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## Implementing the CSILE/KB Program of University of Toronto in English Teaching in China

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### Abstract

This paper first proposes that aims of English teaching should go beyond communicative competence according to Bloom's taxonomy. Then it mainly analyzes that teaching English as a foreign language in China can learn from CSILE/KB Program of University of Toronto in terms of goal setting, active roles of thinking scaffolding and comprehensive English competence acquirement. To bring TEFL to a new stage, the integration of TEFL with KB and MOOCS is put forward and some suggestions are made in the end.

**Key words:** CSILE/KB; TELF; MOOCS; Integration

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### INTRODUCTION

There are many theories concerning the goal of TEFL due to differences of theoretical foundations. Researchers study it from psychological, cognitive and many other perspectives but most of them have adopted linguistic perspective. Actually different theories do not contradict with each other and the lack of integration is the common problem.

With the progress of information technology, the environment of TEFL has been improved to an unprecedented level. However there has not been corresponding improvement in students' language competency. Therefore how can the computer and the Internet be best used in language learning remains a great concern for educators and experts. A new theory and practice is in great demand now in this field.

CSILE/KB Program of University of Toronto, which has lasted for 30 years promotes more than innovative software and platforms, it introduced a new concept, a promising approach and a fresh model in the knowledge society. The theory of KB "encompasses the foundational learning, sub skills and socio-cognitive dynamics pursued in other approaches, along with the additional benefit of movement along the trajectory to mature education." ([http://en.wikipedia.org/wiki/Knowledge\\_building](http://en.wikipedia.org/wiki/Knowledge_building))

This paper mainly analyzes that teaching English as a foreign language in China can learn from CSILE/KB Program of University of Toronto in terms of goal setting, active roles of thinking scaffolding and comprehensive English competence acquirement. To bring TEFL to a new stage, the integration of TEFL with KB and MOOCS is put forward and some suggestions are made in the end.

### 1. AIMS OF ENGLISH TEACHING IN A BROADER SENSE

Generally, the ultimate aim of TEFL is for the students to be able to communicate effectively in English. This has been accepted since communicative competence was advanced by Canale & Swain in 1980. Linguistic competence, sociolinguistic competence, discourse competence and strategic competence are basic components in the aspect of language. But English teaching as an essential part of education, the goals should go beyond language itself. In order to be successful in the 21st century, they need to be educated as individuals who

not only have ability of effective communication but also have incentive thinking as well as the spirit of team work and cooperation and etc.

Many people believe that Bloom's taxonomy is a source of inspiration for educational philosophy and for developing new teaching strategies whose goal is to motivate educators to create a more holistic form of education. It divides educational objectives into three "domains": cognitive, affective, and psychomotor. Judging from Bloom's classification, the goals of English teaching are incomplete. The popular communicative competence in English is mainly a part of Bloom's cognitive domain which includes six levels moving through the lowest order processes to the highest: knowledge comprehension, application, analysis, synthesis and evaluation. The first three levels are given priority, but we know that higher thinking ability is essential for human being's survival and development in modern society. An overall cognitive objective would be contributing to the student's personal, intellectual and professional growth.

Bloom's affective domain describes the way people react emotionally and their ability to feel other living things' pain or joy. Affective objectives typically target the awareness and growth in attitudes, emotion, and feelings. A large number of such objectives in the literature expressed as interests, attitudes, appreciations, values, and emotional sets or biases. Affective factors are considered decisive in language learning since they will greatly influence the learners' motivation but rarely listed as goals of teaching.

There is an urgent need for English teaching to extend its boundary facing the new challenges in the new century. Combing the effective foreign language teaching and learning principles and approaches with newly developed theories, practices and technology can promote English education to a better level.

In light of challenge of knowledge-creating civilization in the 21<sup>st</sup> century, traditional educational practice—as well as its emphasis on knowledge transmission—as well as the newer constructivist methods both appear to be limited in scope. The fundamental task of education is to enculturate youth into this knowledge-creating civilization and to help them find a place in it. (Scardamalia & Bereiter, 2006) More powerful theories of knowledge and expertise are needed to move education and training beyond existing best practices. The Knowledge Building theory from CSILE/KB Program is one of such practical theories which can meet the needs of modern time created and developed by Carl Bereiter and Marlene Scardamalia, from which TEFL can draw new ideas and approaches.

