

# Task Based Learning and Motivation for Science Majors at Japanese Universities

タクスベース・ラーニングが日本の理系学生のモチベーションに及ぼす効果

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## Abstract

This paper discusses ways to increase motivation of English as a Foreign Language (EFL) learners in science faculties in university in Japan through Task Based Learning (TBL). The first section discusses Communicative Language Teaching (CLT) and TBL. The second section outlines motivation in relationship to TBL and Japanese university students. The third section looks at how a TBL curriculum could be implemented in a 15-class term. The paper suggests that TBL within a Communicative Language Teaching (CLT) framework can be a very effective means of instruction at the university level provided that the tasks are tailored to meet the specific needs of Japanese university students.

## Keywords

Communicative Language Teaching, curriculum design, motivation, English as a Foreign Language, scaffolding, Task Based Learning.

## Introduction

Low motivation among science students at Japanese universities learning English as a Foreign Language (EFL) has been a common issue facing language educators. With the shift in classroom practices to Communicative Language Teaching (CLT), soliciting and developing active participation from science students has become more critical to creating and maintaining a successful student-centered classroom environment. As motivation has been recognized as an aspect of growing importance in developing effective language learners, curriculum development has focused on approaches that use CLT and develop autonomous learners. This paper discusses why Task Based Learning (TBL) can be an effective way to increase motivation and some of the considerations of implementation.

## Communicative Language Teaching

Communicative Language Teaching emerged in the 1970's and 1980's as language educators began to re-evaluate the pedagogical practices in consideration of the changes in the views or understanding of language and learning, and of the roles of the learners and teachers (Nunan & Lamb 2001). This shift from the so-called "traditionalism" to CLT has continued to embody new approaches within the general framework of CLT. CLT might be characterized as an approach that perceives language as a system for conveying meaning which logical means that learners need to conduct real communication and do tasks or activities that are meaningful tasks and language that has meaning to the learner. CLT focuses on the learner's needs and as such the learners need to be actively involved the process.

Activities will typically try to engage the learner in communication and will involve information sharing and negotiation of meaning. The learner will be a negotiator and interactor and the teacher will be a facilitator, needs analyst, and counselor (Nunan & Lamb 2001). This kind of approach will also demand new materials because of the difference in approach, especially for Task Based Learning (TBL) programs and the use of authentic materials. (Refer to Appendix 1: Traditionalism & CLT)

## Task Based Learning

TBL is a widely accepted methodology in Second Language Acquisition (SLA). TBL requires students to complete a task in the target language rather than studying the target language. This allows students to experience the target language in a more natural context than with traditional classroom approaches that can be directly related to their educational and professional needs. Many researchers have stressed the importance considering relevance as a factor to include along with other motivators in curriculum design (Alessi & Trollip, 2001; Keller & Suzuki, 2004). This may have a positive impact on student motivation. The introduction of TBL activities is a natural application of the basic principles of CLT primarily because of the emphasis on authentic and meaningful materials and activities.

This leads us to look at what TBL actually is and more importantly how it can be effectively implemented. As noted above, TBL focuses on using authentic language, and learners need to conduct meaningful tasks using the target language. Some typical exercises or lessons that are used in TBL classes include role plays of a visit to the doctor, a job interview, making an appointment, ordering in a restaurant, and so on. Along this line, Willis (1998) defined a task as

... a goal-oriented activity with a clear purpose. Doing a communication task involves achieving an outcome, creating a final product that can be appreciated by others. Examples include compiling a list of reasons, features, or things that need doing under particular circumstances; comparing two pictures and/or texts to find the differences; and solving a problem or designing a brochure.

While these exercises have been used widely, I contend that such general activities are not appropriate TBL

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<sup>1</sup> Such as grammar translation, modeled conversations, etc.

exercising for university students in Japan.

