Teaching for Understanding

Tomoko Kaneko

Abstract

"Teaching for Understanding (TfU)" is one of the educational pedagogies developed in a Harvard University project. This study first introduces the framework of TfU with its brief history and background philosophy. It also compares TfU to other educational pedagogies often used in monolingual classrooms of various subjects. Finally, based on the observation of the above, better teaching and learning ideas in Japanese university level Foreign Language English classroom will be presented.

Introduction

Looking back at the history of teaching English as a Foreign Language (EFL) in Japan, many different approaches have been used based on different linguistic, psychological or sociological theories. As Bailey (2005) points out, three methods have dominated language teaching in the past sixty years. They are Grammar-Translation Method, Audiolingualism and Communicative Language Teaching.

In Grammar-Translation Method, students are taught to analyze grammar and to translate from one language to another. Learners have chances to understand the rules of grammar, but it doesn't mean that they understand the English language. In order for them to be able to use English, their understanding should certify their fluency and communicative competence. In Audiolingualism, English is taught by having students repeat sentences and recite memorized dialogues from the textbook. The method tries to automatize the language habits to attain fluency and automaticity without much focus on the learners' understanding. In Communicative Language Teaching, following the way people learn their first language, it is believed that learners need abundant authentic interaction for acquiring another language. Thus, the method utilizes interaction-based activities, such as role-playing and information gap tasks along with pair-work and group-work class organizations. Those activities provide more chances for learners to use the language, but whether learners can acquire the language so that they can use it in a creative way is not yet shown.

The above brief description of EFL teaching history tells that although some importance of learners' cognitive work was considered from time to time, the interest of researchers and teachers was mainly on the accuracy and fluency of the language produced by the learners in classroom. It was not on how teachers can facilitate students' ability to generalize the gained

knowledge effectively; that is how teachers can help learners really understand the language. The answer for the latter question is more important because surface accuracy and fluency based on short-term rote memory without real understanding will not work in real world.

In the area of education, how students build skills and knowledge over time and how teachers make students understand have long been interesting issues. There have been myriad of teaching methods or ideas which have tried to realize these. The basic idea of the present study is based on several of those studies, which were mainly presented at the lectures given at Harvard Graduate School of Education "Mind, Brain, and Education" Institute in 2008 and WIDE World, a distance learning program managed by the Harvard Graduate School of Education in 2009. Both courses suggest a great insight on the framework and teaching ideas for Japanese university level EFL classroom, which will be presented in this study.

1 TfU and Its View of Understanding

In this section, an educational pedagogy, TfU, will be introduced first and then a view of understanding in TfU will be explained.

1-1. What is TfU

TfU is a term for one of the educational pedagogies first coined by H. Gardner and D. Perkins of Harvard Graduate School of Education Project Zero research group. The group has investigated the development of learning processes in children, adults and organizations since 1967. Project Zero was originally founded to study and improve education in the arts and over the years its concern has been gradually expanded to include education across all disciplines. As a successive project of Project Zero, TfU was a five-year program designed to develop and test pedagogy of understanding. The project first focused on teaching and learning in only four subjects (English, history, math, and science) in the middle and high school years. However, it now offers online workshop and the framework is used as a professional development tool throughout the United States and in other countries in all disciplines.

1-2. A view of understanding in TfU

The core of the program is a performance view of understanding, which exemplifies that if a student "understands" a topic, s/he can not only reproduce knowledge but also use it in unscripted ways. The performance view of understanding is not a new idea and there is no doubt that all teachers teach for understanding among others. Yet, teaching for understanding still continues to be extremely difficult for all teachers. Blythe and Associates (1998) explain that understanding a topic means being able to do a variety of thought-provoking things with the topic. They state that if students understand the topic, "they can explain, find evidence and examples, generalize, apply, analogize, and represent the topic in new ways." Thus, understanding comes beyond simply knowing what it is. Moreover, the

development of understanding is a continuous process, too. The above authors write that "there is always more to be explored along with the development of the understanding" and they define understanding as "being able to carry out a variety of actions or performances that show one's grasp of a topic and at the same time to advance it".

1-3. How students learn for understanding

As we learn swimming by actually swimming, we learn language by "*languaging*"; i. e., by using it in a context. In TfU, understanding a topic means building up performances of understanding around that topic, thus the mainstay of learning for understanding is actually carrying out such performances. Learners are able to learn for understanding by spending the larger part of their time with activities that ask them to do thought-provoking tasks such as explaining, making generalizations, and, ultimately, applying their understanding on their own. The most important point is that they must do these things in a thoughtful way, using their own thinking. In addition, teacher's and students' appropriate feedback will surely help them do this better because the feedback stimulates learner's deeper thinking.

