FCT Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

Relatório de Progresso

[Relatório de Progresso Lacrado com Sucesso a 30-09-2019]

Formulário Relatório de Progresso - Componente Científica

Relatório de Progresso nº 1
Período a que o relatório diz respeito:

Data de início: 14-06-2018
Data de fim: 30-09-2019

1. Identificação do Projecto

Referência do Projecto: PTDC/LLT-LIN/29338/2017
Investigador Responsável: Sónia Marise de Campos Frota
Instituição Proponente: Faculdade de Letras da Universidade de Lisboa (FL/ULisboa)
Data de Início: 14-06-2018   **Data de Fim**: 13-06-2021
Financiamento Concedido: € 227.473,02

2. Resumo dos Trabalhos Desenvolvidos e Desvios à Proposta aprovada

The activities developed between June 2018 and September 2019 comprised the first 5 tasks of the project, with a focus on task 1, crucial for the data collection for tasks 3 to 5. The beginning of the project was prepared by meetings with the consultants Prof. Catherine Best and Dr. Miguel Palha. Meetings were held to achieve the collaboration of the Neurodevelopment unit of Hospital Santa Maria and the Center for the Study of the Baby and Child (Centro de Estudos do Bebé e da Criança) of Hospital D. Estefânia. Also crucial to the launching of the project was the acquisition of the new eye-tracking equipment, which arrived in November, 2018.
The project website was set up as a platform for knowledge dissemination, for the scientific community, professionals from the health and education sectors and the general public, and is available at http://labfon.letras.ulisboa.pt/babylab/PLOS/.
The project was 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://labfon.letras.ulisboa.pt/LabPhon16/sponsors.html). Prof. Catherine Best, consultant of the project, was an invited speaker at LabPhon16. Two foci of LabPhon16 were language development and language impairment, and the conference joined over 300 participants including representatives of companies developing products for the health and education sectors. NeuroD-WELL, the Workshop on Early Language in Neurodevelopmental Disorders (http://labfon.letras.ulisboa.pt/NeuroD-WELL/index.html), to be held on

November 8, 2019, is also co-organized by the project's team. NeuroD-WELL includes 9 oral talks, a poster session, and two keynote speakers. Some of the presentations, including one of the keynotes, address language development in infants and toddlers at risk for language and communication impairments. The workshop aims at bringing together researchers and practitioners working on language development and neurodevelopmental disorders, from a multidisciplinary perspective.

The project's team was also involved in advanced training, through the organization and participation in the Summer School on Experimental Methods STEM V, that had more than 20 registered participants in the different courses offered (http://labfon.letras.ulisboa.pt/summerschool/2019/index.html).

Beyond the project website and the organization of scientific meetings and advanced training activities, dissemination and outreach were also achieved through an invited talk directed to pediatricians, psychologists, speech therapists and other clinical professionals working on language development and language and communication impairments, and the presentation of the project in the Ciência 2018 – Encontro com a Ciência e Tecnologia meeting. Additional means of dissemination were the social media (Lisbon Baby Lab Facebook and Instagram). The research conducted in the Lisbon Baby Lab, and within the PLOs project, was featured on the news: a newspaper article in the daily newspaper O Público, the participation in the TV series As novas escolas (RTP), and an interview for the Facebook Channel Sáude.

The job positions planned within the project were not fulfilled during this period, given that the PhD researcher position could only start after May, 2019, as reported to FCT by the host institution. This required that several adjustments had to be made in the development of the scientific activities of the project and respective milestones (further details below). During the time span of this 1st report, the following deliverables were produced, namely 1 article and 1 conference paper published, 5 talks/posters presented at international and national meetings. These deliverables are according to outputs proposed in the application (and in fact outnumber the planned outputs). As planned, 1 paper was published in the scientific domains of RIS3.

A summary of the activities developed by task follows.

Task1
A recruitment procedure was established that includes the network of institutions collaborating with PLOs, the social media, and access to birth registries that was recently granted to the Lisbon Baby Lab. The latter will be available from November, 2019 (although the request was made well before the beginning of the project). Thus, recruitment will be ongoing during the second year of the project. Presently, 44 new participants have been tested, together with 103 participants in the PLOs-EBELa sample. Screening with the CDI and CSBS DP is ongoing, with 71 new forms already collected. Given that the researcher needed for the norming study could not be hired up to the moment, and negotiations with the publisher holding the copyrights for CSBS DP are ongoing, this milestone will be reached during the second year of the project.

