This presentation will offer a theoretical framework for educators who wish to employ the interactions of text and image in college classrooms in order for students to obtain and retain both foreign language fluency and cultural literacy. My own experience in teaching Japanese literature and art is the only basis for my ideas and proposals, though I will cite some research in the field of language acquisition as a springboard for my discussion. I will address the use of material objects of course, but my emphasis will be on the process of creating mental images of words, concepts, and cultures in the context of text-image interactions as students read literature and view art in the classroom.¹

Research has shown that incidental vocabulary acquisition, in which foreign language learners encounter new words and grammar in context in the process of reading, is more effective than intentional methods, such as rote memorization.² Furthermore,³ it has been demonstrated that glossing, particularly multimedia glossing, can be a tool to enhance retention of new vocabulary.⁴ When images, whether static or moving, represent to students previously unknown words encountered while reading, the brain is better able to retain the meaning and
pronunciation of those words (a process Allan Paivio calls “dual coding”).\textsuperscript{5} This can be complicated, however, when the target language has an opaque orthography that is itself visual, consisting of characters that can be considered images pointing to the concept or object which those characters signify.\textsuperscript{6}

Many Asian languages have such orthographies, and some are hybrid, in which characters (sometime called ideograms) appear alongside elements of a syllabary which are completely transparent, indicating only pronunciation. Japanese words, of course, can appear in either characters (\textit{kanji}) or the two phonetic syllabaries (\textit{hiragana} and \textit{katakana}), and can be simultaneously represented in two orthographies.

Diglossia and heteroglossia have long been key elements of Japanese poetic expression. \textit{Kakekotoba}, or pivot words, are one example.\textsuperscript{7} Layering and juxtaposition of words that are homophonous but divergent in meaning creates a crisis of cognition for readers which must be resolved through careful up-and-down reading and rereading to reach satisfactory interpretations of words and poems. Similarly, words whose pronunciations have little to do with the characters used for that word create a cognitive crisis for readers, as do words represented only in the phonetic orthography with no \textit{kanji} to hint at meaning. Diglossia and heteroglossia are not limited to pre-modern Japanese poetry, however. Complicating the process of reading as a path toward more profound and complex meaning in literary expression found new popularity among writers of the Meiji and Taishō periods, especially those of the \textit{genbun-itchi} movement in which the effort was made to unify two modes of expressing language (oral and written), leading to liberal play with words and their visual representation on the printed page.

\begin{itemize}
\item \textsuperscript{5} \textit{Imagery and verbal}
\item \textsuperscript{6} Slide #3.
\item \textsuperscript{7} Slide #4.
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Modes of representing words in the Japanese orthography in both poetry and modern fiction can be a case study for the uses of multimedia glossing as a vocabulary acquisition tool. It can also inform the interaction of texts and images as a teaching tool. I will argue that, though glossing words with images is an effective means of bolstering vocabulary retention, some modes of representation in Japanese literary expression can complicate this process. Furthermore, it is in the complication of this process of glossing and incidental vocabulary acquisition that deeper and more meaningful ways of acquiring language fluency and cultural literacy can be found.\(^8\)

Recently I had students read Shiga Naoya’s short story *Kinosaki nite*. In it, Shiga refers to a gathering of *yamame*.\(^9\)

Where there was a small deep pool as [the stream] bent around the foot of the mountain, many *yamame* were gathered.

*Yamame*, of course, are fish.\(^{10}\) However, the characters for *yamame* are “mountain” and “woman.” This was a junior-level class in which vocabulary and grammar are obtained through short fiction readings, and students are provided with text-only glosses of the readings. Hence, those who used their gloss were immediately aware that *yamame* was a fish and had nothing to do with women from the mountains. Those who had not done their homework were confused, or perhaps did not care. I had quickly re-read the story for the first time in many years shortly before the class, and had not fretted over the meaning of *yamame*, and had not taken the time to

\(^8\) Slide #5.
\(^9\) Slide #6.
\(^{10}\) Slide #7.
look the word up nor determine its meaning from context. Hence, in class, I was just like the students who had not done their homework.\textsuperscript{11} In my mind, I had associated yamame with Oharame, or women from mountain villages who descend to the city each day to sell vegetables, flowers, firewood, and other essentials. When a student sitting next to me Googled yamame, and came up with a picture of a fish, I experienced a crisis of cognition. My crisis was acute, since I was looked to as the authority on the matter of yamame, and expected to resolve the issue right then and there. As all good teachers do when they are not sure how to answer, I asked the students what they thought.\textsuperscript{12}

“It’s a fish,” said the student next to me as he turned his laptop to show the rest of the students what a yamame looks like. Meanwhile, I was re-reading the passage more closely.\textsuperscript{13} I then asked, “But how would you know it’s a fish if you didn’t have the gloss, or an image of yamame from the web?” No response from the students.

“Look at the kanji,” I said. Of course, there are no “fish” radicals in yamame. “So how do you know they’re fish, and not women from the mountains?” I asked. Nonplussed, the students simply stared back at me. “What’s modifying yamame?” “Takusan.” “Is takusan used to modify human beings?” “No.” And with that I was back in the driver’s seat and none of the students had any idea that their sensei hadn’t really done his homework.

