

Applying Content-Based Instruction to Extensive Reading Class

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Abstract

This study aims to testify whether CBI can be helpful for the ESL learners in the English classroom. It has been conducted in an ordinary middle school in Baotou City, Inner Mongolia, China. The samples are 111 students from No. 8 Middle School. They are randomly selected from two classes in grade senior 2. The study lasts 18 weeks, during which 18 copies of texts based on the content knowledge of other subjects in the curriculum have been selected and applied as extensive reading materials. For each copy corresponding tasks and activities are designed by the researcher. The conclusions indicate that the teachers involved in the study hold positive attitudes towards the CBI and the participants think this approaches have inspiring effect on their English learning.

Key words: Content-based instruction; English learning; Second language teaching

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INTRODUCTION

Content-based instruction refers to an approach to second language teaching in which teaching is organized around the content or information that students will acquire, rather than around a linguistic or other type of syllabus (Richards, 2001, p.204). This approach has been popular since the late 1970s. In a CBI classroom, the target is not grammar or some other items focusing on language but

content, language is a vehicle to carry the meaningful information.

There are many well-known and successful CBI programs abroad, such as “Immersion (Bilingual) Education” in Canada and United States; “Immigrant On-Arrival Programs” and “Programs for Students with Limited English Proficiency (SLEP)” in Australia; “Language for Specific Purpose” developed in Britain; etc. In modern times, we still can see the significance of CBI. To help American students improve their language competency, the U.S. Department of Education and the American Council on the Teaching of Foreign Languages designed and published Standards for Foreign Language Learning in the 21st Century (Lu, 2001) which identifies five goal areas in foreign language education, i.e., Communication, Cultures, Connections, Comparisons and Communities. Among the 5C, connection means English education connects with other disciplines and acquire information, and the relative standard is that “students reinforce and further their knowledge of other disciplines through the foreign language”. Directed by the standards, the foreign language classroom emphasizes the content from other subjects, the language teachers are encouraged to select some interesting and challenging topics for students to search for the relative materials and about which the discussions can be held.

However, the native researchers think at present we can’t fulfill the critical requirements for carrying on CBI (Cai, 2002). English teaching in China is mostly isolated from other courses in elementary school and secondary school, which directly leads to a problem: when the students step into the college, they are found incapable of understanding the academic literature even though the students who have passed CET-4 or 6 (Wang, 1994). Although we have got in touch with inter-disciplinary idea in our new standards, there is no such practice in the English classroom presently. Anyhow, some bilingual

schools have been set up in some developed cities and south of China. In these schools certain percent of the subject matters are taught in English in order to increase the students' exposure to English. It's hoped that the students can gain subject knowledge while developing their English ability, which is so called "two birds with one stone". But few experts hold positive attitude towards bilingual education in China, because many problems undoubtedly exist in those bilingual classrooms, among which teachers' shortage of training in English proficiency and the appropriate teaching material is the basic (Zhang, 2002).

So it occurred to me that it's a compromise proposal to introduce some content knowledge from other subjects into English class. Students can improve their English through grasping the information based on other subjects. That's exactly what this research does. The following address made by Widdowson makes me feel more confident about this research:

I would argue, then, that a foreign language can be associated with those areas of use which are represented by the other subjects on the school curriculum and that this not only helps to ensure the link with reality and the pupil's own experience but also provides us with the most certain means we have of teaching the language as communication, as use, rather than simply as usage.

— Widdowson (1978, p.16, from Jack. C. Richard p.205)

1. EXPERIMENTAL DESIGN

1.1 Concept of CBI in This study

As what has been mentioned just now, we are in lack of professionally trained teachers and appropriate teaching materials for bilingual education at present. Therefore, it's more practical to introduce content knowledge based on certain other subjects into English class. So the concept of CBI in this research refers to a kind of instruction applying content-based materials to extensive reading class, and the content of those materials is mainly related to students' background knowledge of physics, chemistry, geography, biology, mathematics and PE. When they are asked to read the text and to deal with the tasks and activities, they are supposed to activate the relative prior knowledge in their schemata, which will be helpful for them to understand the reading.

1.2 Significance of the Study

This study is of great significance for English teaching. Firstly, since the purpose of this study is to test the feasibility and efficiency of applying the reading materials based on the knowledge from other content in the curriculum, it is groping a way to bridge English teaching and other subjects learning, which follows the trend of cross-discipline. Secondly, during the practice of these content-based materials, teachers need to apply the subject

knowledge besides English in the curriculum, so do the students. That would advocate the all-round development of both teachers and students, which fits in with their future development. Thirdly, CBI has been proved fairly effective, as we all know, in many programs abroad. This study attempts to test whether it can be helpful for Chinese middle school students to grasp English. Should the result be positive, a new teaching method would be at hand.