2   The TfU Framework

In this section, the framework employed by TfU will be explained. It consists of the four frames: generative topics, understanding goals, performances of understanding and ongoing assessment.

2-1. Generative topics

Generative topics are issues, themes, concepts, and ideas, which provide enough depth, significance, multiple connections, and varieties of perspective to support students' development of understanding. The guidelines of generative topics are stated as follows in Blythe and Associates (1998):

① Centrality: Topic is of central importance to one or more disciplines.
② Engagement: Topic is interesting and engaging to the students.
③ Accessibility: Topic is accessible through varied age-appropriate resources.
④ Connections: Topic offers opportunities for multiple connections to their previous experiences.
⑤ Challenges: Topic can always be explored more and more deeply.

2-2. Course-long and unit-long understanding goals

Understanding goals both course-long and unit-long indicate what the teacher wants his/her students to get out of work in the class. The goals clarify what are most important for students to understand in a course/unit. Thus, two types of understanding goals will be described in TfU. The former spans topics and the latter focuses on the central aspects of

a generative topic of the unit.

Both understanding goals share the following features (Blythe & Associates, 1998):

① They focus on the understanding of important concepts, methods, purposes, or forms in disciplines.

② They are not behavioral; they describe what is to be understood instead of what students will do.

③ Stated goals are ready to share beyond the classroom with parents, colleagues, and administrators.

④ They reflect more than one dimension of understanding (knowledge, methods, purposes, or forms).

⑤ They focus on some common misconceptions, assumptions, and/or troublesome knowledge that could block understanding if left unchallenged.

2-3. Performances of understanding

Activities that require students to use knowledge in new ways or situations are performances of understanding. In classrooms, students are often asked to write memorized vocabulary, to answer questions about facts reported in a textbook, to read aloud model dialogues, or to take true-false or short-answer tests. All of these are not performances of understanding. In order to elicit performances of understanding (i.e. to reshape, expand on, extrapolate from, apply and build on what they already know), teachers should ask students to explain their answers, to give reasons for their answers, to offer supporting evidence and to make predictions.

There are three levels of performances of understanding (introductory, guided inquiry, and culminating) and step by step, students enhance their performances.

2-4. Ongoing assessment

This is the final factor of the framework. Receiving assessment is as important as performance of understanding. Although this frame is explained as the last frame, assessment criteria should be established at the earlier planning stage, and feedback from a variety of perspectives should be offered to the students even when the students are at the introductory level of performances. To attain satisfactory level of performances of understanding, assessment criteria need to be in mind of both the teacher and students. Needless to say, not only teacher's but also other students' feedback is indispensable.

Giving feedback or assessment is what teachers often do in classroom without much consciousness. However, many of them do not necessarily support understanding. One of the reasons is that they are inclined to evaluate student performances without having made the assessment criteria explicit beforehand. Since teachers naturally have a certain assessment criteria in mind based on their own experiences, they miss-suppose that students would also

have the same objectives and assessment criteria as they do. Another phenomenon often seen is to evaluate student performances only at the end of a unit. The purpose of evaluation is to give students chances to improve their performances, not to give them grades.

In summary, the following chart shows the relationship among the four frames of the TfU framework based on Blythe and Associates (1998).

Chart 1. The TfU Framework
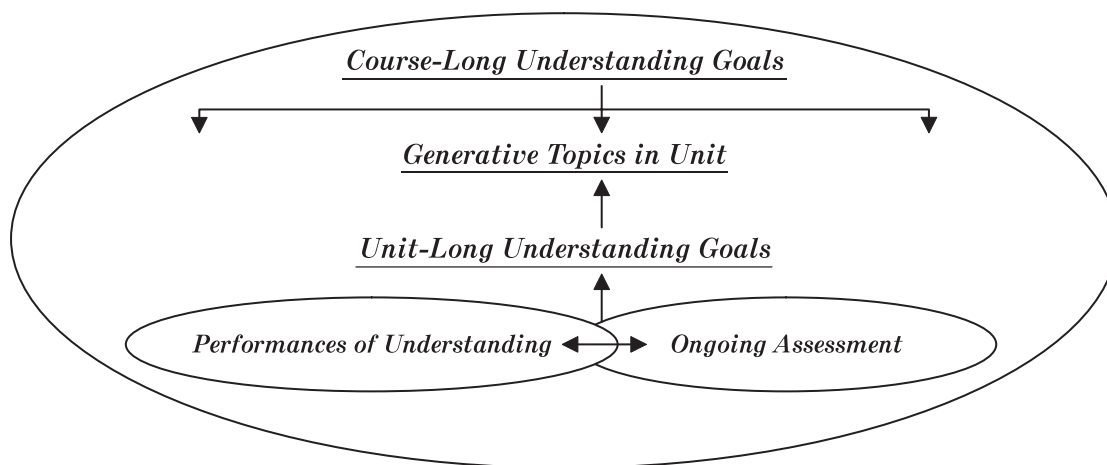
3 Comparison with Other Popular Pedagogical Ideas

In this section, the twelve most popular pedagogical ideas will be introduced and compared to TfU.

