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A CALL System to Help Students Practice and Develop Reasoning in  
Determining the Countability of English Nouns.

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## Thesis Abstract

DeCEN is a Computer Assisted Language Learning (CALL) system for helping English as a Second Language (ESL) students learn to determine the countability of English nouns. The countability of an English noun determines whether the noun needs number distinction or not. Determining the countability of English nouns is difficult for many Asian students. It is especially problematic for Japanese students because of the difference between what is countable in Japanese and in English.

The traditional way of teaching the countability system by categorizing nouns based on their features is not effective for ESL students because each category tends to include some exceptions (e.g. Food category is non-countable; "Potato" is countable.) and does not adequately explain why many nouns can be both countable and non-countable. Another problem is that it assumes that ESL students have the same view about nouns as native English speakers do, so it tends to ask questions, such as "is it specific?" "is it too small to count?," which are answered differently depending on their native languages.

A new model of the countability system was designed to help determine the countability of English nouns in context by classifying each use of a noun into one of four categories. The DeCEN system introduces students to the new model and, through exercises, helps students develop their own reasoning habits in determining countability by using the model. The program can provide help based on students' answers and chooses the next exercise based on their performance. Therefore the program functions as a tutor. DeCEN is a Java applet that can be used from anywhere via the Internet. Its skeletal version can be used as an authoring tool to create other tutors.

This thesis describes each stage of the project, provides details of the system, and concludes with the results of a formative evaluation of the system by actual ESL students.

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