Technical French Vocabulary for Electrical Engineers
A Resource for Second Language Acquisition

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Introduction

This project is intended to act as a tool for French language students seeking to expand their vocabulary to include concepts from electrical and computer engineering. Based on my research into current theories of second language acquisition (SLA), I designed this resource to be able to act as both a teaching tool and as a reference.

Objectives

- Research the theory and teaching methodologies of second language acquisition
- Obtain vocabulary needed to communicate electrical engineering concepts in French
- Apply findings to develop a resource for French language learners in electrical engineering

## Background

Second Language Acquisition

SLA relies heavily on input. In order for SLA to be successful, the learner must receive structured, comprehensible input in the language they are attempting to acquire. Common methods of making the input comprehensible include presenting it alongside its equivalent in the learner's native language and associating it with images corresponding to its meaning.

Electrical Engineering Vocabulary

This project is intended to help engineers learn the vocabulary necessary to communicate in a French-speaking setting. It required that I research previously-unfamiliar French vocabulary relating to electrical engineering concepts and terminology. These concepts included equations, units of measure, electrical components, and laboratory equipment.

Results

The design of this resource is based on my research into SLA. In order for SLA to be successful, the learner must be presented with comprehensible input in the language that they are trying to acquire. I accomplish this by presenting the vocabulary (in French) alongside one or several images depicting it. I found this approach particularly compelling since much of engineering vocabulary can be depicted with easily recognized symbols, graphs, or diagrams.
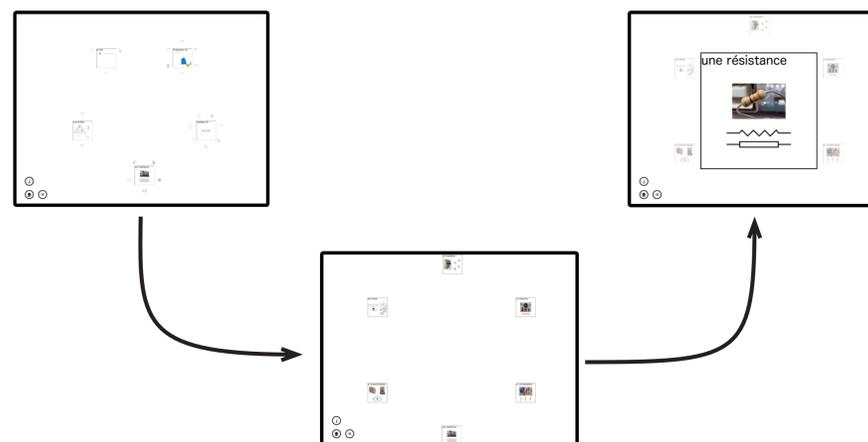

I chose to present the project in the form of a simple web application. This allows it to be easily accessed from anywhere on a variety of platforms. Additionally, it was designed to be usable on nearly any display size for mobile or desktop users.

By presenting this vocabulary in the form of a digital resource, I can easily group like terms for ease of navigation and can place terms in multiple related groups without needing to duplicate resources. Lastly, this format allows for easy expansion. Simply adding new entries on the server will make them available to all users.

Conclusion

This project provided me with an opportunity to study the theories of—and methodologies behind—second language acquisition. Additionally, it provided an opportunity to expand my French vocabulary to include key concepts in electrical engineering.

I intend this resource to be useful to students such as myself looking to expand their French-speaking abilities to an engineering context. It is designed to be easily expandable to allow continuous improvement.
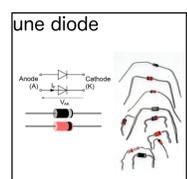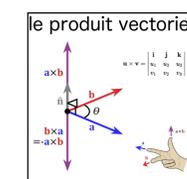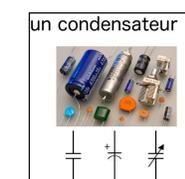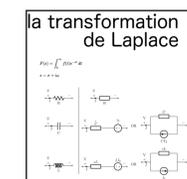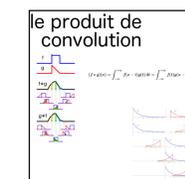
References

- Making Communicative Language Teaching Happen (2nd ed.) by James F. Lee and Bill VanPatten
- How Languages are Learned by Patsy M. Lightbown and Nina Spada

The Final Project

http://www.ece.iastate.edu/~cmhurst/