1. Introduction
According to Paran (1996) Goodman’s psycholinguistic model of reading comprehension has been the basic model used in L2 reading comprehension research. Lately this model seems to have gone out of fashion and has been replaced by comprehensive or integrative models that include both top-down and bottom-up processing abilities being equally important in reading comprehension (Brown, 2007 p. 358; Koda 2005). But are they really equally important or as the psycholinguistic model argues is top-down processing more important than bottom-up processes? Even though I feel that the integrated view of reading is probably the correct view I have decided to test which is more important for reading comprehension top-down or bottom-up processes. In this paper I will discuss a pilot study I set up to test the theory, the results of the pilot study and a discussion of the results.

2. Purpose
As the introduction to this paper explained the purpose of the pilot study is to research whether top-down or bottom-up processes, or respectively micro and macro skills, play a bigger role in a L2 reader’s comprehension of a given text. Because of a time and space constraint I decided to focus specifically on the micro-skill of decoding and macro-skill of using formal schema in comprehending L2 written text.

Even though there several reading assessment models to choose from such as: the psycholinguistic model, the metalinguistic model, schema model, and interactive model (Fitzgerald, 1995; Grabe 1991; Paran, 1996), for this pilot study’s assessment test I decided to base my assessment on the cognitive model found in McKenna and Stahl’s (2003, p. 23) and Koda (2005). The main reason I choose the cognitive model is because it incorporates the metalinguistic model, the schema model, and the interactive model and therefore allowed me to assess both micro and macro skills.

3. The Pilot Study
3.1 Focal group of learners
For this study two native Japanese speakers with similar backgrounds were chosen. I will use the synonyms Kei and Emi for the two of them. Both Kei and Emi share a great deal of similar background experience in their L2 English. Both are post graduate Japanese of about the same age living in Japan with EFL and ESL experience, studied abroad during their undergraduate studies and married native English speakers. One more important aspect of Kei and Emi is that both are highly literate in their L1 and enjoy reading.

Despite their similarities there are several key differences between the two participants dealing
with their L2 reading background and L1 reading preferences. First is the amount of reading they do in their L2. Kei has gone on to post-graduate studies in TESOL and therefore reads large amounts of academic English texts and regularly writes academic reports in English for her studies. The fact that she regularly has to write in English is important because several studies have shown a positive correlation between reading and writing ability (Grabe, 1991, p.394). Emi on the other hand is now a typical Japanese housewife and mother and has little time for reading in her L2. However, during her time as a student in America and before becoming a mother Emi reports that she enjoyed reading popular English fiction. Because of the differences between the two participants amount of L2 reading I theorized that Kei would be the more fluent of the two readers because of her current situation of having to read large amounts of English text under time constraints while Emi currently has little time to read in English and her past reading experience was more for leisure.

Besides the time spent on reading in their L2, another difference that is of a major concern for this study is the two participants’ background in their L1 reading. This is important for the study since it has been reported that there is some transfer of L1 reading skills over to the L2 reading (Fitzgerald, 1995; Koda, 2005). Kei states that she enjoys reading Japanese historical novels in her free time. Emi mostly reads essays by famous people in books and magazines. This difference allowed me to decide the type of text that I would use to assess their L2 reading comprehension for this pilot study.

3.2 Text Characteristics

The text chosen for the pilot study was taken out of Sakamoto and Naotsuka’s (1982) book titled Polite Fictions: Why Japanese and Americans Seem Rude to Each Other. The book is a compilation of short stories on Sakamoto’s, an American woman married to a Japanese man, experiences dealing with the differences in Japanese and American Cultures. I choose the text for several reasons. First the vocabulary used in the text was on par with both participants vocabulary knowledge. I was able to deduce this by first running the text through Nation’s range finder program, which can be found on his home page. The range finder indicated that 85% of the text was made up of West’s general service list’s first three thousand words. By eye I was able to determine that the remaining words where not above the first five thousand word-level and both participants indicated that they were familiar with them. Since Nation (2001) argues that a reader needs to know at least 95% of the words in a text to be able to read it without outside help I felt that this text was appropriate. Second, because of their similar backgrounds both participants had experience with cross cultural differences and therefore could bring some content schemata into play when reading the text. However, since I wanted to test to see if formal schema is more important for reading comprehension I chose this style of writing which is more similar to what Emi reads in her L1 and than what Kei reads on a regular basis.

3.3 Reading Mode

Two modes of reading where encouraged through the tasks that the participants had to perform. First was skimming and the second was basic comprehension.