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## 2. CSILE/KB PROGRAM

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**Terms in CSILE/KB Program:** CSILE/KB Program is the short form for computer-supported intentional learning environments conducted by Marlene Scardamalia and Carl

Bereiter in University of Toronto. Knowledge Building (KB) is the core word in the program. It was created and developed for describing what a community of learners needs to accomplish in order to create knowledge. KB refers to the process of creating new cognitive artifacts as a result of common goals, group discussions, and synthesis of ideas. These pursuits should advance the current understanding of individuals within a group, at a level beyond their initial knowledge level. A Knowledge Building Community (KBC) is a community in which the primary goal is knowledge creation rather than the construction of specific products or the completion of tasks. This notion is fundamental in Knowledge Building theory. If knowledge is not realized for a community then we do not have knowledge building. Examples of KBCs are classrooms, academic research teams, modern management companies, modern business R&D groups KBC and Knowledge Building International (KBI).

**Principles:** CSILE/KB Program is guided by Knowledge Building principles which act as a system to facilitate development of knowledge building communities. The principles were established under socio-cognitive dynamics and have technological dynamics in support.

Zhang and Chen (2012) categorized the twelve principles of Knowledge Building into 3 types: principles of ideas, principles of community and principles of Knowledge Building approaches. In the process of KB, the characteristics of ideas are real and authentic, and diversified and meanwhile they are improvable so as to be risen above. Through a sustained improvement of ideas and understanding, members of KB create higher level concepts.

Principles of Knowledge Building provide teachers with fundamental guidance in teaching process while they can still bring creative elements in reality.

**Software:** CSILE is the educational software designed to help and support knowledge building communities first appeared in 1983, which considered the first networked system designed for collaborative learning. The new version of CSILE was renamed Knowledge Forum (KF) and has been used in educational technology since 1996. KF was designed to offer technical support for Knowledge Building theory helping knowledge building communities. It provides students and teachers with a unique collaborative space in which to share ideas and data, organize course materials, analyze research results, discuss texts, and cite reference material. ([http://en.wikipedia.org/wiki/Knowledge\\_Forum](http://en.wikipedia.org/wiki/Knowledge_Forum))

The product is now used in a large variety of social contexts in 19 countries in the Americas, Europe, Asia, Australia and New Zealand. The next generation of knowledge-building environments such as Knowledge Space Visualizer (KSV) and Knowledge Building Discourse Explorer (KBDeX) are in design.

### 3. IMPLEMENTING THE CSILE/KB PROGRAM IN ENGLISH TEACHING IN CHINA

Considering the previous research on KB in China which was mainly conducted in the introduction of the its theories, models, practices and technologies and the current projects mainly focused on science teaching in elementary and secondary schools, higher education concerning TEFL with Knowledge Building in China is in demand now.

Although there is not much research concerning KB in the field of TEFL, this research holds the view that it can apply equally, or better, to TEFL.

#### 3.1 Giving Priority to Affective Goal in TEFL

There are many theories regarding the important role of affect in learning a foreign language. The affective approach manifested itself in methods such as Community Language Learning and Suggestopedia. A strong proponent of humanism in language teaching, Stevick (1980) argued that "...language learning success depends less on materials, techniques and linguistic analyses, and more on what goes on inside and between the people in the classroom."

A series of interventions conducted by Moskowitz (1981; 1999) with high school second and foreign language students reported positive correlations between the use of humanistic exercises and students' attitudes towards language learning, their classmates, and themselves. Results of questionnaires administered to the teachers in this study also showed improved attitudes toward their classes and enhanced self-concept and self-awareness.

One of the most valuable and groundbreaking lessons TEFL or any other areas in society can draw from KB pedagogy is that people are motivated to contribute ideas and get them improved by others in an appropriate environment, which is extremely beneficial to the society as well as the individual.

"The driving force is not so much the individual interests of children as their desire to connect with what is most dynamic and meaningful in the surrounding society" (Scardamalia & Bereiter, 2006). Curiosity alone is not sufficient to motivate sustained effort in mastering a foreign language. Longer-term goals are needed in the learning process.