Task2
Data collection is progressing. As soon as the human resources needed for this task are hired, the scoring programs and apps will start to be developed.

Task3
Data collection is proceeding in good pace, with 66 children already tested. A proceedings

paper has been published on the perception of prosodic boundaries by typically developing infants, using eye-tracking. These findings set the reference for the performance of at risk infants in this task.

Task4

Data collection is proceeding, with 11 infants tested. A paper on adults' processing of words has been published in Frontiers in Psychology. Adults are the control group for toddlers' performance, and this started to be analyzed for typically developing toddlers.

Task5

The language and communication abilities of the infants tested in the experimental tasks are measured at the moment the task is performed and at different subsequent points in time, following the waves defined in the flowcharts of the prospective longitudinal design. 74 CSBS DP, 38 CDI-I, 45 CDI-II and 141 DCQ forms have been collected, and 54 Griffiths administered (including the PLOs-EBELa sample).

Equipa de Investigação

Nome	Cargo Função	Tarefas	%Tempo	Dt Entrada	Dt Saída	Desistiu
Sónia Marise de Campos Frota	Inv. Responsável	Recruitment and early assessment of participants f(...) *** Tools for e-health: scoring programs and app for e(...) *** Looking while listening experimental tasks: sounds(...) *** ERP tasks *** Longitudinal assessment of language abilities *** Prospective evidence for predictors of language ou(...)	40%			
Joseph Butler	Investigador	Looking while listening experimental tasks: sounds(...) *** Prospective evidence for predictors of language ou(...)	25%			
Kai Alter	Investigador	ERP tasks *** Prospective evidence for predictors of language ou(...)	25%			
Marisa Alexandra Sousa da Cruz	Investigador	Looking while listening experimental tasks: sounds(...) *** Prospective evidence for predictors of language ou(...)	25%			
Marisa Gomes Filipe	Investigador	Recruitment and early assessment of participants f(...) *** Looking while listening experimental tasks: sounds(...) *** ERP tasks *** Longitudinal assessment of language abilities *** Prospective evidence for predictors of language ou(...)	30%			

Nuno Miguel Ribeiro Paulino	Investigador	Recruitment and early assessment of participants f(...) *** Longitudinal assessment of language abilities	25%				
Marina Cláudia Pereira Verga e Afonso Vigário	Co-investigador Responsável	Recruitment and early assessment of participants f(...) *** Tools for e-health: scoring programs and app for e(...) *** Looking while listening experimental tasks: sounds(...) *** ERP tasks *** Longitudinal assessment of language abilities *** Prospective evidence for predictors of language ou(...)	40%				
Claudia Rute de barros Viana Macarico bandeira de lima	Técnico	Recruitment and early assessment of participants f(...) *** Longitudinal assessment of language abilities	25%				
Sofia Lopes Clérigo	Técnico	Recruitment and early assessment of participants f(...) *** Longitudinal assessment of language abilities	20%				

3. Publicações

Outputs of the project available at http://labfon.letras.ulisboa.pt/babylab/PLOS/publicações.html

A - Publicações científicas

<u>Proceedings</u> (Contabilizado em 4. como ´Artigo em Revista Internacional´)

Published - Frota, S., Butler, J., Severino, C., Uysal, E., & Viga´rio, M. (2019). Infant perception of prosodic boundaries without the pause cue: an eye-tracking study. In S. Calhoun, P. Escudero, M. Tabain & P. Warren (Eds.), Proceedings of the 19th International Congress of Phonetic Sciences, Melbourne, Australia 2019 (pp. 3160-3164). Canberra, Australia: Australasian Speech Science and Technology Association Inc.

<u>Papers in international journals</u>

Submitted – Cruz, M., Butler, J., Severino, C., Filipe, M., & Frota, S. (submitted). Eyes or mouth? Exploring eye gaze patterns and their relation with early stress perception in European Portuguese. Submitted to the Special Collection Laboratory Approaches to Portuguese Phonology (Ed. by E. Albano & D. Demolin), Journal of Portuguese Linguistics.

Published - Silva, S., Vigário, M., Fernandez, B.L., Jerónimo, R., Alter, K., & Frota, S. (2019). The sense of sounds: Brain responses to phonotactic frequency, phonological grammar and lexical meaning. Frontiers in Psychology 10, 681, 28 March 2019. https://doi.org/10.3389/fpsyg.2019.00681 - [Publicação científica em domínios científicos enquadráveis na RIS3]

B – Comunicações

Talks em encontros científicos internacionais

Presented - Vigário, M., Butler, J., Severino, C., Uysal, E., & Frota, S. (2019). Infants discriminate utterances with and without internal prosodic boundaries: An eye-tracking study with delexicalized speech. Talk given at LCICD 2019 - The 4th Lancaster Conference on Infant and Early Child Development, August 21-23, Lancaster, UK.

