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Content-based instruction: A tale with two flavors

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Content-Based Instruction (CBI) is a powerful tool for improving a student's communicative competencies. It started with the pioneering immersion programs begun in Canada in the 1960s, and has evolved into a popular alternative to textbook-based, teacher-centered communicative language learning, especially in the field of ESP (English for Special Purposes). After a brief introduction to the theory and practice of CBI, we examine two separate styles for conducting CBI classes. The first style to be discussed will be a Practical English course designed around the topic of Global Climate Change. Second, a conversation class for science and technology students based on DVDs of classic science fiction movies will be presented.

内容中心教授法(CBI)は、学生のコミュニケーション能力を改善するための強力な道具である。CBIは1960年代にカナダのイマージョン教育に始まった。教科書中心かつ教師中心に行われていたコミュニケーションのための言語学習で、殊にESP(特殊目的のための英語)の分野で、CBIは人気のある代替手段に発展した。CBIの理論と実践に関する詳細な紹介に続いて、我々は2つの別々なCBIの授業の実施スタイルを検討する。始めに論じられるスタイルは、地球規模での気候変動を題材とする実践英語の授業である。2つめは科学技術を専攻する学生のための英会話の授業である。古典的SF映画のDVDに基づいた授業について論じられる。



or the past few decades, researchers and teachers have provided us with a variety of resources for changing our classrooms. One of these new instruction models is known as Content-based Communicative Instruction (CBI). CBI is a powerful tool for improving a student's communicative competence, as well as making the students' interactions more meaningful, and, in addition, it encourages the predominant use of the target language. "Immersion programs" (the earliest form of CBI) were "first established in 1965 in a suburb of Montreal, Canada" (Snow, 2001, p. 305). Soon after that it found favor

as a very popular model for ESL instruction in the United States. Recently it has been gaining increased popularity as a viable alternative to the standard-model for EFL classes in Japan.

CBI models can basically be classified into four separate and distinct types. (Snow, 2001). The first is termed the immersion model in which teachers use the target language for their whole lesson, and the entire school curriculum is carried out within the CBI framework. The second type is referred to as the sheltered course, in which teachers also use the target language, but the content is specially designed to allow for the learner's level of language acquisition. The third type is called the *adjunct model*, in which a qualified language teacher runs the language-learning portion of the class and a regular teacher delivers the content aspect of the class; of course, they both coordinate their activities. The fourth type is called the *theme-based course*, and it is this type that is most often utilized by EFL teachers in order to focus on an abundance of content material. There are several different strands that comprise the golden braid of theoretical background providing the rationale for using content-based instruction in the EFL/ESL classroom

Snow (2001) explicitly points to four major SLA theories that contribute to the background of CBI: (1) Krashen's input hypothesis (1984), (2) Swain's output hypothesis (1993), (3) Lantoff and Appel's explanation of Vigotsky's ZPD and inner speech (1994), and (4) Grabe and Stoller's explanation of cognitive psychology (1997).

A considerable number of the teachers who regularly employ content-based learning relish the conceit that they are not merely teaching discrete units of linguistic knowledge, but rather, that they are facilitating the emergence of higher levels of communicative competence. The definition that was given by Muranoi (2006) depicts communicative competence as a multifaceted concept, rather than a unitary one, and he includes language competence, cognitive ability, real-world knowledge, attitudes/values/ personality, and strategic competence within his continuum (p.169). With Muranoi's definition of communicative competence held firmly in mind, Stryker and Leaver's (1997) vision of communicative competence can add a further dimension to an already complex idea.

Many of today's foreign language teachers see our central role as facilitators of communicative competence in learners. This "new goal" is to empower students to become autonomous learners. This happens most effectively when we tap into students' needs and motivation, help students understand their own learning process, and allow them to take charge of their own learning from the very start. (Stryker & Leaver, 1997, p. 285)

Hence, content-based instructors are facilitating their students' acquisition of a deeper level of communicative competence and learner autonomy than those who merely focus on discrete grammar points and contextless vocabulary drills.

