

Formulário Relatório de Progresso - Componente Científica

Relatório de Progresso nº 1

Período a que o relatório diz respeito:

Data de início: 04-04-2016

Data de fim: 31-05-2017

1. Identificação do Projecto

Referência do Projecto: PTDC/MHC-LIN/3901/2014

Investigador Responsável: Sónia Marise de Campos Frota

Instituição Proponente: Faculdade de Letras da Universidade de Lisboa (FL/ULisboa)

Data de Início: 04-04-2016 **Data de Fim:** 03-04-2019

Financiamento Concedido: € 166.360,00

2. Resumo dos Trabalhos Desenvolvidos

The activities developed between April 2016 and May 2017 were distributed among the first 4 tasks, as planned. The beginning of the project's activities was prepared by a meeting with the project consultant Dr. Miguel Palha to examine and discuss in detail the goals, methods and procedures to follow, especially in what concerned the recruitment of participants. A methodology was put in place involving the clinical team from the Center for Child Development – 'Diferenças', the main center for Down Syndrome in Portugal. Crucial to the launching of the project was also the invited talk given by the PI at the International Congress CountDOWN held at Fundação Calouste Gulbenkian.

The focus of the first year of activities was on recruitment of participants and all the networking of collaborations related to this task (task 1), and the design and testing of the experimental paradigms (tasks 2 and 3). Besides pilot testing, the actual data collection for the several looking while listening experiments was initiated (task 2), and the longitudinal assessment of later language abilities of the infants tested (task 4) was implemented. In December, 2016, a scientific meeting with the national consultant of the project (Dr. Miguel Palha) and with the clinical team of Diferenças was held to examine and discuss the progress made.

A major achievement was the set up of the new Lisbon Baby Lab EEG lab that is now fully equipped. This was possible due to funding from H21 and outside funding (QREN – PORLisboa, FLUL, and private fund raising).

The project website was set up as a platform for knowledge dissemination, both for the scientific community and the general public, and is available at

<http://labfon.letras.ulisboa.pt/babylab/horizon21/> . The research conducted in the Lisbon Baby Lab, and within the H21 project, was featured on the news (CMTV, CM Jornal e Correio da Manhã).

Two job positions for research were opened within the project. Two post-doc (BPD grant) were hired, one in December, 2016 (directed to the EEG component of the project – task 4), and the other in May, 2017 (directed to the eye-gaze and language assessment components of the project – tasks 1, 2 and 4).

The project is one of the organizing members of the International Conference on Laboratory Phonology – LabPhon16, under the theme ‘Variation, development and impairment: Between phonetics and phonology’ (<http://labphon16.labphon.org/sponsors.html>). Prof. Len Abbeduto, consultant of the project, is a invited speaker at LabPhon16.

During the time span of this 1st report, the following deliverables were produced, namely 2 articles published, 5 talks/posters presented at international meetings and 5 at national meetings. These deliverables are according to outputs proposed in the application (and in fact outnumber the planned outputs).

A summary of the activities developed by task follows.

Task 1: Recruitment and early assessment of participants

Infant participants with DS are being mostly recruited from the Center for Child Development – ‘Diferenças’ patients database, although spontaneous individual participation has also been promoted. Presently, 27 infants are included in the H21 database (matching the criteria for inclusion), and recruitment is ongoing. Recruitment of TD infants was made using the Lisbon Baby Lab participants database and the lab’s network of collaborating institutions, and is currently closed as the number of participants was already attained. Early assessment of DS participants through the CSBS DP checklist and the Griffiths 0-2year Scales is ongoing, with 16 CSBS DP forms filled and 10 Griffiths assessments ran.

Task 2: Looking while listening experiments

The paradigms of the 7 looking while listening experiments planned in the application were designed and underwent pilot testing and revision. The experiments are currently running and 17 infants with DS have been tested so far. With respect to TD participants, of the 7 experimental tasks involving eye gaze, 4 are already closed and 2 are ongoing. Given the low numbers of DS participants, one of the eye-tracking tasks - the phonetic discrimination of a native and a nonnative segmental contrast – which involved high numbers of subjects was low ranked and priority was given to all the other tasks. Results from the TD studies were presented in several conferences and publications, and preliminary findings for DS were presented and published with respect to word segmentation abilities.

