

# Content-based elementary school English: Growing morning glories and soybeans

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## Reference data:

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As lower grade elementary school students in Japan spend a high percentage of their school life in study and projects for socio-environmental studies (*seikatsu*) classes (MEXT, 2008), the authors decided to focus on content from this subject to teach English. They introduce how they used content-based instruction (CBI) in English lessons for first graders (growing morning glories) and second graders (growing soybeans). Looking at student response to lessons, the results of a survey of parents regarding this approach, and the comments of homeroom teachers, the authors found the use of CBI to be effective and popular with students, teachers, and parents.

日本では英語イメージ教育環境にある小学校で内容中心教授法(CBI: Content-Based Instruction)を用いているが、それ以外の一般の小学校でもCBI英語教育を取り入れることは可能だろうか。著者らは、小学校低学年において生活科の学習が学校生活の大きな割合を占める(文部科学省 2008)ことに注目し、この教科の内容のCBI英語教育を構想している。本稿では、小学校1・2年生が生活科で学ぶ「朝顔の栽培」「大豆の栽培」のCBI英語授業実践を紹介した上で、授業での児童の様子、この試みに対する保護者へのアンケートの結果、学級担任のコメントから、CBIで行う児童英語教育について考える。

## Content-based instruction

Brinton, Snow, and Wesche (2003) define CBI as “the concurrent teaching of academic subject matter and second language skills” (p. 2). In content-based language teaching, “students get



‘two for one’—both content knowledge and increased language proficiency” (Larsen-Freeman, 2000, p. 142).

CBI has been supported by a number of Second Language Acquisition (SLA) theories (Butler, 2005). CBI motivates and satisfies children (Pinter, 2006). When children are exposed to content which has already been covered in Japanese, the input becomes more comprehensible, thus reducing the affective filter (Krashen & Terrell, 1995), or the level of anxiety felt in the English class. Also, through the conversation practiced in CBI, understanding of content can be deepened and productive language skills can be exercised with comprehensible output as the result (Swain, 1985).

Butler (2005), having observed various CBI classes in East Asia, notes that while interest in CBI is growing in EFL education, care needs to be taken in its implementation. According to Butler (2005) the effectiveness of CBI hinges on four factors: program setting and curriculum, special characteristics of teachers, special characteristics of learners, and availability of resources, all of which must be taken into account. This being done, a choice may be needed as to which of two CBI approaches is most appropriate in a given situation: a language-driven approach, which emphasizes the students’ language development more than content learning, or a content-driven approach, which emphasizes the students’ acquisition of content learning (Met, 1998).

In addition to such general considerations, in using CBI with children in an EFL situation such as Japan, the counsel of Paul (2005) that the use of songs and chants with actions motivates lower grade children, and aids in their retention and production of the target phrases and vocabulary, needs to be kept in mind in creating and choosing teaching materials and methods.

## Rationale

The literature on CBI is focused on immersion programs in which the students are engaged largely in academic learning in English, and in which the CBI is intended to help students succeed in the overall academic program. Could the principles of CBI also be applied to English instruction within a Japanese elementary school, where all subjects except the English class are taught in Japanese?

The authors used a language-driven approach to CBI in a Japanese elementary school using topics that students had covered in Japanese in their regular socio-environmental studies (*seikatsu*) classes. They focused on the following questions:

1. Will children understand the topic content in English?
2. How will children respond to CBI? Will children make efforts to speak English using this approach?
3. How will classroom teachers and parents respond to CBI?

## Teaching context

In the private elementary school where the authors teach, English classes are held for 40 minutes, twice a week. The four skills are introduced from the first grade; by the middle of the first year, students can write the upper and lower case letters, and are used to copying words. In the second grade, students read and copy simple sentences. For homework, they listen to and repeat chants, songs, and short patterned stories they have first learned at school. They are used to reproducing the English that they hear.

## First grade CBI project: Growing morning glories

Growing morning glories (*asagao*) is a hands-on learning experience common to virtually every first grader in Japan. In May,

just after the beginning of the school year, each first grader receives a large flowerpot and plants morning glory seeds in it. The students check and water the plants regularly. In the summer, the students take their flowerpots home. In the autumn, when the pods have dried, students harvest the seeds. The seeds are given to the next year's first graders, creating a tradition that continues year after year. Students keep a journal of this process, drawing pictures and recording observations in Japanese.

