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EFFECT OF AN EFL LEARNING GAME ON PHONEMIC AWARENESS

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Development of Phonological Awareness.


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 (Luc1) and without explicit phonological training (Luc2)

PHONONOLOGICAL AWARENESS (PA)

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

Crucial role in reading acquisition [4]

Explicit training proved beneficial [3]

General linguistic meta-skill [2]


METHODOLOGY

43 classes (mean 6.5yo)

PRE-TEST
Feb 22
March 22
April 22
May 22
June 22

Luci n=82
Luc2 n=100
Control n=317

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

22 sessions of 20 minutes per week
Used in autonomy

PLAYING LUCIOLE

POST-TEST&TRACES

Post-test: same format as pre-test
User traces collected
Indicators to be extracted

TEST TASKS

LISTENING COMPREHENSION
Hear item and choose right picture
Raising complexity
18 to 25 items

AUDITORY DISCRIMINATION (PA)
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

FINDINGS

Luciole groups significantly better on listening comprehension task (p<0.05)
No clear result on PA assessment tasks
Time and means constraints (not enough items, collective test)
Need for standardized tests for PA
Control group skews results (encoding training)
New experiment to conduct with better control group

PERSPECTIVES

FOR LANGUAGE TEACHING
Increase synergy with curriculum
Interaction with oral production in class
May affect meta-cognitive skills
Beneficial to take down some barriers

FOR LUCIOLE
Interaction with oral production in class
Increase synergy with curriculum
May affect meta-cognitive skills
Beneficial to take down some barriers

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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 serve 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.