Talks em encontros científicos nacionais

Accepted - Paulino, N., & Frota, S. (accepted). Measuring early development of language skills in infants and toddlers learning Portuguese and an Additional Language: Implications for language assessment in Bilinguals. Talk to be given at XXXV Encontro Nacional da Associação Portuguesa de Linguística, October 9-11, 2019, UMinho, Braga, Portugal.

Presented – Frota, S. (2019). Escuta bebé! Descobrir a língua antes da fala. Invited talk given at 2as Jornadas do Centro de Estudos do Bebé e da Criança do Hospital Dona Estefânia, May 20, Lisboa, Portugal.

Presented - Vigário, M., Severino, C., Cruz, M., Filipe, M., Butler, J., & Frota, S. (2018). Marcadores precoces de desenvolvimento da comunicação e linguagem. Talk given at Ciência 2018 – Encontro com a Ciência e Tecnologia, July 2-4, Lisboa, Portugal.

Posters em encontros científicos internacionais (Contabilizados em 4. como ´Comunicações em encontros científicos internacionais´)

Presented - Czeke, N., Zahner, K., Rimpler, J., Braun, B., & Frota, S. (2019). German infants do not discriminate Portuguese rising vs. falling contours. Poster presented at 4th Workshop on Infant Language Development (WILD), June 13-15, Potsdam, Germany.

Presented - Frota, S., Butler, J., Severino, C., Uysal, E., & Vigário, M. (2019). Infant perception of prosodic boundaries without the pause cue: An eye-tracking study. Poster presented at ICPhS 2019 – XIX Intenational Congress of Phonetic Sciences, August 4-10, Melbourne, Australia.

C – Relatórios

Relatório de Progresso 1 do Projeto PLOs (PTDC/LLT-LIN/29338/2017).

D – Organização de seminários e conferências

NeuroD_WELL - Workshop on Early Language in Neurodevelopmental Disorders, Lisbon, November 8, 2019.
http://labfon.letras.ulisboa.pt/NeuroD-WELL/index.html

LabPhon 16 - Variation, development and impairment: Between phonetics and phonology, University of Lisbon, June 19-23, 2018.
http://labfon.letras.ulisboa.pt/LabPhon16/index.html

E - Formação avançada

Teses de Doutoramento

Concluded - Vidal, M. M. (defense pending, September 2019). The influence of music in the development of phonetics, phonology and phonological awareness in 3-year-olds with typical development and 3- to 6-year-olds with speech and language disorder. PhD Thesis, Universidade de Lisboa (started 2014) [FCT: SFRH/BD/98841/2013]. Supervisor: Marina Vigário.

Ongoing – Paulino, N. (Ongoing). Effects of prosodic systems in bilingual acquisition of sandhi. PhD Thesis, Universidade de Lisboa (started February, 2019) [FCT: SFRH/BD/138535/2018]. Supervisor: Sónia Frota; Co-supervisors: Tjerk Hagemeijer and Laura Bosch.

N – Integração do conhecimento em atividades de formação superior

STEM V – Summer Training in Experimental Methods, September 2-7, 2019
http://labfon.letras.ulisboa.pt/summerschool/2019/index.html

4. Indicadores de Realização Física

Indicadores	Quantidade realizada
A - Publicações científicas	
51 - Publicações científicas em domínios científicos enquadráveis na RIS3	1
Livros ou capítulos de livros	
Artigos em revistas internacionais	1
Artigos em revistas nacionais	
B - Comunicações	
Comunicações em encontros científicos internacionais	3

Comunicações em encontros científicos nacionais	2
C - Relatórios	1
D - Organização de seminários e conferências	2
E - Formação avançada	
52 - Pedidos de patentes europeias (EPO)	
Teses de doutoramento	1
Teses de mestrado	
Outras	
F - Modelos	
G - Aplicações computacionais	
H - Instalações piloto	
I - Protótipos	
J - Produtos	
K - Produções/criações artísticas	
L - Processos inovadores	
M - Bases de dados curadas	
N - Integração do conhecimento em atividades de formação superior	1
O - Patentes	
Patentes EPO	
Outras patentes	