Task 3: ERP experiments

The paradigms of the 4 ERP experiments initially planned were designed and underwent pilot testing and revision. As for Task 2, the experiment related to phonetic discrimination of native/nonnative contrast was low ranked at this point. For the other 3 experiments, and given the absence of adult ERP studies for EP in these domains, adult testing was completed and

results were presented at international conferences. Infant testing of TD participants has recently started, as well as testing of DS participants.

Task 4: Assessment of later language abilities

According to plan, the language abilities of the infants tested in experimental tasks is being measured in intervals of 6 months, using the Portuguese Communicative Development Inventory (CDI) short form (infant and toddler) European Portuguese versions. Of the 17 DS infants already tested, 18 short forms were collected (16 corresponding to the first point in time and 2 to the second point in time of the measurement of later language abilities). The assessment of later language abilities database was set up and pre-processing of the data proceeds on a regular basis upon receipt of the CDI forms. A first analysis comparing DS infants with TD participants was presented at an international conference. Three of the DS participants have already completed the longitudinal program and were thus assessed with the Griffiths Scales at 30 months.

3. Publicações

Outputs of the project available at

<http://labfon.letras.ulisboa.pt/babylab/horizon21/publicacoes.html>.

A – Publicações

Published - J. Butler, J., C. Severino, S. Correia, M. Vigário, S. Frota, “The emergence of early word segmentation abilities in typically developing infants and infants with Down syndrome”, *Revista de Neurologia* 62 (C01), p. C267, May 2016.

Published – S. Frota, “Horizonte 21 - Novas linhas de investigação em Trissomia 21”, electronic journal *Descubra as Diferenças*, no. 19, May 2017.

B - Comunicações/Posters

Accepted - C. Severino, A. Christophe, M. Vigário, S. Frota, “Prosodic structure constrains word segmentation beyond the utterance edge factor”. Talk accepted (March 2017) to be presented at WILD 2017 - Workshop on Infant Language Development, BCBL - Basque Center on Cognition, Brain and Language, Bilbao, Spain, June 15-17, 2017.

Accepted – J. Butler, S. Frota, “Early segmentation abilities in European Portuguese-learning infants: The impact of word and utterance level prosody”. Poster accepted (March 2017) to be presented at WILD 2017 - Workshop on Infant Language Development, BCBL - Basque Center on Cognition, Brain and Language, Bilbao, Spain, June 15-17, 2017.

Accepted – M. Vigário, J. Butler, C. Severino, S. Frota, “The role of phonotactic frequency and phonological grammar in infant word learning: an eye-tracking study”. Talk accepted (March 2017) to be presented at WILD 2017 - Workshop on Infant Language Development, BCBL - Basque Center on Cognition, Brain and Language, Bilbao, Spain, June 15-17, 2017.

Accepted – S. Frota, J. Butler, C. Severino, M. Vigário, “Early language development in

language-impaired, at-risk and typically development children measured with the European Portuguese MacArthur-Bates CDI Short Forms”. Poster accepted (March 2017) to be presented at WILD 2017 - Workshop on Infant Language Development, BCBL - Basque Center on Cognition, Brain and Language, Bilbao, Spain, June 15-17, 2017.

Presented – S. Frota, J. Butler, C. Severino, C. B. de Lima, M. Vigário, “The European Portuguese MacArthur-Bates CDI Short-forms: Assessing language development in longitudinal studies and clinical populations”. Talk presented at the VII Workshop on Linguistics, Language Development and Impairment, University of Lisbon, Lisbon, Portugal, February 3, 2017.

Presented – B. Leone-Fernandez, R. Jerónimo, S. Lu, S. Correia, M. Vigário, K. Alter, S. Frota, “Prosody drives the CPS, not syntax”. Poster presented at the 2nd PhD Students Meeting of the Mind-Brain College of the University of Lisbon, Lisbon, Portugal, November 28-29, 2016.

Presented - J. Butler, C. Severino, S. Correia, M. Vigário, S. Frota, “The Emergence of Early Word Segmentation Abilities in Typically Developing Infants and Infants with Down Syndrome”. Talk presented at the I Iberoamerican Congress of Neuropsychology, University of Deusto, País Basco, June 1-4, 2016.

