

# Online Dictionary APIs - Options and Thoughts

## Introduction

Originally from a conversation about dictionary service options with Justin in regards to the UIO+ work that we anticipate using for the SJRK platform as learner scaffolding, I'm pulling together some links from quick research I did.

This is not about the following scenarios:

- Browser plug-ins that allow dictionary lookups
- Browsers (like Chrome) that support dictionary lookups

This is about available online APIs for dictionary word definitions, and libraries that access them or make them easier to use.

## Wiktionary

Wiktionary supports the [standard MediaWiki API](#) - this basically lets you return page markup in a somewhat parseable format.

- Here is a gist snippet example of doing this: <https://gist.github.com/nichtich/674522>
- And some projects to make working with Wiktionary content more machine-readable:
  - <https://github.com/dkpro/dkpro-jwktl>
  - <https://github.com/Suyash458/WiktionaryParser>
  - <https://github.com/Patatruc/word-definition> (Javascript)

## Open Source Libraries / Dictionaries

- <https://wordnet.princeton.edu/>
  - An example of using it from Node: <http://progur.com/2016/12/how-to-use-wordnet-in-nodejs-applications.html>
  - Their list of related projects is worth perusing: <https://wordnet.princeton.edu/wordnet/related-projects/>
- <http://www.babelnet.org/>

## Commercial Services

Many dictionary API services exist, including from the well-known dictionary publishers. These are examples, not comprehensive:

- <https://developer.oxforddictionaries.com/>
- <https://www.dictionaryapi.com/>
- <https://www.wordsapi.com/> (based on wordnet)
- <https://www.collinsdictionary.com/api/>

## Non-English Dictionary Services

This needs filling out! Wiktionary has non-English versions available such as ([https://fr.wiktionary.org/wiki/Wiktionnaire:Page\\_d%E2%80%99accueil](https://fr.wiktionary.org/wiki/Wiktionnaire:Page_d%E2%80%99accueil)), but their quality is not certain.

## Thoughts for Implementation in UIO

- Define a standard format for dictionary entries - a JSON structure that converts to display HTML
- An integrator would need to wire up a preferred service returning that format
  - For the SJRK platform, we could create a Kettle-based dictionary datasource doing this as an example
  - It might be possible to implement an in-browser parser doing the same - not sure about how this might interact with same origin policies

## Working with Natural Language in Javascript

Some natural language libraries, like <https://github.com/NaturalNode/natural>, may have dictionary features.