**Flashcard-based design and spaced repetition in Computer Aided Language Learning (CALL): a literature review**

**Abstract**

**Purpose** – This literature review’s purpose is to address the following questions: How does the design of a flashcard-based Computer Aided Language Learning (CALL) application affect a user’s ability to acquire and retain language? What effect does spaced repetition have on the acquisition and retention of language in CALL applications? What other learning techniques can be used with such CALL applications to increase the efficiency of language acquisition and retention?

**Methodology**

*Search and selection strategy*

Google Scholar and the University of Portsmouth’s library Discovery and catalogue search to find papers and books to get a rough feel and overview of the topic areas, journals and research.

Current systems that are in use were also searched for and these have been found by searching Google for the following keywords: language learning software, language learning apps, language learning applications, language learning programs. The first most relevant article for each keyword was taken and a list of 5 applications was created. This was done by eliminating apps that are paid for, as the artefact in development will be free, and also by putting those that are mentioned multiple times at the top of the list.

Keyword: language learning software

Article: The Best Language-Learning Software of 2018

URL: <https://uk.pcmag.com/education/8711/the-best-language-learning-software>

Date of search: 23/10/2018

Results:

Rosetta Stone Language Learning

Simon and Schuster Pimsleur Comprehensive

Rocket Languages

Fluenz

Living Language Platform

Babbel

Yabla

Duloingo

Transparent Language Online

**Findings**

**Research limitations**

**Practical implications**

**Introduction**

**Advantages and dis-advantages of flashcard-based interfaces**

**Flashcard design**

* *Note specifications for certain devices and operating systems*
* *Discuss any other design elements*

**Spaced repetition and the Leitner system**

* *Forgetting curve, Leitner algorithm*

**Spaced repetition algorithms**

* *Discuss the many different implementations of the SM2 algorithm and its flaws*
* *Discuss other algorithms*

**Conclusions**

**References**