Presented – S. Frota, J. Butler, S. Lu, M. Vigário, “Infants’ perception of native and non-native pitch contrasts: tune, pitch accent or tone?”. Talk presented at the First Lancaster Conference on Infant and Child Development, Lancaster University, Lancaster, UK, August 25-27, 2016.

Presented - S. Frota, “Marcadores precoces de desenvolvimento da linguagem: Investigação do Lisbon Baby Lab”. Invited talk presented at the International Congress CountDOWN. Calouste Gulbenkian Foundation, Lisbon, Portugal, October 29-30, 2015.

Presented – S. Frota, “From sounds to words: An eye-tracking study of infant word learning”. Invited talk presented at 3ª Semana da Inovação da ULisboa, RedeSAÚDE, University of Lisbon, Lisbon, Portugal, May 4, 2017.

Presented - S. Frota, “Investigar o desenvolvimento inicial da linguagem: novos métodos, instrumentos e resultados”. Invited talk presented at a discussion session on Falar de Fala e Voz, I Jornadas de Terapia da Fala. Centro Hospitalar Lisboa Central, Lisbon, Portugal, October 21-22, 2016.

Presented – S. Frota, “Horizonte 21: Desenvolvimento da Linguagem em bebés com Síndrome de Down”. Poster presented at 3ª Conferência Anual da Rede SAÚDE, Reitoria da Universidade de Lisboa, Lisbon, Portugal, May 3, 2016.

Presented - J. Butler, C. Severino, S. Correia, M. Vigário, S. Frota, “The emergence of early word segmentation abilities in typically developing infants and infants with Down Syndrome”. Talk presented at 1º Encontro de Alunos Colégio Doutoral Mente-Cérebro da Universidade de Lisboa, University of Lisbon, Lisbon, Portugal, December 2, 2015.

Presented - S. Frota, “Horizon21: Early language development in Down Syndrome [Horizonte21: Desenvolvimento da linguagem em bebés com Síndrome de Down]”. Poster

presented at 1º Encontro de Alunos Colégio Doutoral Mente-Cérebro da Universidade de Lisboa, University of Lisbon, Lisbon, Portugal, December 2, 2015.

E - Formação avançada

In progress - Barbara Leone-Fernandez, Post-Doc Researcher within the project Horizon 21 - Early language development in Down Syndrome [PTDC/MHC-LIN/3901/2014], Laboratório de Fonética, CLUL/FLUL. University of Lisbon/Fundação para a Ciência e Tecnologia. December 2016-December 2017. Supervisor: Sónia Frota (FLUL); Co-supervisor: Marina Vigário (FLUL).

In progress – Cátia Severino, Post-Doc Researcher within the project Horizon 21 - Early language development in Down Syndrome [PTDC/MHC-LIN/3901/2014], Laboratório de Fonética, CLUL/FLUL. University of Lisbon/Fundação para a Ciência e Tecnologia. May 2017-May 2018. Supervisor: Sónia Frota (FLUL); Co-supervisor: Marina Vigário (FLUL).

4. Indicadores de Realização Física

Neste quadro deve indicar os valores referentes ao período a que corresponde o Relatório de Progresso.

Neste quadro deve apenas indicar concretizações efectivas. Não indique publicações submetidas para publicação, nem teses que ainda não tenham sido discutidas.

Indicadores	Quantidade realizada
A - Publicações	
Livros	<input type="text" value="0"/>
Artigos em revistas internacionais	<input type="text" value="1"/>
Artigos em revistas nacionais	<input type="text" value="1"/>
B - Comunicações	
Comunicações em encontros científicos internacionais	<input type="text" value="5"/>
Comunicações em encontros científicos nacionais	<input type="text" value="5"/>
C - Relatórios	<input type="text" value="1"/>
D - Organização de seminários e conferências	<input type="text" value="2"/>
E - Formação avançada	
Teses de Doutoramento	<input type="text" value="0"/>
Teses de Mestrado	<input type="text" value="0"/>

Outras	<input type="text" value="0"/>
F - Modelos	<input type="text" value="0"/>
G - Aplicações computacionais	<input type="text" value="0"/>
H - Instalações piloto	<input type="text" value="0"/>
I - Protótipos laboratoriais	<input type="text" value="0"/>
J - Patentes	<input type="text" value="0"/>
L - Outros	
Database of early markers of language development	<input type="text" value="0"/>