Besides motivation, sense of responsibility is given priority in KB which TEFL should take into consideration. The theory of Knowledge Building highlights the collective cognitive responsibility and it can be further developed into social responsibility which is critical to the survival of modern human being. In KBC, students are encouraged to take responsibility for their own and one another learning. Everybody participates and is a legitimate contributor to knowledge. A goal for

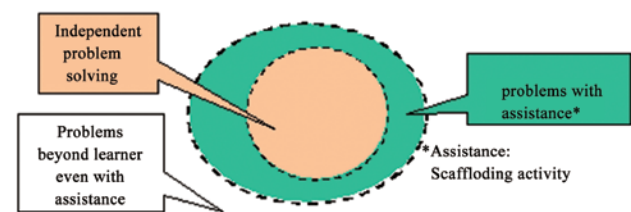
Knowledge Building communities is to have individuals and organizations actively working to provide a reciprocal advance of their knowledge. All members, including the teacher, sustain inquiry as a natural approach to support their understanding. Students take responsibility not only for meeting learning objectives set by the teacher but for managing the long-term acquisition of knowledge and competencies.

In the Chinese tradition, the individual's eternal source of driving force comes from society. The most cherished core value of Chinese is that the self-realization is conducted by means of contributing to the benefits of family, community, nation and the whole human being. Cultivating the comprehensive quality of 21<sup>st</sup> century global citizen is essential goal in education at any level, at any time especially in our modern challenging society.

In KBC students can easily reduce anxiety by wording alone freely beforehand and get motivated and excited by sharing, commenting and rise above afterwards. KB model can provide students with most mentally comfortable environment for learning and creating.

#### 3.2 Adopting Active Roles of Thinking Scaffolding in KF

People tend to go to an extreme in education. In teacher-centered approach there is too much guidance and help from teachers while student-centered one is to leave everything to students, which may lead to inefficiency due to neglecting the roles of teachers. The solution is to identify on which level they are and how much help they need in the specific learning process and problem solving process. In school, students gradually learn to solve some problems independently, but most of the time they face new problems with outside assistance. The scope of circles changes as one receives more education as we can see from the below picture.



**Figure 1**  
Students in Different Stages of Problem Solving

Scaffolding is the support given during the learning process which is tailored to the needs of the student with the intention to help the student achieve his/her learning goals. Instructional scaffolding is a golden means to balance the two extremes. Scaffolded instruction is the systematic sequencing of prompted content, materials, tasks and teacher's support to optimize learning and teaching. It is regarded as a learning process designed to promote a deeper level of learning. The support can take many forms such as outlines, recommended documents, storyboards, or key questions.

These supports are gradually removed as students develop autonomous learning strategies, thus promoting their own cognitive, affective and psychomotor learning skills and knowledge. Teachers help the students master a task or a concept by providing support.

Technical scaffolding is a newer approach in which computers replace the teachers as the experts or guides, and students can be guided with web links, online tutorials, or help pages. Educational software can help students follow a clear structure and allows students to plan properly.

From foreign language learning perspective, ESL students are particularly dependent on scaffolding which usually includes oral scaffolding undertaken by the teacher and visual scaffolding which provides image of what the teacher is describing or the key words that the teacher is explaining, which not only serves to make the input considerably more comprehensible, but serves to remove the affective filter which results from the fear or boredom that comes of understanding very little in class.

Cognitively, KF provides students with deep thinking prompts. It was originally designed to provide procedural facilitation (Scardamalia & Bereiter, 1983) for fostering expertise in writing, and were titled thinking types. The following uses of Knowledge Forum scaffolds represent the real goals underlying their design:

(a) Scaffolds give ideas defined roles in such processes as theory refinement (e.g., this theory cannot explain...) and constructive criticism. The opportunistic rather than mandated use of scaffold supports helps students embed these forms of discourse in their everyday work with ideas. As Pontecorvo (1993) states "forms of discourse become forms of thinking." (b) The supports contained within any particular scaffold can be used opportunistically and flexibly in any order. Once selected the term is entered into the main body of the text, at the point assigned by the author. The scaffold support then additionally serves as a searchable parameter.

