Effect of an EFL listening comprehension learning game on phonemic awareness in French
Émilie Charles, Émilie Magnat, Marie-Pierre Jouannaud, Coralie Payre-Ficout, Mathieu Loiseau

To cite this version:
Émilie Charles, Émilie Magnat, Marie-Pierre Jouannaud, Coralie Payre-Ficout, Mathieu Loiseau. Effect of an EFL listening comprehension learning game on phonemic awareness in French. ATFLY 2022 – Advances in Teaching Foreign Languages to Young Learners, Sep 2022, Wuppertal, Germany. hal-03865677

HAL Id: hal-03865677
https://hal.science/hal-03865677
Submitted on 22 Nov 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.
EFFECT OF AN EFL LEARNING GAME ON PHONEMIC AWARENESS

E. Charles1, E. Magnat2, M-P Jouannaud3, C. Payre-Ficout4, M. Loiseau1

1Univ Lyon, INSA Lyon, CNRS, LIRIS, UMR CNRS 5205, F-69621 Villeurbanne, France
2Université Lyon 2, 2CAR UMR 599 CNRS, France
3Université Paris 8, TransCrit EA 1569, France
4Université Grenoble Alpes, LIDILEM EA 609, France

coralie.payre-ficout@univ-grenoble-alpes.fr - mathieu.loiseau@liris.cnrs.fr
emilie.charles1@gmail.com - emilie.magnat@univ-lyon2.fr - marie-pierre.jouannaud@univ-paris8.fr

PHONOLOGICAL AWARENESS (PA)

"one’s ability to recognize, discriminate, and manipulate the sounds in one’s language" [1]

- crucial role in reading acquisition [2]

- explicit training proved beneficial [3]

- general linguistic meta-skill [2]

- development of phonological awareness in French

FINDINGS

- Luciole groups significantly better on listening comprehension task (p<0.05)
- No clear result on PA assessment tasks
- Need for standardized tests for PA

PERSPECTIVES

FOR LUCIOLE

- Increase synergy with curriculum
- Interaction with oral production in class

FOR LANGUAGE TEACHING

- May affect meta-cognitive skills
- Beneficial to take down some barriers

LUCIOLE, AN EFL LEARNING GAME ON TABLET

6-9-year-olds
- Listening comprehension
- English-speaking characters

IST EXPERIMENT

- development of phonological awareness in French
- effect on phonological awareness in French

NEW EXPERIMENT

- replication of previous results
- 2 versions of Luciole: original (Luc) and without explicit phonological training (Luc2)

PRE-TEST

Feb 22 - Mar 22
Collective, on tablet
45-60 minutes
3 tasks for Luciole:
- Listening comprehension
- Auditory discrimination
- Phoneme positioning

SPEECH-disguised auditory discrimination
- Raise complexity
- Hear item and choose right picture

LISTENING COMPREHENSION
- Hear token and choose right picture
- Raising complexity from 18 to 25 items

TEST TASKS

AUDITORY DISCRIMINATION
- Hear two tokens, decide if same or different
- Different speakers in post-test
- 6 to 8 items, French and English

PHONEME POSITIONING (PA)
- Position given phoneme in nonword
- 8 to 10 items, French and English

POST-TEST & TRACES

Apr 22 - May 22
22 sessions of 20 minutes per week
Used in autonomy

User traces collected
Indicators to be extracted

METHODOLOGY

43 classes (mean 6.5yo)
Luc1 n=82
Luc2 n=100
Control n=317

POST-TEST & TRACES

- Post-test: same format as pre-test
- User traces collected

<table>
<thead>
<tr>
<th>Time</th>
<th>Luciole</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 22</td>
<td>Luc1</td>
<td>Luc2</td>
</tr>
<tr>
<td>Mar 22</td>
<td>Luc1</td>
<td>Luc2</td>
</tr>
<tr>
<td>Apr 22</td>
<td>Luc1</td>
<td>Luc2</td>
</tr>
<tr>
<td>May 22</td>
<td>Luc1</td>
<td>Luc2</td>
</tr>
<tr>
<td>June 22</td>
<td>Luc1</td>
<td>Luc2</td>
</tr>
<tr>
<td>Sept 22</td>
<td>Luc1</td>
<td>Luc2</td>
</tr>
</tbody>
</table>

The authors are grateful to the ASLAN project (ANR-10-LABX-0081) of the Université de Lyon for its financial support within the French program "Investments for the Future" operated by the National Research Agency (ANR).
Luciole is an EFL listening comprehension learning game for 6–9-year-olds. Learners play the role of a French kid named Sasha recruited by a spy agency to help save animals. Sasha interacts mainly with native English-speaking people from all around the British Isles who either speak English or French with a strong foreign accent. Luciole offers different activities. Some target thematic lexicon, others train specific phonological aspects of English difficult to apprehend for French learners. A first experiment showed that children who played Luciole developed their listening comprehension in English but also improved their phonological awareness (PA) in French. A new experiment has been designed to try to replicate the previous results and to explore their origin.

PA is defined as “one’s ability to recognize, discriminate, and manipulate the sounds in one’s language, regardless of the size of the word unit that is the focus” (Anthony & Francis, 2005). PA, and specifically phonemic awareness, plays a crucial role in reading acquisition (Snow et al., 2001), and the beneficial impact of explicit instruction of PA for typically and atypically developing children is well known (Ehri et al., 2001; Zoubrinetzky et al., 2019). Furthermore, various authors defend the hypothesis that PA is not linked to a specific language but rather a general linguistic meta-skill (Comeau et al., 1999; Cummins, 1979).

Explicit phonological activities represent only about 5% of Luciole’s activities, raising the question of their relation to PA improvement. Thus, in this new experiment, pupils from 14 classes were either confronted with the current version of Luciole (7 classes; n=89) or with a version without explicit phonological training (7 classes; n=102). Pupils from 29 other classes (n=355) using another application served as an active control group. All 43 classes were tested in February 2022 on listening comprehension in English and PA in French and English, then they started to use the applications in class, for at least 22 sessions of 20 minutes spread from March to June 2022; post-tests are administered starting mid-June 2022. User traces are collected to refine our analyses.