1.3 Participants

The participants involved in the study are 111 students in No. 8 Middle School in Baotou, Inner Mongolia. It's an ordinary but not a key school, so it has the qualification of representative and the result of the study has universal significance. Their grade is senior 2.

Comparatively, the students in senior 2 have learned much knowledge of other subjects than those in senior 1 so as to help them understand the applied content-based materials better, also they have less pressure on study for the entrance examination than senior 3 students, so it's easier and more practical for both teachers and students to find some time to carry on this study.

Furthermore, one of the sub-questions of this study is to test whether students preferring science have different level of interest in these content-based materials from those preferring literature, and it's true that more students get to be partial to certain subjects when they enter senior high school, some are more in favor of natural science while the others like social culture better, so the conclusion can be more significant if the study chooses senior students to participate in this study.

1.4 Research Questions

The main research question is "How can CBI in this study influence participants' English learning"? Three sub-questions related are addressed as the following:

(a) Compared with the usual reading passages, can these content-based reading materials be more desirable for the participants?

This question seeks for the information whether the participants are interested in this instruction and they would accept it. Interest can be the best teacher, keeping students' high interest is the crucial element of successful learning.

(b) What do they think they have gained through this practice?

The solution to this question can from another perspective show the reason why the participants prefer to CBI and how CBI works.

(c) Do the participants' attitudes towards CBI have anything to do with their partial preference to scientific or literal subjects?

The purpose of providing this question is to find out whether CBI will have different effect on different students who either prefer scientific or literal subjects.

1.5 Applied CBI Reading Materials

These applied content-based reading materials are crucial in this study, their authenticity and comprehensibility can have direct effect on participants' interests and also the reliability of the research conclusion. In terms of the helpful suggestions offered by Brinton(1989, p.89) on content-based texts selection, totally 18 copies of materials are selected and well-prepared, which are respectively based on the content knowledge of geography, history, physics, biology, literature and poetry, and PE. Among them 11 are selected from "Bilingual Textbooks with Diagrams for Secondary School" (Brian, 2001), for the detailed topics of the reading passages please see Appendix 1, also the sources of the rest passages. These applied materials are authentic, which implies that these materials are used in native-language instruction (Richards, 2001, p.215).

The selection and application of the materials are flexible to meet participants' needs. In the course of the study, participants' reflective opinions such as the degree of difficulty, their interest in topics, the types of tasks and activities, and so on are continuously collected in order to revise the materials if necessary. According to Nunan (1991, p.224), teachers should consider 11 points to make the materials appropriate to learners' needs and interests. Also Penny (1996, p.148) listed ten elements is related to efficient and inefficient reading, which can be a criterion for the material refinement in this process. So these applied materials are not only *authentic* but also *comprehensible* to participants, both of which are the requirements for applied materials according to Richards (2001, p.215).

The design of the corresponding reading tasks and activities is a challenging and time-consuming job, in which the guidelines of "testing reading" (Arthur, 2002, pp.116-133) have been referenced. Since the CBI classroom should focus on real communication and the exchange of information, finishing the tasks and activities in groups will be an ideal situation, so the tasks and activities are presented in various forms, including Jigsaw activity, talking to professor (Brinton, p.151), peer interview, and discussion, etc..

1.6 Data Collection Instruments and Procedure

During the study period of over 4 months, three instruments have been employed to collect data concerning the participants' and teachers' opinions towards the applied content-based reading materials and participants' learning behaviors in extensive reading classes. The data collection instruments are briefly summarized below.

1.6.1 Interval Interviews to the Participants and Teachers

As the study going on, once a month the teachers and participants are interviewed to tell their reflections to the materials, for instance whether the topics of these reading materials and activities are well received, and whether the

degree of difficulty is acceptable, etc.. Their opinions help me to select and revise the materials whenever necessary to meet the participants' needs.

1.6.2 Question Sheets for Participants

At the end of the study, question sheets are handed out to the participants. The purpose of it is to explore how the participants like the applied reading materials compared with the usual ones; and whether they will welcome the content which are based on other subjects; and whether the science-preferred participants and literature-preferred ones have different thoughts and feelings towards the materials, and so on.

1.6.3 Final Interview Sheet for the Teachers

At the end of the study, two teachers involved in the study are interviewed. They are asked to express their opinions about these materials; about the application of the content based on other subjects; their views about cross-discipline; and so on.

CONCLUSION

The conclusion of the study shows the solutions to the pre-set research questions, and also the opinion of the two teachers involved in the study.