### Morning glories song

The authors first consulted with the homeroom teachers and received manuals in Japanese on growing morning glories and the previous year's students' illustrated Japanese journals of plant growth. They then arranged and presented this information through an English song with actions (see Table 1 and Appendix 1) and set it to a familiar tune, "London Bridge." Each of the three verses describes phases of the growing process.

Table 1. Morning glories song

1.	Morning glories, <i>asagao</i> , Pretty flowers, pretty flowers, Make holes. Plant the seeds. Water, sunshine, grow, grow, grow.
2.	Look, look, coming up, Coming up, coming up, Leaves, vines, grow, grow, grow. Leaves, vines, grow, grow, grow.

- |    |  |
|----|--|
| 3. | I see buds. I see flowers.<br>White and pink, purple and blue,<br>I see brown seeds. Pick, pick, pick.<br>Brown seeds, pick, pick, pick. |
|----|--|

### Teaching approach for grade one

The homeroom teacher guided the socio-environmental studies class long-term project of growing morning glories using Japanese. Following a slight lag, the authors introduced the relevant English using the CBI approach as in Figure 1.

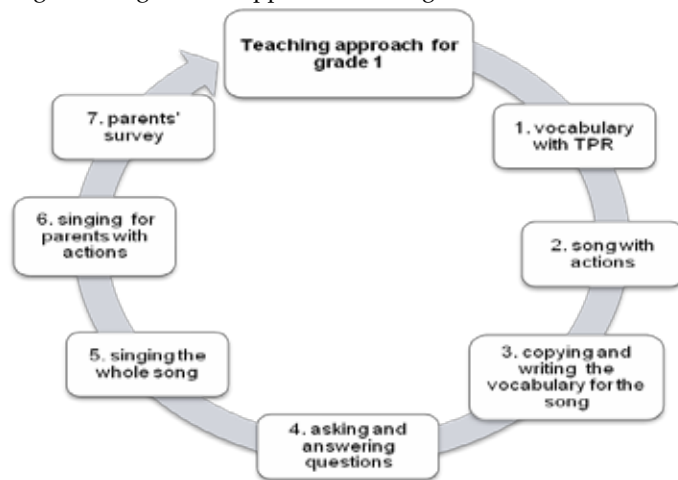


Figure 1. Teaching approach for growing morning glories

After seeds were planted and at various phases in the growing process, vocabulary from the song above was presented and practiced using Total Physical Response (TPR) (Asher,

1977). The morning glories song with actions was introduced, one verse at a time, as the seeds were planted and began to grow, and then as buds formed, flowers bloomed, and seeds were harvested. Students copied the key vocabulary items for each part of the process from the chalkboard onto an illustrated worksheet (see Appendix 2).

Students asked and answered questions regarding the morning glories (see Appendix 3). As the growing process, with its new leaves, buds, blooming flowers, and seed picking took place over much of the school year, there were repeated opportunities to practice conversation. Students shared the number and color of the flowers they observed on a given morning. Also, as the number of seeds picked increased with each lesson, students learned and used larger numbers.

Students sang all the verses of the song in class with actions or as they pointed in succession to the pictures and words on the worksheet they had colored. As the students gained confidence, they were then able to do this individually. At home, they taught their parents the song. Parents then completed a survey regarding this activity and CBI. Altogether, the students spent about three hours of class time on this project.

### Second grade CBI project: Growing soybeans

In the second grade socio-environmental studies classes in Japan, depending on the school they attend, students may grow soybeans, sunflowers, loofahs, or other plants. At the authors' school, soybeans are grown. Like the first graders' morning glories project, the soybeans project continues over most of the school year. Seeds are planted in May, and plants cared for at home over the summer. The soybeans are harvested in the autumn and taken back to school. In the winter, the beans are made into tofu.

### Growing soybeans chant and mini-book

The authors received from the homeroom teachers the Japanese manuals and the previous year's students' illustrated Japanese journals for growing soybeans, and then divided the growing process into fourteen stages. A chant with actions was created to communicate in simple English what happened at each stage. This chant then became the text for fourteen-page mini-books (see Table 2). Students copied the relevant phrase on each page, and added illustrations.