3-1. Back to Basics

Back to Basics emphasizes the routine and basic skills of reading, writing, and arithmetic.

In TfU, these skills are taught within the context of more complex performances of understanding. Focused practice sessions can also be useful if students understand the relationship between the skill they are practicing and the performance of understanding in which they will use the skill.

3-2. Cooperative Learning

Cooperative Learning is a teaching strategy started by Spencer Kagan (1994) in the 1980's, where small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates, which creates an atmosphere of achievement. Students work on the assignment until all group members successfully understand.

Many performances of understanding can involve cooperative learning, but Cooperative Learning itself does not aim for understanding by students.

3-3. Essential Questions

An Essential Question captures the most important aspects of a topic that students study during a given unit. Essential Questions reside at the top of Bloom's Taxonomy (Bloom & Krathwohl, 1956), which has been widely used by educators in planning education. The questions are framed to provoke and sustain student interest as well as link to other essential questions.

Essential Questions direct students to consider particular aspects of that topic, while a generative topic in TfU is a broad field for exploration.

3-4. Exhibition

Through exhibitions, students strive to achieve specialized knowledge and aim to consider learning as an adventure. Exhibitions help students develop team spirit and their abilities in attracting the attention of viewers. They are by definition public and include feedback not only from teachers and classmates but also from people outside the school.

As for TfU, it is not public and feedback comes only from teachers and classmates.

3-5. Hands-On Learning

Hands-On Learning provides learning by helping students to acquire knowledge and skill outside of books and lectures. Learning can occur through work, play and other life experiences.

Not all hands-on activities are performances of understanding. An activity must present a cognitive challenge which will lead students to develop and demonstrate understanding to be a performance of understanding in TfU.

3-6. Interdisciplinary Curricula

In Interdisciplinary Curricula teaching, educators apply content and methodology from more than one academic discipline to examine a theme, issue, question, problem, topic, or experience.

Because many connections can be made between issues within a single discipline in TfU, teachers can teach for understanding just as effectively by focusing on a single discipline or domain.

3-7. Lectures

A lecture is an oral presentation intended to present information or to teach people about a particular subject. Usually the teacher will stand at the front of the room and recite

information. Critics point out that lecturing is a one-way method of communication that does not involve significant participation by students. However, lectures delivered by talented speakers can be highly stimulating. Lectures are useful for giving students new information for new topics.

TfU believes that lectures work best when they are brief, targeted, and given in response to questions students raise as they carry out performances of understanding.

3-8. Multiple Intelligences-Based Teaching

The theory of Multiple Intelligences was developed in 1983 by Dr. Howard Gardner at Harvard University (Gardner, 1993). He proposes eight different intelligences: linguistic, mathematical, spatial, musical, kinesthetic, interpersonal, intrapersonal and naturalist intelligences. Dr. Gardner states that although we esteem the highly articulate or logical people of American culture, we should also place equal attention on individuals who show gifts in the other intelligences. His frame allows students to build and demonstrate understanding in a variety of ways, using different intelligences.

All performances should help students develop the understandings stated in the goals in TfU and, in doing so, all the intelligences above will be stimulated at the end of the course.

3-9. Portfolios

Portfolios are collections of students' work over time. A portfolio often documents a student's best work and may include other types of process information, such as drafts of the student's work, the student's self-assessment of the work, and the parent's assessment. Portfolios may also be used for evaluation of a student's abilities and improvement.

Portfolios that include examples from all phases of students' work are more helpful than portfolios containing only selected "best works" for ongoing assessment in TfU. Students' progress toward the understanding goals can be reviewed by checking the portfolios.

3-10. Project-Based Learning

Project-Based Learning activities create opportunities for students to work on problems in the real world. Projects relevant to the world outside the classroom can help the students to see and understand the connections between classroom activities and the world outside.

In TfU, projects are useful to help students achieve the understanding goals, but they must be accompanied by ongoing assessment.