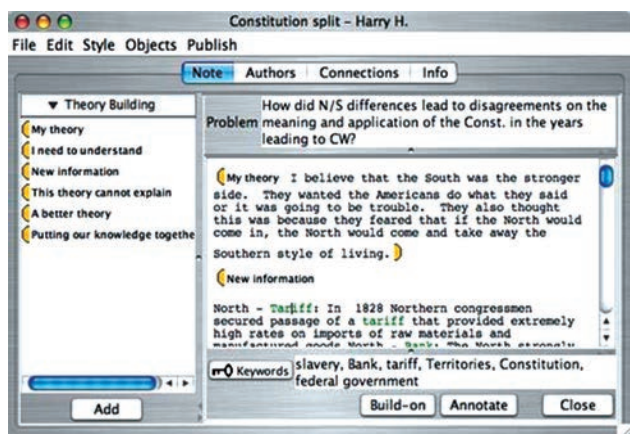


Figure 2 Scaffolding in KF (<http://www.knowledgeforum.com/Kforum/products.htm>)

From the above picture, we can see learners can develop the discourse based on 6 aspects of the frame of thinking. Given a topic, students are often at loss as where to start, these scaffolds serve as a map for discovering what they want to know.

CHEN Ying-ping (2008) summarized the features of the KF as language learning model, and how it works. The platform as language learning model constructed with KF has the properties as follows:

- (a) Learner-centered environment;
- (b) Interactive and cooperative communication;
- (c) Rich in authentic comprehensible input;
- (d) Rich in opportunities for language output and language skills training;
- (e) Rich in ideas diversity, ideas improvement

Research clearly shows that students succeed when allowed to pose their own questions, test ideas, explain their theories, and collaborate on solutions. It is true in all subjects and it ideally applies to TEFL. Since students are active learners whose cognition and emotions have developed to certain degree, what they need is not mere language training and practice but real communication, discussion, knowledge building and unknown exploration and problem solving.

Knowledge Forum, designed and built on the basis of this research, helps classrooms become communities—academic communities whose purpose is the nurturing of ideas, the discipline of sustained inquiry, and the building of new knowledge, which can serve as a high level of communication. Scaffolds can be yoked to views, so different discourse forms can be encouraged in different views.

As for foreign language learners, they will certainly encounter language barriers; therefore combining linguistic scaffolds with cognitive scaffolds will greatly promote learning process and develop thinking ability in the Knowledge Building Community.

### 3.3 Acquiring Comprehensive English Competence in KB Practice

Knowledge Building originated from "knowledge-telling strategy" which intended to promote writing competence, one of the most advanced skills in foreign language learning. Then it developed into a stage of knowledge-transforming which involves a cycling between writing concerns and concerns about knowledge and belief. The findings make the study turned to improve students' writing to supporting more active knowledge processes in writing to help children take charge of their own minds. (Scardamalia, Bereiter, & Steinbach, 1984). Effective writing is actually active pursuit of a mental life which leads more research to a new concept-knowledge building. Identifying problems of understanding, gathering information, theorizing, designing experiments, answering questions and improving theories and reporting all involve active use of language in authentic situation.

Foreign language learning involves reading, listening, speaking and writing. Activities in KF showed that language here is the tool of creating new information instead of some approaches of learning language for language sake. Knowledge Building, in a sense, could help developing language competence in a better way. It is evident that the best language learning is achieved in the collaborative community.

KF encourages learners to learn by reading, writing, listening, researching and publishing on the forum ability. Readers of KF can contribute their ideas, comments on the original material including text and video by using “build on”, “annotation”, “rise above” buttons; or enrich the original material by adding referencing source through “attachment”, “reference note or view” or “movie”. While writers can get fast feedback from readers, they can perceive the subject from different perspectives by reading feedback information. These meaningful interactive writing and reading activities not only strengthen learners’ vocabulary mastery and their communicative skills, but also help to build up their cognitive thinking.

KF serves as a platform for learners not only to obtain comprehensible real language input, but also to perform meaningful interactive communication. It leads learners to learn by using language in real life context, which is considered as the best way to master a language.

Furthermore, the design of KF encourages learners to express diverse ideas, which is helpful for learners to perceive the subject from different angles and to develop their critical thinking.