Most of those students who consulted the gloss \textit{and} saw the image of the fish will likely retain the pronunciation and meaning of yamame, at least short term. The studies I cited earlier show this to be the case. Nevertheless, I posit that those, like me, who made assumptions about yamame that turned out to be incorrect, and were faced with a crisis of cognition resulting from

\footnotesize{\textsuperscript{11} Slide #8.}\textsuperscript{\textsuperscript{12} Slide #9.}\textsuperscript{\textsuperscript{13} Slide #10.}
mental images spurred by the kanji “yama” and “onna” conflicting with the image of a fish and who subsequently resolved that crisis through contextual clues, will likely retain the pronunciation and meaning of yamame much longer. I know I will never forget it, especially since I am talking about it again now. Furthermore, I propose that precisely because there was a crisis of cognition leading to cognitive negotiation between written language and images in the classroom setting that the correct understanding of yamame led not only to a cemented vocabulary gain, but also to a deeper understanding of Japanese language and culture.

This is why: Once the crisis was resolved and everybody understood yamame to be a fish, I took the opportunity to talk about why the characters “yama” and “onna” were chosen for a fish. We also talked about *ateji*, or phonetic equivalent characters—characters whose pronunciation are often inscrutable but whose imagistic value and nuanced relationship to the sign they signify make them both fascinating and frustrating to readers. These are especially common in plant and animal names.

We also discussed *genbun itchi*, the movement of the late 19th and early 20th centuries to unify vernacular and written languages. As writers became more aware of and concerned with the ways in which language was transcribed on the page and how printed words were related to spoken words and images, novelists such as Shiga Naoya, but especially Natsume Sōseki and Akutagawa Ryūnosuke, began to play with the semantic and imagistic possibilities of the Japanese orthographies, employing *ateji* liberally, creating diglossia through creative use of alternate or absurd readings for certain characters, and creating heteroglossia by introducing foreign words into their texts yet representing them in a number of different foreign and native

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14 Slide #11.
15 Slides #12-16.
16 Slide #17.
17 Slide #18.
orthographies. I argue that their “play” with orthography and image can be a starting point for an approach to text and image in the language and literature classroom.

To cite my own experience once again, the literati of the Edo period present another opportunity for understanding how creating crises of cognition in the classroom can lead to deeper understanding of languages and cultures. Whenever I introduce the writings of literati such as Hattori Nankaku, Gion Nankai, and Yosa Buson in my literature courses, I make it a point to also introduce their paintings. At first, I was surprised at student reactions. Literati painting (bunjinga, or nanga) was not what they had expected after reading the poetry and prose of these men. I quickly realized the reason for their disappointment in the paintings—they were experiencing a crisis of cognition in which the mental images evoked by the words on the page did not match the material images I presented to them. In other words, the object created in the interaction of the reading mind and the printed word (what I’ll call a mental image) conflicted with the material object (or visual image) placed before them in the classroom. The language they expressed and the visual images they created mediate for us as modern readers/viewers the experience, ideals, and ideas of the literati. And, yet, students routinely encounter a crisis of understanding as they attempt to reconcile their mental images of the literati experience (mediated by the words of the literati) with visual renderings of the literati experience (mediated by the paintings by the literati).

Eminent art historian Mimi Yiengpruksawan, writes of the dilemma of treating art objects in a “world of language.”

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18 Slide #19.
19 Slide #20.
The allure of the object in a world of language is the dilemma of the art historian. . . . For it is through words that our understanding of things gets even more complicated, inflected, and obscured as the processes of representation and seeing run their course.20

“The allure of the object is a problem precisely because we often conceive of art as material objects that can be discreetly defined, viewed, and appreciated without the mediation of words, which can ‘complicate, inflect, and obscure’ the visual image.”21 However, if we approach text and image as equal and equally mediating expressions of meaning, both to be “read” in the sense that both contain a grammar and vocabulary, and both to be “viewed” in the sense that both have the power to create mental images, then we can set the stage for a negotiation and resolution of cognitive crises.

If multimedia glossing, using text and image to relay pronunciation and meaning (dual coding), is better for helping the brain retain vocabulary, then I propose that forcing the brain to create those images itself, or negotiate among a number of competing mental and material images, during a crisis of cognition might be even more effective in cementing language gains. Furthermore, negotiation among text, mental image, and material image can lead not only to a resolution in which pronunciation and meaning is determined and retained—it can also provide students with a deeper, broader cultural context for understanding not only vocabulary but larger issues of linguistic signification, literary expression, and cultural production.22

As we introduce material culture in the classroom, let it coincide with and be in conflict with textual culture, creating for our students crises of cognition in which they must negotiate the

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22 Slide #21.
meaning of competing images, and images in competition with words. Such cognitive
negotiation in the interstices of language and image as it is represented in writing and material
objects can lead to more significant gains in language fluency and cultural literacy as it provides
students with the opportunity to not only learn new words but also new ways of reading and
seeing.