3-11. Text-Based Teaching

Textbooks provide students with the knowledge and information they need for understanding. They often include conventional problem solving tasks. However, textbooks often present difficulties to some students because they often contain facts that are hard for

students to summarize and explain.

In TfU, textbooks will be used to offer students basic knowledge and information, which will be extended as sources for performances of understanding.

3-12. Thinking Skills Curricula

The term "thinking skills" refers to the human capacity to think in conscious ways to achieve certain purposes. Such processes include remembering, questioning, forming concepts, planning, reasoning, imagining, solving problems, making decisions and judgments, translating thought into words and so on. Those curricula can provide cognitive challenge, collaborative learning, and meta-cognitive discussion. Bloom's taxonomy of thinking skills (Bloom & Krathwohl, 1956) has been widely used by teachers in planning their teaching. He identifies a number of lower order cognitive skills and higher order skills as follows:

Chart 2. Bloom's Taxonomy (Based on Bloom & Krathwohl, 1956)

No.	Order	Cognitive Goal	Thinking Cues
1	lower	Knowledge	• Say what you know or remember • Repeat • Define • Identify • Tell who, when, which, where, or what Q: What happened in the story?
2	lower	Comprehension	• Describe in your own words • Tell how you feel about it or what it means • Explain, compare or relate Q: Why did it happen that way?
3	lower	Application	• How can you use it? • Where does it lead? • Apply what you know • Demonstrate • Use it to solve problems Q: What would you have done?
4	higher	Analysis	• What are the parts or the order? • What are the reasons why or the causes, problems, solutions or consequences? Q: Which part did you like best?
5	higher	Synthesis	• How might it be different, how else or what if? • Suppose, put together, develop, improve or create your own. Q: Can you think of a different ending?
6	higher	Evaluation	• How would you judge it? • Does it succeed? • Will it work? • What would you prefer? • Why do you think so? Q: What did you think of the story? Why?

The question in the lower part of each "Thinking Cues" column shows an example question teachers can ask when telling a story to students.

In TfU, thinking skills are developed in the context of performances of understanding.

4 Application to EFL Classroom in Japan

Understanding the above framework and claims, what we can apply to EFL classroom in Japan will be discussed in this section.

4-1. Five key points

Many of the points proposed by the pedagogical ideas listed above have also taken a focused position in EFL. The following is the list of ideas which are and can be applied to English language teaching in Japan.

① Set goals for generative topics

Teaching goals must always be in both the teacher's and students' minds. Setting goals beforehand is also the idea proposed by many teaching professionals these days (Mckeachie & Svinicki, 2006).

② Elicit from students

Elicitation from the students is an extremely important issue especially in teaching languages. Students should always be in the center of learning. Teachers need to let them think through thought-provoking activities.

③ Use task-based teaching

Task-based teaching is one of the effective ways to apply students' understanding to practical use. Always give students chances to be cognitively active is the rule. Task-based language teaching (TBLT) has been a big issue in SLA for several years and investigation on how and why TBLT works (ex. Corony & Willis; 2005, Van den Branden, Bygate & Norris; 2009) is being searched in the area now.

④ Give appropriate feedback

Ongoing assessment based on clearly articulated criteria for successful performances both by the teacher and students is crucial. In SLA, some detailed studies on feedback (Lyster, R. & Ranta, L., 1997; Lyster, R., 2004, etc.) have been published and still many researchers are interested in why some feedback works and some don't.

⑤ Keep records

In order to gauge progress towards understanding goals, portfolios that include examples from all phases of students' work are helpful for reflecting on performances. Keeping learning record in the form of portfolios is also being tried by many teachers with some effect.

It is somewhat surprising that what have been discussed in the discipline of education are also issues many researchers and teachers in SLA and EFL discipline are interested in. What is not focused on in EFL is the notion that all kinds of learning takes place by doing a variety of thought-provoking things. It is clear from the above survey that asking learners to do cognitively challenging tasks is extremely important for them to really understand the language.

4-2. A Model EFL Lesson Plan

Following the TfU guidelines explained in the former sections, a model EFL unit lesson plan will be presented here. Chart 3 shows a unit lesson plan on "Personal Letters" for Freshmen.