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#### **4. INTEGRATION TEFL WITH KB AND MOOCS**

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One of the dramatic changes technology brings to education in recent year is the rapid development of Massive Open Online Course (MOOC). MOOC is an online course aimed at unlimited participation and open access via the web. In addition to traditional course materials such as videos, readings, and problem sets, MOOCs provide interactive user fora that help build a community for students, professors, and teaching assistants. Many MOOCs use video lectures, employing the old form of teaching using a new technology. ([http://en.wikipedia.org/wiki/Massive\\_open\\_online\\_course](http://en.wikipedia.org/wiki/Massive_open_online_course))

In the field of TEFL, now the world is open for language learners. MOOC course can be a very good source of “comprehensible input” in a foreign language. Take a MOOC, you can learn a language in a global classroom. It is true that not all language contents and skills can be covered in a MOOC, but it cannot be denied that there’s a lot of work to be done. It would probably be very interesting to see what language contents and at what levels students can benefit more from MOOC-type teaching and learning.

There have been some efforts in this field. One typical example is LTMOOC, which is a collaborative course for language teachers of all levels to discuss and gain a deeper understanding of emerging trends in blended teaching and learning of world languages, including the methodology, best practices, and practical application of the blended and online classroom.

Another is Instreamia which is a new MOOC that focuses on learning languages. It offers free courses in Spanish, English, Italian, Japanese, and Portuguese, using some surprising, but abundant, course materials. Instreamia uses YouTube videos from recording artists, pop culture, TED lectures, and other entertainment resources created by native speakers in the language you would like to learn. These videos are supplemented with listening exercises and flashcards. During listening exercises, you can simultaneously view a translation, gradually building your vocabulary.

Online media, when used to distribute learning materials, to exchange ideas and links with blogs, micro-blogs, discussion forums, social bookmarking and social network services are powerful tools for learning. But these tools and services simply do not support very well systematic group collaboration in higher level, so there is a lot of room for effective and efficient evaluations by far.

The latest development of CSILE/KB Program is how to create increasingly powerful open and free resources to optimize Knowledge Building, bringing knowledge-building discourse to open and free educational resources and increasing the effectiveness of MOOCs, etc., through collaborative knowledge building by users. Meanwhile the high-profile projects and endeavors in the MOOCs-business are also looking for smart ways to make them more collaborative and participatory than classical distance learning courses or courses using automated checking of exercises. They are going to learn from each other and try to supplement with each other.

Therefore in the near future, online learning will adopt more knowledge building principles and KB pedagogy and technology may develop more characteristics of MOOCs. What educators and researchers need to do is reasonable detailed designs in different courses and improvement in implementation respectively.

The Integration TEFL with KB and MOOCS is far from easy. First of all, TEFL teachers need to understand the idea improvement as the essence of KB and its underlying principles and technology in English learning process and combining these with other traditionally effective ways of promoting English as a foreign language such as role play, acting, face-to-face discussion or debate, participating in real communicative activities and so on. Secondly, they need to catch up with the rapid development of technology-enhanced education and actively participate in it. Thirdly, teachers are supposed to bear in mind that all available courses in target languages can be used in language learning besides using MOOC

videos and subtitles to learn languages and specially designed MOOC language learning programs. What they need to do is to help students to find an effective way to develop affectively, cognitively and linguistically.

## CONCLUSION

TEFL as an independent discipline has its unique principles and approaches, meanwhile it is a part of education and therefore everything involved should be taken as a whole. Bloom's taxonomy points out a holistic view for any courses including TELF. More specifically, the author of this paper holds the view that it will be rewarding for teachers to design the language teaching process with guidance from KB principles aiming at cultivating a whole person with affective and cognitive development along with the goal of developing communicative competence. Besides the traditional forms of class and foreign language activities, teachers need to make best use of flexible forms of online resources like MOOCs and other tools as live learning materials and effective approaches to combine learning and acquisition together, helping them develop cognitive, emotional and social qualities and skills necessary for 21 century to meet new challenges and to solve new problems. More systematic studies in theories and practice are required to advance the frontiers of integration of KB and MOOCs with TEFL in the Chinese educational and social context.

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