

Large scale experimentation of a serious game targeting oral comprehension in English as a second language for 6–8 year-olds: some lessons learned

· Abstract (99/100w):

Between 2018 and 2020, the Fluence project tested three learning apps with 700+ pupils for more than two years. The protocol neutralized the novelty effect by having concurrent apps targeting different skills administered to each group. In this symmetrical protocol, the test-group for app1 is the control group for app2 and vice-versa.

One of the three application of the Fluence project is Luciole an EFL learning game for 6-8 year-olds. The pupils using Luciole significantly improved their English oral comprehension (Mandin et al. 2021) compared to the other groups. In this communication we delve deeper in the explanation of the results.

· Description (301/300w):

In this communication we deliver a full assessment of the Luciole app within the scope of the Fluence project, which ended in 2022.

In the first part we motivate the design choices made (learning game, integrating a narrative, focused on oral comprehension) by positioning it in the acquisition theories it builds upon (VanPatten 2002), and the literature of serious games (Loiseau and Noûs 2022). These choices were also deeply rooted in the overall context of the study, both from the institutional standpoint — national instructions regarding language teaching for 6-8 year old pupils (MEN 2015) — and from the field's point of view — linguistic insecurity among some teachers who do not choose to teach a foreign language (Delasalle 2008).

In the second section we detail the experimental protocol, from the ecological conditions targeted by the project, to group repartition, without omitting the pre- and post- tests taking place at the end of each school year of the project.

In the third section, we explain our analysis drawn from three different data sources: 1) pre- and post- tests; 2) interaction traces collected by the application; and 3) in game auto-evaluation. The experiment showed a significant effect on oral comprehension in English and on phonological awareness. The pupils using Luciole in year 1 of the project and those using it in year 2 had significantly better results than those who did not. But the pupils who used it in both year 1 and year 2 did not fare better than the group who used it just during the second year. We cross the data from our 3 sources to explain these results in depth.

These analyses bring us to draw conclusions on the carrying out of large scale ecological studies, which will be taken into account in the Trans3 project that started in 2023.

· Biblio

Delasalle, Dominique. 2008. "Enseigner Une Langue à l'école : A-t-on Les Moyens de Relever Ce Défi Dans Le Contexte Actuel ?" *Études de Linguistique Appliquée* 3 (151): 373–83.

Loiseau, Mathieu, and Camille Noûs. 2022. "À La Recherche de l'attitude Ludique." In *Regards Sur Le Jeu En Didactique Des Langues et Des Cultures*, edited by Haydée Silva, 9:61–83. Champs Didactiques Plurilingues. Bruxelles, Belgique: Peter Lang Verlag. <https://doi.org/10.3726/b19412>.

Mandin, Sonia, Ahmed Zaher, Svetlana Meyer, Mathieu Loiseau, Gérard Bailly, Coralie Payre-Ficout, Julien Diard, Fluence-Group, and Sylviane Valdois. 2021. "Expérimentation à grande échelle d'applications pour tablettes pour favoriser l'apprentissage de la lecture et de l'anglais." In *Transformations dans le domaine des EIAH : innovations technologiques et d'usage(s)*. online. <https://hal.archives-ouvertes.fr/hal-03292798>.

MEN. 2015. "Programmes d'enseignement de l'école élémentaire et du collège." Bulletin officiel spécial 11. Paris: Ministère de l'Éducation Nationale. <http://www.education.gouv.fr/cid95812/au-bo-special-du-26-novembre-2015-programmes-d-enseignement-de-l-ecole-elementaire-et-du-college.html>.

VanPatten, Bill. 2002. "Processing Instruction: An Update." *Language Learning* 52 (4): 755–803. <https://doi.org/10.1111/1467-9922.00203>.