Chart 3. Model EFL Unit Lesson Plan

Subject	Freshmen EFL			
Course-Long Understanding Goals	1. How does writing in English help me to communicate with people from other cultures? 2. How can I communicate effectively when writing in English?			
Generative Topic (Unit)	Personal Letters			
Unit-Long Understanding Goals	1. What is the purpose of writing letters? 2. What English letters have I been most impressed by? 3. How can I write good letters?			
Sequence	UGs	Performances of Understanding		Ongoing Assessment
Introductory	#1	• Students (Ss) reflect the purposes for which they wrote letters in English. • Ss discuss their responses and as a class generate a list of purposes.		<u>Criteria:</u> Diversity of reasons. Teacher (T) discusses this with Ss. <u>Feedback:</u> Informal T-Student(S) and S-S in context of whole-class discussion.
Guided Inquiry	#2	• Ss in groups pick up some impressive English letters from the samples in the handout and discuss why they're impressive, covering both styles and linguistic features. • After the presentation by each group, the class makes a list of characteristics.		<u>Criteria:</u> Sensitivity to the range of characteristics that make a letter impressive. Awareness of styles and linguistic features. <u>Feedback:</u> More formal during presentations than during group work.
Culminating	#1 #2 #3	• Individually, Ss write an English letter. The letter needs to include a purpose, the addressee and key expressions used to make the letter impressive. • Both the draft and the final letter will be kept in the portfolio. • The final letter will be sent to the addressee.		<u>Criteria</u> Co-developed by T and Ss before Ss begin writing. <u>Feedback</u> Formal. The first draft is critiqued by a classmate and the final one by self and T, using criteria sheet.

① Generative topics

Following the TfU guidelines, the generative topic chosen for the sample class is "Personal Letters." The main purpose of English learning for Japanese university students is proficiency for real communication. Some study English so that they can use the language when they have a chance to take trips to English-speaking countries, while some

study English in case they need to use it at their future work and so on. For those students, letters in English, for example, seasons' greetings, thank you notes are important media for communication. Many kinds of resources are available, for example, sample letters on the web, copies of letters written by famous people, personal cards received from teacher's friends and so forth. Studying English letter writing relates to the understanding of grammatically correct sentences and also of the sameness and differences of background cultures of the two languages. Connections to students' non-school contexts are also evident. When planning generative topics, the best way is to think about what interests the teacher and the students most in the subject area.

② Performances of understanding

In the sample class, each student will be asked to reflect on the purposes of writing English letters and discuss their responses with other classmates. This will satisfy the introductory understanding performances. Then they focus on what makes the letters impressive. They will not only look at styles of letters but also at linguistic features, and the way to use unique expressions effectively in order to communicate what you really feel. Then finally, students individually write an English letter to someone whom they want to send a message. The final letter will be sent to the addressee, which connects what they learn in the class to their real life.

③ Understanding goals

The course-long understanding goals for the sample EFL class set here is a typical ones for the university level non-major EFL course. Although when asked which English language skill they most want to develop, most Japanese students answer "speaking," along with the development of internet systems, students will have increasingly more chances to write English than speak it in the future.

The unit-long understanding goals set for this course are ready to share beyond the classrooms and reflect several dimensions of understanding (knowledge, methods, and forms, at least). Writing good English letters is sometimes misunderstood by students to mean writing grammatically correct sentences following a special format. It is extremely important to understand that the content of the letters is most important and good letters can move the readers' mind as well as give accurate messages to the recipient.

④ Ongoing assessment

Along with the sequences of performances of understanding, the criteria and feedback in ongoing assessment change. In the introductory level, the teacher helps students a lot and the feedback is informal. In the guided inquiry level, the teacher's help becomes less, while the feedback becomes more formal. At the culminating level, criteria will be worked better if the students and the teacher co-develop it. In this way, students are forced to challenge some of the more demanding cognitive tasks.

Summary

Although how cognition works in foreign language learning is still an issue to be studied, all the researchers now admit that it accounts for a large part of learning. Good language learner studies in SLA tell that an awareness of learner's own learning process is one of the major aspects of successful learning (Ellis, 1994). This awareness is classified as one of the meta-lingual strategies and is realized by meta-cognitive knowledge which helps them assess their needs, evaluate progress, and give direction to their learning. Such awareness gives learners control over their own learning. Even in assessing one's own learning, though it is only a small part of whole learning process, cognitive activities are extremely important. Thus teaching for real understanding, which focuses on cognitive challenges by students, is what goes beyond practice for surface exchange of words in EFL classrooms. Thought-provoking activities are indispensable in this point of view. While in SLA, researchers are searching for why and how those thought-provoking activities lead to acquisition of language and are striving to find evidence for it. For example, although some detailed studies of the effect of different kinds of feedback have already been progressed as stated before, why feedback is cognitively useful is not yet answered. At the same time, one of the biggest practical developments these days in SLA is task-based language teaching (TBLT). Considering the insight from the TfU, TBLT is surely one of the most promising ways for EFL to elicit some cognitive challenges from students when it is carefully planned.

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