Table 2. Soybeans chant/mini-book

1.	Plant the seeds. Sunny place.
2.	Soil dry? Water.
3.	Plants grow. Leaves grow.
4.	Cut a little.
5.	Soil in. Fertilizer in.
6.	Purple flowers.
7.	Pods, pods.
8.	Yellow leaves.
9.	Leaves fall.
10.	Shake the beans.
11.	Cut the plants.
12.	Dry the plants.
13.	Pick the beans.
14.	Soybeans!

## Teaching approach for grade two

After the soybean seeds were planted, vocabulary and phrases necessary to describe the growing process were introduced using TPR and chanted together as a class (see Appendix 4). The authors introduced the growing soybeans CBI as in Figure 2.

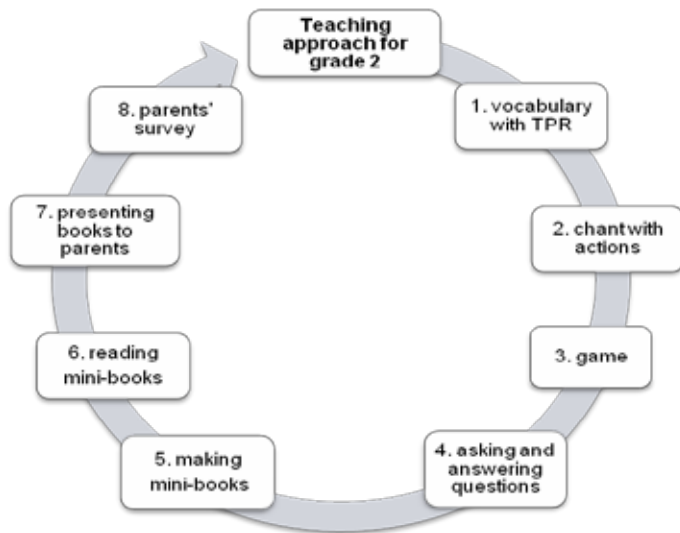


Figure 2. Teaching approach for growing soybeans

Students played the game “Simon says” (see Appendix 5), repeatedly using the vocabulary of the soybean growing process. Students asked and answered questions about their soybeans (see Appendix 6). They made “Growing soybeans” mini-books, copying and illustrating the expression for each of the fourteen steps in growing soybeans. They also wrote what soybean products they liked, for example, “I like *natto*/soy sauce/tofu.” The content of the journals was familiar to the students, as they

had already done this in Japanese. Students practiced reading completed mini-books in the classroom, their illustrations providing contextual hints for the difficult words. Students read their mini-books to their parents, who then completed a survey regarding this activity and CBI. Altogether, the students spent about two and a half hours of class time on this project.

## Survey analysis and results

### Content-based English learning parent survey results

The students took the survey home on December 18, and returned it to their homeroom teachers on December 22. Out of 161 surveys distributed, 136 (84.5%) were returned. The survey was conducted in Japanese and translated into English by the authors.

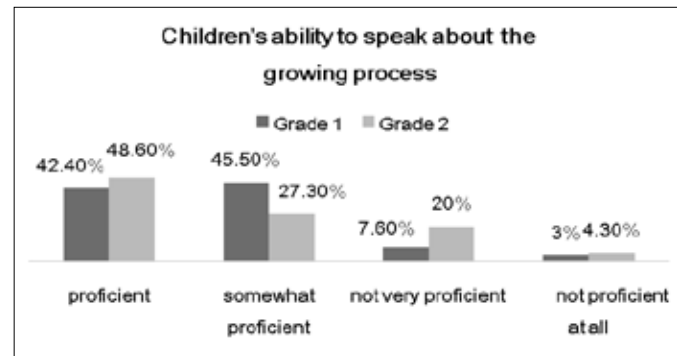


Figure 3. Parents' assessment of children's ability

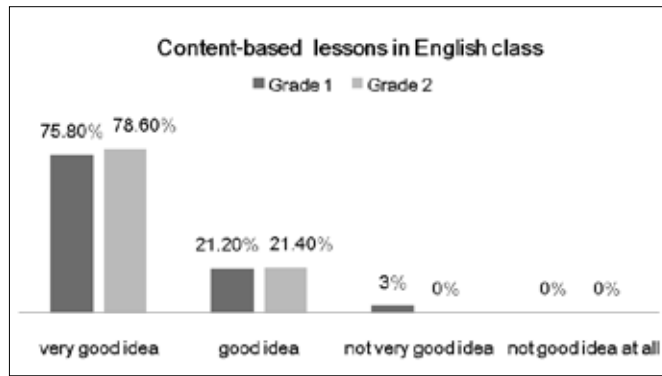


Figure 4. Parents' assessment of CBI

Many parents wrote in the part of the survey for opinions and comments regarding the project and CBI. The top eight responses are listed here in descending order, and the number of parents making each comment is in parentheses. There were no negative comments.