There are other rationales for CBI when it is used with a slightly different goal in mind. Brinton, Snow, and Wesche (2003) presented several explicit reasons for implementing a content-based curriculum in an ESL course at an American university where the students were adult ESL learners (p. 31):

- 1. All four skills can be taught through one topic.
- 2. The topics stimulate the interest of a variety of student types.
- 3. The class introduces learners to the issues that are directly related with their lives in the U.S.A.

CBI can thus stimulate the interest of students by letting them choose the themes, texts, and activities that are more appropriate to their individual situations.

As the above clearly shows, numerous researchers have identified a multitude of theoretical reasons for employing content-based instruction. CBI can provide meaningful interaction in the classroom and it fosters communicative competence. In the content-based classroom, a teacher helps the students to comprehend the underlying framework of the actual learning process. Since students are a part of the construction process, they become more autonomous in content-based classrooms. Once students become autonomous learners, their composite communicative competence self-organizes, and emerges synergistically from a dynamic process that they instigate themselves.

The next section of this paper delineates examples of authentic classroom experience. Akita Prefectural University was founded almost a decade ago as a science and technology university. Five years ago, not satisfied with the already high quality of our educational process, a systematic survey and needs analysis of the English education component was conducted to further improve the curriculum. The survey revealed the necessity for instigating several English for Specific Purposes or ESP classes. The survey results encouraged us to transform our teaching

syllabus into more content-focused one. By using CBI, we could alleviate some negative attitudes in the classroom. CBI added authenticity to the lessons and changed the students' goals from merely translating English to actually using English. This paper will elucidate the process we went through to create effective CBI courses.

Practical English: B's class

This Practical English class was a simple test preparation course in its initial iteration, and it used the Eiken Test Grade 2: Official Past Exam Paper Book with Advices 『英 検 2 級全問題集』 as the primary text. The students were asked to answer each question orally, and then they were given the answer to each question only once per class hour, so the students had no choice but to review the questions on their own for the final exam. The sentence arrangement was arbitrary in the book; therefore each sentence could not provide contextualized information. The Psycholinguist David Ausubel's Cognitive Theory of Learning contrasts rote and meaningful learning, stating that meaning only "...emerges when potentially meaningful signs, symbols, concepts, or propositions are related to and incorporated within a given individual's cognitive structure on a nonarbitrary and substantive basis" (Anderson & Ausubel, 1965, p. 8). Obviously, the students did not show any marked improvement over the semester, and the class was fairly monotonous at this stage, hence a strong need to change the classroom atmosphere was felt.

Therefore, the second iteration of the Practical English class morphed into a more activity-based mode. Short communicative activities were employed and the use of the test preparation book was gradually reduced. The interactive tasks brought the students into the learning process, and they seemed to become more engaged with the materials and to show more interest in participating. However, the students still had no chance to recycle the language in subsequent classes, as the material was not yet contextualized. The following activities were used during this second stage:

- 1. Board games (A *sugoroku* game, a teacher-created board game employing markers moving according to the roll of dice. Students are required to talk about whichever topic is written on the square. Its main purpose is to increase fluency.)
- 2. *Concentration* A card game that encourages vocabulary learning
- 3. Focused Group Discussions
- 4. Posters created by using VOA news items
- Listening to English songs and related 'Cloze' activities
- 6. Watching DVDs

Students enjoyed the activities much more that the test drills, but still complained that the class was too loosely connected. Actually, there was NO unifying theme or relationship between the activities and any ultimate goal for the class. That is when the need for a paradigm shift in perspective was ascertained.

Discovering Content-based Instruction was the key to that "Eureka" moment, enabling the third and most recent iteration of the Practical English class. It became Topicbased, and Global Climate Change was chosen as the central theme. Multiple activities were then arranged under that singular, overarching theme. The following materials and activities were employed:

- 1. Al Gore's An Inconvenient Truth (DVD)
- 2. The film script of An Inconvenient Truth
- Assigning out-of-class interviews of the college staff
- Visiting the library and using the Internet for research
- 5. Writing and rewriting various speech drafts, and preparing presentation materials
- 6. Making a group presentation to the class
- 7. Peer evaluation

The students were able to recycle their language throughout the entire semester as both input and output, thus reinforcing meaningful learning until it became acquisition. First, they were instructed to choose a topic that was directly related to global climate change on a small scale. As an example, one such topic was to find the total amount of electricity used by the university. Then they were instructed to conduct interviews to obtain additional information, analyze that data, and put the facts together to make a presentation.

