**Multimedia Learning in Second Language Acquisition**

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“*People learn more deeply from words and pictures than from words alone*.” – Richard E. Mayer[[1]](#endnote-1)

**Abstract**: The study by Jan L. Plass and Linda C. Jones is focused on second language acquisition and the integration of multimedia resources. The models that framed the research of the study, were the *Interactionist Perspective* and Richard E. Mayer’s *Cognitive Theory of Multimedia Learning* (CTML).

**Interactionist Perspective**: Language learning strategy that is broken into three distinct phases:

1. Comprehensible Input: where input is made more understandable for learners through interaction with the target material.
2. Interaction: the use of helping aids (images, elaboration, simplification, providing definitions, etc.) to assist in comprehension.
3. Comprehensible output: output from learners that is modifiable through the identification of errors, and allowing modification of responses.

**Cognitive Theory of Multimedia Learning**: A cognitive theory based on three assumptions,

1. There are two separate channels for processing information, (Auditory & Visual)
2. There is a limit to each channel’s capacity,
3. Learning is an active process of: filtering information -> selecting information - > organizing information - > integrating the information.[[2]](#endnote-2)

**Introduction:** Plass and Jones outline the goals of communication as the ability to communicate ideas, maintain relationships and create discourse. Further to that, they break down communication further into two competencies.

1. Input competencies: listening & reading
2. Output competencies: speaking & writing

The study’s authors then delved into a number of historical approaches to second language acquisition. Some of the approaches discussed were the *Structural Approach*, the *Cognitive Approach*, the *Constructivist Perspective* and the *Sociocognitive Perspective*.

The researchers describe Second Language Acquisition as meaningful interaction in the target language where the focus is on communication. They go on to describe Second Language Acquisition with Multimedia as the use of pictures and words to aid in learning the second language. Plass and Jones’ model of choice for the execution of their research was the *Interactionist* Perspective (as described above).

**Interactionist Perspective Model:**

Input -> Apperperception -> Comprehension -> Intake -> Integration -> Output

**Detailed steps in the Interactionist Model:**

* **Input:** The material the learner is presented with.
* **Apperperception:** The process of selecting words and pictures to attain comprehension of the material. It is also known as “Noticing”.
* **Comprehension:** What can be apperperceived (noticed) without understanding the syntax of the language.
* **Intake:** The comprehended input that can be integrated into the learner’s linguistic system.
* **Integration/Output:** The point at which the learner is able to understand the material to a point where they can identify and correct their own errors.

What the researchers demonstrated next was how this model could be incorporated into Second Language Acquisition using Multimedia material.

 **Selecting Words Organizing Words**

Verbal Input Verbal/Text Base Verbal Model

 Apperperception -> Comprehension -> Intake -> Integration (Learner’s Linguistic System) -> Output

Pictoral Input Visual Image Base Visual Model

 **Selecting Images Organizing Images**

**Research Findings:**

Using the Interactionist Perspective along with Multimedia Principles for Second Language Acquisition, Plass and Jones’ research found that Picture annotation facilitated greater second language acquisition, than those with text annotations. Their research also found that text comprehension was better when both picture and text annotations were used. The best results were when text was used along with video.

**Limitations of Existing Research:**

The research concluded that because of the nature of Second Language Acquisition, it is difficult to conduct *Quantitative Research* in a natural communication environment. Of the studies Plass and Jones looked into, they found that there were poor results from studies that attempted Quantitative research. They also indicated that at the time of their study, there had not been many studies into large-scale multimedia or web-based applications.

**Future Directions for Research:**

Plass and Jones suggest that further research needs to be conducted to:

1. Find better ways to exploit the used of multimedia for second language acquisition, by:
	1. Enhancing comprehensible input,
	2. Facilitating meaningful interaction,
	3. Eliciting comprehension output.
2. Need to find a better way to measure language competency.
3. A need for stronger integration of second language acquisition research with CTML, and investigation principles found in the comprehension of scientific materials (in the context of second language acquisition).

**Personal Reflection on the Study:**

While the topic Plass and Jones chose is an excellent one, I believe they were limited by the technology and application that were available at the time of their research. In addition, all of the research in the study is from 2004 or earlier, and is all pre-YouTube[[3]](#endnote-3), which could have been an enormous benefit to their study, especially considering their research indicated that the use of text and video annotations were the most effective multimedia material for acquisition of a second language.

I agree with the research findings, that it is extremely difficult to quantify second language acquisition, since learning another language is neither linear, nor the same for every learner. Motivation for learning a second language has proven to be one of the biggest contributors to success, perhaps even moreso than access to suitable resources. (Kelsen, 2009 and Vesselinov, et al., 2012) That being said, with new online learning applications such as Duolingo (<http://www.duolingo.com>), Babbel (<https://uk.babbel.com> ) and Rosetta Stone (<http://www.rosettastone.com>) there are now numerous online second language programs that assign measurable data to a learner’s progress. In addition, now more than ever, multimedia tools are available to aid with second language acquisition. With easy access to the free online language programs listed above, there are tons of excellent videos posted online (French specific videos: <http://www.imagiers.net> & <http://www.jefrench.com> ), and thousands of traditional text and image based worksheets (<http://www.education.com> & <http://www.french-linguistics.co.uk/> ) all available for free.

**Personal experience teaching second language using multimedia materials.**

My personal experience with second language acquisition, echoes many of the researchers’ findings. While teaching French, I endeavor to always use visual aids in conjunction with text based materials, and have found that using both definitely improved the student’s acquisition of new language. My students have used flashcards, slide slow images, and student created drawings to reinforce and demonstrate their learning. I also try to integrate as much relevant video as possible, to accentuate the learning of the desired vocabulary. Songs are another fantastic way to help the students remember the material, especially for beginner or primary to intermediate-aged students. Once the students have a better handle on the basics of their language, it is very important that they are able to see how it can be used in a real life situation. As much as possible, I will try to recreate scenarios where they can demonstrate their learning through direct interaction with the material, such as role plays, virtual tours or presentation.

1. Retrieved from [www.learning-theories.com/cognitive-theory-of-multimedia-learning-mayer.html](http://www.learning-theories.com/cognitive-theory-of-multimedia-learning-mayer.html)

October 27, 2014 at 11:30am [↑](#endnote-ref-1)
2. Retrieved from [www.learning-theories.com/cognitive-theory-of-multimedia-learning-mayer.html](http://www.learning-theories.com/cognitive-theory-of-multimedia-learning-mayer.html)

October 27, 2014 at 11:30am [↑](#endnote-ref-2)
3. Retrieved from <http://en.wikipedia.org/wiki/YouTube> October 27, 2014 at 11:30am

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Vesselinov, R. O. U. M. E. N., & Grego, J. (2012). Duolingo Effectiveness Study. *City University of New York, USA*. [↑](#endnote-ref-3)