A. The Solution to 1st Sub-Question

The 1st sub-question is raised as: "Compared with the former usually reading passages, can these content-based reading materials be more desirable for the participants?". In the answer sheets for participants, an item was designed to deal with this question. According to the statistical data, among the 111 participants, 48 chose "preferring applied materials to usual ones"; 32 chose "see no difference"; and only 17 chose "preferring usual materials to these content-based ones". So those materials based on the content knowledge of geography, history and physics have been received well.

When being interrogated about the challenge of dealing with the content-based reading materials, over half of the participants (54.1%) thought the applied materials were somehow difficult for them to finish, and 44.1% thought the main cause was the vocabulary problem. One further question for the participants was "If more content-based reading materials are to be added in your English class, which subject knowledge does you want them based on?". The statistical results based on the participants' answers were as the following:

Table 1
Statistical Result About the Subjects on Which Participants Preferred the Content of the Materials Were Based

Preferred subject	Number of participants	Preferred subject	Number of participants
Physics	21	Biology	25
Chemistry	20	Literature, poetry	62
History	54	Mathematics	16
Geography	47		

B. The Solution to 2nd Sub-Question

The 2nd sub question is raised as: “What do the participants think they’ve gained through practicing these content-based materials?”. The statistical result of it is as the following Table shows:

Table 2
Statistical Result About What Gains Participants Reflected to Get From the Reading

What participants gain	Numbers of participants
knowing many new words	57
expanding the knowledge	69
developing the interest in English	38
other gains	48
no gains	5

As for “other gains”, participants give some examples to illustrate, here are some representatives: “To express the subject knowledge in English is so interesting, I can’t stop reading before getting to the end”; “These kind of materials can establish links among different subject knowledge, which is certainly helpful for us to learn the knowledge by heart”; “This is a good way to integrate science and literature knowledge, which will do us good to our college study”.

C. The Solution to 3rd Sub-Question

The 3rd sub-question is raised as: “Do participants’ attitudes to these content-based materials have anything to do with their preference to literal or scientific subjects?”.

The statistics indicate that no obvious relationship can be seen between participants’ preference to these applied materials and their partiality to literal or scientific subjects. These applied reading materials mainly based on scientific subject knowledge will not have any side effect on the students who are partial to literature.

D. The Solution to the Main Research Question

Based on these solutions to the three sub-questions, the answer to the main research question at last comes into being: CBI in this study proves to have positive effect on English learners’ study. Most of the participants welcome CBI and prefer these content-based reading materials to those former usual ones. And they think they have gained much through the practice, either in the promotion of their interest in English or the enlargement of their content knowledge. And the statistical result shows that there isn’t any relationship between participants’ attitudes towards applied content-based reading materials and their partial preference to literal or scientific subjects, so CBI will not have any side effect on those students who prefer literature if the applied teaching material is related to scientific subject content.

Closing slogan: “Every teacher, an English teacher”
As early as in the mid-1970s, British governmental commission recommended a proposal for native-

language education, out of which grew the Language across the Curriculum movement. This movement had influenced L2 instructional theory and practice. The report of the commission recommended that language skills should be taught in the content subjects and not left exclusively for the English teacher to deal with. This report influenced American education as well, and the slogan “Every teacher, an English teacher” became familiar to every teacher. Although this cross-disciplinary proposal hadn’t any impact on classroom, the need for collaboration between language teachers and other subjects’ teachers was emphasized, and the curricular material integrating science, math, and language study was produced. It can be expected to see CBI continue as one of the leading curricular approaches in language teaching.

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APPENDIX: TITLES AND THE SOURCES OF THE APPLIED READING MATERIAL

Eleven of them are from “Bilingual Textbooks with Diagrams for Secondary School” (Brian Arnold, 2001):

- a) Solar System
- b) Earth and Space
- c) Potential Energy and Kinetic Energy
- d) Convection
- e) Mass, Weight and Density
- f) Inertia
- g) Moment
- h) Current and Circuit
- i) Magnetism
- j) Pressure
- k). Acceleration

Other 7 copies:

Two copies are from *English for Specific Purpose— A learning-centered approach* (Tom Hutchinson and Alan Waters, 1987); one copy from *Making the most of your Textbook* (Neville Grant, 1987, p.30); one copy from the journal *English world*; one copy from Internet (www.enhanted learning.com/subjects/dinosaurs); two copies from Ediger & Alexander’s (1989) *Reading for Meaning: Skills Development for Active Reading*. The titles of the texts are respectively the following:

- a) Australia and Mexico
- b) Galileo, Astronomer and Physicist
- c) Pumping System
- d) Dinosaur
- e) How Relief Rainfall Occurs
- f) The Man’s Problem
- g) November Events