- (21) It is good to learn the same content in both Japanese and English.
- (20) My child could enjoy learning English.
- (20) Please do more content-based teaching.
- (12) My child gained the power to communicate something in English.
- (11) English felt familiar and safe.
- (10) As the content was familiar, it was easy to understand.
- (10) Our child could really communicate the information well.
- (10) I wished I could have learned this way when I was a child.

### Analysis of parents' survey responses

The results of the survey and the comments showed satisfaction with the projects as enjoyable, effective approaches for learning English, and desire for more similar CBI.

Being familiar with the content in Japanese helped the children and their parents as well to relax and use English. The parents had most likely grown morning glories when they were in the first grade, making this a chance to relive that experience with their children. Soybeans, an integral part of the Japanese food culture, are also familiar.

In grade one, 87.9% of the parents said that their child could speak in English about growing morning glories, and 75.9% of the second grade parents said that their child could explain the process of growing soybeans in English (see Figure 3). The lower percentage for the second graders could be due to the relative difficulty of the task. The second graders had to read a fourteen-page mini-book, and the time for class practice was limited compared with that of the first graders. Still, all of the second grade parents, and almost all of the first grade parents were positive about CBI (see Figure 4).

### Comments on CBI from teachers

Below is a summary of the comments of eleven elementary school teachers who had observed the CBI lessons in English. The number of responses is in parentheses.

- (4) I think it is very good to relate English to school subjects.
- (3) Learning what we are covering now in Japanese and English makes it easy for students to remember the English.
- (2) Children already know the content, so there is no need to explain in Japanese.
- (2) Learning in English what children have already studied and know gives confidence in English.

Not having to explain content that students have already learned in Japanese would seem to make teaching English much easier for the homeroom teachers. Also, giving the students confidence in English would make them more positive about using English.

### Observations and further comments on CBI

In the CBI projects described here, the authors took up high interest topics familiar to the students. These were introduced using songs, chants, games, illustrated worksheets, and student-created mini-books. This approach to CBI helped students to understand material in English in a limited time and with little anxiety, and to engage in short conversations on a common topic. Students showed enthusiasm, learned quickly, and were able to retain the language. When parents came to observe the CBI classes in January, they were impressed by their children's performance.

In general, English education in Japanese elementary schools can be said to lean towards what Cummins (1992) called Basic Interpersonal Communication Skills (BICS), necessary for daily conversation. He distinguishes this type of linguistic ability from another, Cognitive Academic Language Proficiency (CALP), necessary for academic work. According to our study, CBI can aid in the development of CALP, even in the lower elementary grades. As students advance in grade, the language learned can be recycled and expanded; in the authors' project for example, the next years' second graders would encounter the vocabulary of the growing process for a second time through the soybeans project.

CBI can be done using topics from various subjects and at any grade level if CBI English teaching materials are suited to the English level of the students. The authors also taught fifth and sixth grade public elementary school students using the CBI ap-

proach with topics already covered in the third and fourth grade social studies classes. The students had minimal background in English and the teaching time was limited, yet the lessons seemed to engage both the students and their homeroom teachers.

### Conclusion

The students, parents and homeroom teachers that the authors have worked with have been overwhelmingly positive concerning the value of using CBI as discussed in this paper. This response indicates a need to develop more CBI materials appropriate for Japanese elementary school students. There is also a need to support the homeroom teachers who will be required to teach English as a regular subject from 2011 in using the materials effectively. In the view of the authors, CBI holds much promise as an approach that can help Japanese elementary school students to learn English.