The utilization of higher cognitive abilities for this process was very important because it engaged the students in creating a plan, then successfully carrying it out, and, finally, in reflecting on their own projects. The cyclic process from planning to analysis provided a perfect opportunity for the

students to experience a spiraling pattern of autonomous learning.

Ultimately the students generated many creative ideas for reducing CO₂. In their reflection journals, almost all of the students wrote thought-provoking comments about the importance of Global Climate Change to the future survival of the human race. Although they expressed their anxiety before making their presentations, all of the students did exceptionally well in their final performances.

Communicative English: S's conversation class

The goal was to create a more realistic conversation class, rather than employ the traditional textbooks that use a mishmash of disconnected artificial conversations based on the language of stereotyped situations with no continuity or context. This part of the paper will detail the reasons for selecting the particular movies as well as giving explicit details on classroom management and testing.

Background

The students at Akita Prefectural University all major in various fields of high technology, including such science-fiction-friendly fields as: Machine Intelligence, Robotics, Electrical Engineering, and Biotechnology. The semester is officially 15 weeks long, and the 30 classes are 90 minutes each, meeting twice a week. In reality, the semester usually entails 28 classes, thus lending itself to using three classic science fiction movies, each in eight sections, plus three tests, and an introductory class with an additional wrap-up session at the end. The goal of the class was not merely

to promote conversational fluency, but to also encourage two additional skills useful in pursuing a career in science: critical thinking and creativity.

There were several reasons for choosing the particular movies detailed below. First, recognized classics in the field were chosen for their artistic merit and for the fact that the students would not tire from repeated viewings. By choosing films whose storylines included robots, genetic engineering, Artificial Intelligence, and virtual reality, scientific vocabulary and concepts that would prove useful in the students' other classes were employed. The three movies all included multiple, overlapping themes that tied them together, as well as providing language with little topical slang, jargon, or profanity. The language all presented in a realistic, visually arresting context, and the popularity of the movies provided a much higher motivation than the traditional text-based conversation class.

Materials

The DVDs

Three complete movies are shown in the class. The first film is *Star Wars*, *Episode IV*, *A New Hope*; then *Blade Runner* — *The Final Cut*; and finally *The Matrix*. The origins of *Star Wars* can be directly traced back to the Flash Gordon cliff-hanger serials of the 1930s, the classic "Space Operas" of the pulp fiction era of science fiction, as well as the samurai movies of Akira Kurosawa, particularly *The Hidden Fortress* (隠し砦の三悪人, Kakushi toride no san akunin). The other major aspect of *Star Wars* that is discussed is the fact that the story is an example of what the comparative mythologist

Joseph Campbell (1949) calls "The Hero's Journey." Luke's Hero's Journey not only conforms to the mythic archetype described by Joseph Campbell in his classic *The Hero With A Thousand Faces* (1949) but also to Neo's transformation in *The Matrix*. In order to illustrate some of these antecedents during the introductory class Episode Five from *Flash Gordon Conquers the Universe* (1940) starring Larry "Buster" Crabbe is shown.

The second film to be viewed is the latest version of what many consider to be the finest science fiction movie ever made: Ridley Scott's *Blade Runner - the Final Cut*. This movie is a futuristic film noir adaptation of Philip K. Dick's science fiction masterpiece *Do Androids Dream of Electric Sheep* (1968). The major theme explored with this movie is the nature of being human, along with the sub-theme of the human/replicant love story. As a lead-in to *The Matrix* it is also mentioned how the movie was an inspiration for the Cyberpunk genre of modern science fiction literature.

