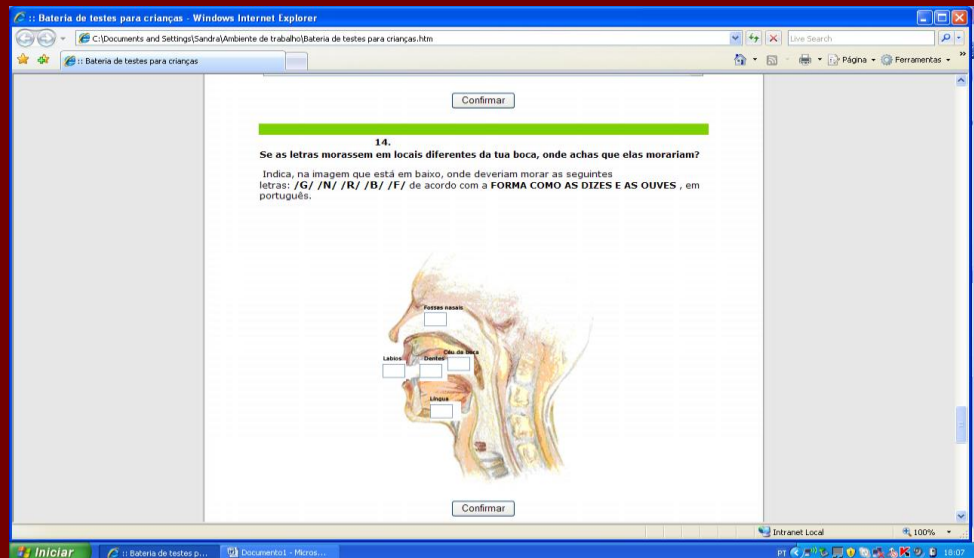
According to the variables “Age” and “Foreign accent” (test 11), we found a non-random distribution ($\chi^2=23.009$;g.l._5;p_.000; $\eta=.600$). Regarding differences in “foreign accent”, between the categories of “Age”, the groups V (28%) and VI (28%) have foreign accent in the speech. The youngest groups (I, II) exhibit less accent on reading.



■ 3. Test 12 (“*Perception of articulatory profile of sounds*”)

[Identification of articulatory points of 5 sounds - /G/ /N/ /R/ /B/ /F/, considering the image present at the test.]

According to the variables “age” and “Perception of articulatory profile of sounds”, we found a non-random distribution ($\chi^2=57.608$;g.l._40;p_.035; $\eta=.552$). Regarding differences in “*Perception of articulatory profile of sounds*” between categories of “Age”, **the group VI (adults – 23- 30 years old) (60%- 5 registers) has the best performance**, followed by the group V (6 of 11 participants identify 4 correct places). The groups I and II show the worst achievement, identifying in less number.



DISCUSSION

*** In reading test (11) the children are the group with the speech more near native; adults reveal foreign accent with more evidence. This difference between the accent on speech is the evidence with more agreement, between authors and researchers, to the critical period defense, regarding the language competence. (Lenneberg, 1967). The fossilization of structures affects especially the phonetic and phonological levels. The foreign accent is a prove of lateralization effect: crystallization of structures and functions related.**

*** The oldest participants (19-30 years old) present the best answers on the test 12 (perception of articulatory profiles), against the youngest ones (7-12 years old). In fact, also adolescents (13-15 years old) show a distinct performance, like adults. According to Andrade and Martins (2007), the adolescents, more than pairs, have more strategies applying to the articulatory movements to achieve perceptual goals. The visual learning style is the most important for this age group. This task is very difficult to second language learners, considering the different phonetic profiles on different languages. The voicing and nasality characteristics are the most preserved to the non native hear. In Portuguese language, the large system of vowels is a real challenge to the discrimination by foreign people, mainly with mother tongues that are not romance languages. Although, we observed a lower performance in this test, comparing to the others. One of the major problems is the phenomenon that Binnie (1974) call of “homopheneity”; other is the intonation, “*Intonation is the glue that holds a message together. It indicates which words are important, disambiguates partes of sentences, and enhances the meaning with style and emotion.*” (Eskenazi, 1999, p. 55)**

*** The characteristics of production affect the perception and more “allophones” are developed in the speech of the second language learner. Although, our data show that even children are experts in a native production (phonetics), they are the participants with lowest performance to identify the articulatory points for the five sounds exhibited. In fact, in other data (here not reported), we found that the visual learning style is not the preference of younger participants. There is certainly a relation between these data.**

*** With the battery developed and the results discussed, we intended to reveal that the “*issue for someone [scientifically investigating the ability of the speaker] focused on operational processes*” can no longer consist of “*developing tests that give correct results and make relevant distinctions*” (Chomsky, 1978, p. 101). Our goal is to identify performance clues and the subjects’ intuition as to contribute in the future with a test that may represent an opportunity of leveling the subjects’ performance and inform them on their ability, without cataloguing “correct results”.**

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