3.4 Sub-Skills to be measured

Using Koda’s (2006) and McKenna and Stahl’s (2003) cognitive model I decided to measure the participants decoding ability, text-information building and situation-model construction. I decided to base the assessment of Kei’s and Emi’s on two of the components of the cognitive model for
several reasons. First, by testing their decoding skills I could find out if Kei really did have a higher 
L2 reading fluency than Emi. I chose the text-information building component because I needed to 
assess how well the two participants were able to comprehend the text based on their syntactic 
knowledge of the L2, again this was to make sure that both of the participants where about equal in 
language ability.

3.5 Comprehension Tasks

For the pilot study I used four types of tasks to assess the participants’ decoding ability and 
language comprehension. The comprehension tasks were made up of both text-explicit and 
text-implicit information. The first task the participants had to perform was a jigsaw task where they 
had to put the text back into its original order as fast as they could. I chose this task because it could 
test whether Emi was more sensitive to the rhetorical organization of essays than Kei. I theorized 
that if top-down processing was really the stronger than bottom-up processing Emi should be able 
reorder the text quickly based on her formal schema. The second task the participants had to perform 
was finding the grammatically incorrect sentences within text. This task was used to help to see 
which participant was better able to decode information and whether decoding was essential to a 
general understanding of the text. The third task was a cued recall task where Kei and Emi had to 
answer four questions about the content of the text with the answers all being made of explicit-text 
information. This task was used to check Emi and Kei’s general comprehension of the text itself. 
The fourth task was a text-implicit information task, also used to check the participants’ general 
comprehension, and consisted of the participants summarizing the author’s intended meaning. Even 
though it was not a task I placed one sentence in the text that had the words in the sentence 
misspelled in that the first and last letter of each word was correct but the letters in between where 
jumbled. For example:

Smemoties he wloud cmoe hmoe erlay and snped tmie by hlesmif in his room

I did this for several reasons. First, I wanted to see if they would notice the problem and if so, 
would it impede on their understanding of the text.

3.6 Rubric

When assessing Kei and Emi’s tasks I used speed and correctness as my two rubrics. I assessed 
speed by timing how long it took each participant to finish a task. For correctness of the cued recall 
and summary I allowed the participants to use either their L1 or L2 in answering. I did this because 
even though I knew that both participants are highly fluent in English and Koda (2005) explains if 
the objective of the study is to assess comprehension, having the learner respond in their L2 can 
affect the accuracy of the answer not because they did not understand the text but because of output 
proficiency problems (p. 248).

4. Pilot Study Results

The differences between Kei and Emi’s results were not extreme. Emi took one minute longer 
than Kei on reordering the text and both missed the order of just one of the paragraphs. In reverse 
Kei took about a minute longer to find the grammatically incorrect sentences but was able to get all 
of them correct while Emi was only able to correctly identify three of the four sentences. Once again 
there was a flip in time during the cued recall questions with Kei being a minute faster than Emi but
both participants were able to correctly answer all the questions. Both Emi and Kei were able to summarize the author’s main idea in about the same amount of time. Also, both participants said that they noticed the mixed up sentence instantly but where still able to read it and felt that it did not impend on their understanding of the text or the flow of their reading.

5. Discussion

I was a little surprised by the results of the pilot study. I had thought that Emi would have been able to reorder the text quicker than Kei and I had thought that both of them would have gotten the order perfectly correct. Also, I had thought Kei would have been quicker at finding the grammatically incorrect sentences than Emi because of her background in teaching English and the amount of time she spends reading texts. According to the idea of time on task she should have done better than Emi. From these results it would seem that the argument that both bottom-up and top-down processes are equally important in fluency and comprehending a L2 written text is correct.

This pilot study did have many problems though. First, to better test for fluency I should have put a time limit on each task instead of just timing each participant. Nation (2001) points out that time pressure is crucially in developing fluency and in retrospect I think that probably it also important for measuring fluency. A second problem was the number of participants and texts. If I had a large group of participants and used two kinds of text, so that each group was familiar with one type of text, like Carrell’s study (1987) cited by Fitzgerald (1995), then I might have been able to get more varied and precise results. If I was to do this study again I would also have a control group made up of either native English speakers or fluent non-native speakers who are familiar with both types of texts.

In conclusion based on this pilot study it seems that both top-down and bottom-up processing are necessary for reading comprehension. However, because of the many deficiencies of the study one cannot take it as concrete evidence and instead it should only be used as a jumping point for further studies into the matter.

References