The final film viewed by the class is *The Matrix*, though the most recent movie of the three, yet still ranking in most lists of the top ten SF movies ever made. Many of the ideas included in this movie were lifted directly from cyberpunk science fiction, most notably William Gibson's seminal science fiction masterpiece, *Neuromancer* (1984). The overall theme of this movie concerns the nature of reality and illusion, with the secondary strand of humans versus intelligent machines weaving its way through all three movies. A succinct overview of Campbell's Hero's Journey archetype mapped onto the characters and plot of both *Star Wars* and *The Matrix* is provided as a separate handout, so as to raise the student's awareness of the similarities in

structure between the two seemingly disparate movies. For the final class of the semester, after the final exam, a DVD called *Animatrix* – a group of nine Matrix-related anime written by the creators of *The Matrix* and each rendered in a different visual style, is shown in its entirety. This provides more background and context, as well as being a relaxing way to wind down the final conversation class.

The Texts

The Japanese company, Screenplay Publishing Company, Ltd., publishes the screenplays for a wide variety of films. These professionally prepared transcriptions serve as the text for both Star Wars and The Matrix. Not only do the texts provide the English script of the film, but also the facing pages give a Japanese translation along with vocabulary notes. Due to copyright restrictions, they are unable to publish the Blade Runner screenplay. Luckily, a fanproduced copy of the transcript of the original film (Blade Runner) could easily be downloaded from the Internet. This was used as the basis for the text provided to the students. An updated text rewritten to conform to the changes made by the director for the *Final Cut* with adapted transitional explanations of the action especially tailored for ESL students is currently used. Recently, a student located a Japanese translation of the script and this was also added to the transcript.

Handouts

This class utilizes a set of three related handouts for every section of the movie. First, a set of ten comprehension

questions is given out at the end of every class as homework. The students have to read and understand the scenes that they are going to view before they actually see them. On the reverse of that handout the discussion questions that will be dealt with at the end of the next class is included. That way students can preview the discussions and think about what they will say in class. The third handout is a four-question film quiz that is given to the students before they view the film, where they have to write the answers to the questions as they watch. The film quiz has a place for the students' names and numbers, and it is collected after going over the answers in class. The questions all relate to items that they view in the film, but are not mentioned in the text. The only purpose of the film quiz is to make sure that the students stay awake and pay attention during the presentation. They carry no weight towards the final grades.

Three modalities of classroom organization

This is a conversation class, but not in the traditional sense. First the students read and understand the dialog. They accomplish this through the homework, and the first third of the class is devoted to going over the answers in detail, and explaining various points of interest, culture, or philosophy. Next they view the film and listen to the conversations in the proper context. Each 12-15 minute section is shown twice, once with English subtitles and the second time with Japanese subtitles. The second viewing with Japanese subtitles is especially important for confirming their understanding of the story. *Blade Runner* is the darkest and most difficult of the three films, so the second viewing is even more crucial. Finally, the students have conversations

based on the discussion questions provided on the back of the homework. Because the discussion questions are provided on the back of the homework handout they have had a week to think about their answers. Thus the students are better able to discuss the themes of the movies and how they relate to their everyday lives.

Testing

Three tests are given during the semester, one after each of the movies. Bloom's Taxonomy is used as the basis for creating these tests. In 1956, Benjamin Bloom headed a group of educational psychologists in developing a classification system for the various areas of intellectual behavior important for learning: the Cognitive, the Affective and the Psychomotor domains. Six levels are identified within the cognitive realm, from simple Knowledge, i.e. rote memorization, as the lowest level, through increasingly more complex and abstract mental levels, to the highest order referred to as Evaluation. For the purpose of testing, the focus is on the lowest three levels of the Cognitive realm.

The first part of the test, the Knowledge Test, is based on the reading comprehension questions given to the students as homework. Next, the students have the Comprehension Test, which has the students applying their understanding to recognize such things as overall themes, and examples of key concepts. Finally there is the Application Test, which tests their creative and predictive powers. The students need to write a short essay predicting what would have happened if the plot of the movie had followed an alternative path. One of the keys to "freeing their minds" is to not require spelling or grammatical accuracy, and hence, the students are able

to devote their cognitive abilities to critical thinking and originality.