### Bio data

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## Appendix I: Morning glories song and actions

Morning glories song	Actions
1. Morning glories, <i>asagao</i> , Pretty flowers, pretty flowers, Make holes. Plant the seeds. Water, sunshine, grow, grow, grow.	Cup both hands in the shape of morning glory flowers. Make holes in "soil" using forefinger, and plant seeds in the holes. Water the plants; make a sun using both hands.
2. Look, look, coming up, Coming up, coming up, Leaves, vines, grow, grow, grow. Leaves, vines, grow, grow, grow.	Use fingers to show plants poking through the soil. Make leaves using both hands, and vines by twirling forefingers outwards in small circles.
3. I see buds. I see flowers. White and pink, purple and blue, I see brown seeds. Pick, pick, pick. Brown seeds, pick, pick, pick.	Make buds using the thumb and forefinger. Use forefinger as if pointing to flowers. Cup a hand like a dried seed pod, then pick seeds from the "pod."





## Appendix 2: Morning glories worksheet



**morning glories**



\_\_\_\_\_





**water** \_\_\_\_\_ **sunshine** \_\_\_\_\_


**seeds** \_\_\_\_\_ **holes** \_\_\_\_\_

**vines** \_\_\_\_\_



**leaves** \_\_\_\_\_

**buds** \_\_\_\_\_



**flowers** \_\_\_\_\_

**Name** \_\_\_\_\_

## Appendix 3: Conversations about morning glories

T: Teacher	S: Student
T: Do you like morning glories?	S: Yes. /No.
T: How many seeds did you plant?	S: Seven.
T: Did you water today?	S: Yes. /No.
T: Is this your flowerpot?	S: Yes. /No.
T: Which one is your flowerpot?	S: This one.
T: Did you see buds this morning?	S: Yes. /No.
T: How many buds did you see this morning?	S: Five.
T: Did you see flowers this morning?	S: Yes. /No.
T: How many flowers did you see this morning?	S: Four.
T: What color are your flowers?	S: White and pink.
T: Do you have blue/pink/red flowers?	S: Yes. /No.
T: How many seeds did you pick?	S: 70 /289 /300.

### Appendix 4: Soybeans chant with actions

Soybeans chant	Actions
1. Plant the seeds. Sunny place.	Plant the seeds in holes. Make sun with both hands.
2. Soil dry? Water.	Check the soil. Use watering motion.
3. Plants grow.  Leaves grow.	Slowly raise hands to simulate the plant growing. Open both hands to simulate growing leaves.
4. Cut a little.	Prune the plants using "scissors."
5. Soil in. Fertilizer in.	Add soil to the pot. Add fertilizer pellets to the soil.
6. Purple flowers.	Open hands to show blooming flowers.
7. Pods, pods.	Cup hands like pods hanging down.
8. Yellow leaves.	Use hands as leaves.
9. Leaves fall.	Hands flutter down like falling leaves.
10. Shake the beans.	Shake the plants, listening for the rattling of dry beans.
11. Cut the plants.	Cut plants off at base using scissors.
12. Dry the plants.	Hang plants to dry.
13. Pick the beans.	Pick the beans with thumb and forefinger.
14. Soybeans!	Show "handful" of beans.

### Appendix 5: "Simon says" game – growing soybeans version

#### *How to play "Simon says"*

The whole class stands up. Simon is a king who must be obeyed. What Simon says / does must be repeated and done by students. For example, the leader says, "Simon says, 'Water the soybeans.'" Students repeat, "Simon says 'Water the soybeans'" while doing the action. If the leader does not preface his command / statement with "Simon says," students must remain silent and motionless. If a student speaks or moves in this case, s/he must sit down (either for one turn, or for the rest of the game). If the game is played to the end, the last student(s) standing wins. In a large class, the game may be played for a few minutes at the beginning of a lesson, allowing the students to speak and act in unison, with the game aspect aiding in concentration and motivation. There is no need to finish the game.

## Appendix 6: Conversations about soybeans

T: Teacher	S: Student
T: Do you like soybeans?	S: Yes. /No.
T: How many seeds did you plant?	S: Seven.
T: Do you water every day?	S: Yes. /No.
T: What color are soybean flowers?	S: Purple.
T: Are the soybean flowers yellow?	S: Yes. /No.
T: Big flowers or small flowers?	S: Small flowers.
T: How many pods?	S: Many, many.
T: How many soybeans in a pod?	S: Two. / Three.
T: How many soybeans did you pick?	S: 50. /Many, many.
T: What do we make from soybeans?	S: Tofu / <i>miso</i> / <i>natto</i> / <i>kinako</i> ...
T: What soybean food do you like?	S: I like tofu / <i>miso</i> / <i>natto</i> ....