The final component is to test their actual conversational ability. While the majority of the students are occupied with the written portion of the test, a conversation test is given to the class, one pair at a time. One of the discussion questions from the class is used and the students need to talk to each other rather than to the teacher. Each pair of students is awarded the exact same conversation grade, an average based on their ability to discuss the concepts, contribute additional information, and defend their own viewpoints. This adds peer pressure to the mix and increases their motivation to excel.

Discussion

Some general patterns can be ascertained from the two examples of CBI-based classes. First, a detailed needs analysis is more important when designing a CBI class than for a traditional language class. The fact that the classes are more student-centered than teacher-centered makes this needs analysis essential. Also, considering that the entire semester will revolve around a central theme, an informed choice based on the needs analysis is crucial for a successful class. It must be of high interest to the teacher and the students, as well as having the possibility to provide multiple levels of comprehensible input.

Second, as can readily be seen from the details relating to the two different CBI classes, the teacher is required to put in a lot more thought, time, and energy than normal in order to create a properly balanced CBI class. Thus, switching from the traditional, off-the-shelf, commercial textbook-based English class to the highly customized, CBI-based class is not something a teacher should undertake lightly. Motivation is the key, not just the student's motivation, but also the teacher's. Rod Ellis (1985) puts it well when he states:

It is the need to get meaning across and the pleasure experienced when this is achieved that motivates SLA. These are views which are encouraging to the language teacher. Motivation that is dependent on the learner's learning goal is far less amenable to influence by the teacher than motivation that derives from a sense of academic or communicative success. In the case of the later, motivation can be developed by careful selection of learning tasks both to achieve the right level of complexity to create opportunities for success and to foster intrinsic interest (p. 119).

Thus one might be persuaded that the pedagogy directed towards CBI incorporates a range of factors that promote motivation in the classroom

Conclusion

Two completely different methodologies employed to create a Content-Based curriculum were presented in this paper. First, the gradual evolution of a Practical English class from a conventional class based on the context-less rote memorization of *Eiken* test questions, to a dynamic, student-centered class based on self-motivated research, analysis and presentation on the very pertinent topic of Global Climate Change. Secondly we looked at the unique design of

Conversation Class for technology students based on three classic science fiction movies.

In the Practical English Class students experience a holistic process from generating original ideas to creating unique presentations. The activities include cooperative learning, peer teaching, and peer evaluation. The students successfully gain an insight into the complex problems pertaining to Global Climate Change, and, at the same time, they are able to actively use the pertinent language in a meaningful context. During the first stage of the Practical English class when using an *Eiken* preparation textbook, communicative activities were not even remotely contemplated, and student's evaluation was also out of the question. In the second, activity-based stage, the students kept a study journal to record their reactions to the communicative activities. This feedback from the students' point of view showed the necessity of having thematic unity. Many practical comments helped to improve the Practical English class by pointing out where the teaching materials needed adjustment, and also that the time management needed more attention, as, at the end, there was just not enough time for the students to satisfactorily discuss the complex problems relating to Global Climate Change. Thus fine-tuning the level of the material and improving the time management seems to be the next goal for the Practical English class.

The CBI class based on the use of classic science fiction movies was a good alternative to the boring, contextless conversation classes normally being taught to science and technology students today. The key to developing a good CBI/DVD class was to first conduct a needs analysis of the

students in order to ensure the selection of an appropriate film. It was also important to balance the different modalities used to teach conversation in the classroom. Finally, using Bloom's taxonomy (1956) was proposed as the basis for creating tests that cover higher-level domains of cognitive activity. Further refinements of the discussion portion of the conversation class are ongoing based on student feedback and levels of language production.

It is not our proposal that anyone try to reproduce our exact classes, but rather we hope that these two different examples of ways to implement a Content-Based curriculum will provide inspiration and a pattern to guide others in creating classes tailored to their own students exact needs rather than accept the easy, off-the-shelf, lowest-commondenominator solutions provided by commercial textbooks. Teaching can be an Art as well as a Science, and CBI can be another powerful tool to enhance both motivation and creativity.

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