The two essential components of what TBL is, or should be, bears repeating; TBL requires authentic language and meaningful tasks. While the above-mentioned tasks certainly meet the first criterion, I believe that they do not meet the second. That is to say, despite appearances, I would suggest that these kinds of conversations are not meaningful for Japanese science students at the university level.

## Learners in Japan

Most English language learners in Japan should be considered English as Foreign Language (EFL) learners, which is to say that they will have very little need and opportunity to use spoken English<sup>2</sup> in their daily lives. Most students are extremely unlikely to ever need to use English at the doctor's office, or to make an appointment, or to even as suggested above, design a brochure. So while these kinds of TBL exercises may be quite useful and meaningful in other teaching contexts (e.g. the European context), they are not likely to be useful or needed by typical university students in Japan. The students of course realize this, which then makes these kinds of scenarios a fall back to contrived modeled conversations reminiscent of audio-lingualism.

## Motivation

One of the driving forces behind using authentic and meaningful materials has been the assumption that there is at least a positive impact on motivation. Motivation is a very broad term and has been singled out as a key factor of success of language learning and the lack of motivation has been also been used an explanation for failure (Brown 1987). It has been suggested that there are two kinds of motivation, integrative motivation, the positive attitudes towards the target language, and instrumental motivation, possible usefulness of target language proficiency (Gardner & Lambert, 1972). Dulay suggested that that was an affective filter (1985) and this filter could block out parts of the language environment. Therefore, input can be negatively impacted by low motivation. However, integrative motivation has a positive relation to success in language study (Gardner 1985). Svanes (1987) concluded the backgrounds of the students were directly related to the type of motivation, which makes it more important to look at motivation research in the context of Japan.

Kubo developed a scale for the motivation of EFL students at the university level (1997), which considered the cultural aspects. It was found that there were different language learning motivation factors for Japanese university students (Kimura, Nakata & Okumura, 2001). Again, the importance of examining motivation must be stressed. So what does this mean in terms of curriculum design for a TBL course for science students at university in Japan? Many science departments offer English language courses for undergraduate students in Japan. The Ministry of Education, Culture, Sports, Science and Technology

<sup>2</sup> There are some English language learners that are in ESL situations especially in particular niches in some of the larger cities, but for the most part, university students in Japan are in EFL situations.

(MEXT) requires that all students enrolled in science departments take a certain number of English language courses as part of their breadth requirement (MEXT, 2003). These students have very specific challenges because of educational and cultural background. They are not prepared for CLT because they do not have experience in communicating in a foreign language to the degree that even a simple exchange of personal information can be too difficult for some students (McVeigh, 2001). Many students appear to have little experience in communicating even in Japanese and are not trained in how to express their own opinions and views. The students may not have written any essays since elementary school, and have rarely if ever been asked answer questions in detail. (Azra, Ikezawa, Rowlett, & Vannieuwenhuysse, 2005).

### **Task Based Learning Curriculum**

Firstly, in considering a TBL curriculum, it is important to recognize that meaningful tasks are needed that are specific to science classes and science students. Furthermore, these tasks need to consider that there may be different cultural factors in play. Japanese university ESL students are more motivated to participate in in-class language activities that are graded, particularly if there is immediate feedback. Furthermore, this increase in motivation seems also improve their performance in assignments as well (Bruno 2008). However, the Immediate Method may be effective in elementary level conversation type classes, it was not designed for the more advanced or non-conversation focused language courses.

A TBL course can help to bridge these cultural issues because the design of a TBL course. It is task specific and is quite easy to scaffold. By scaffolding, I refer to “the various kinds of assistance, which guide a learner into an activity that is often too complex...” (Bruner 1983). With TBL, scaffolding is temporary and there is a handover to the learner and the Initiation-Response-Feedback (IRF) structure disappears allowing the learner autonomy in their learning.

It is for that reason that the teacher needs to direct the language learners more actively, and scaffold more, than perhaps he or she might have been inclined to do had the students been at a higher level of language competence. By scaffolding the activities, the teacher is providing the support that the students need, while allowing them the freedom to have some input on the directions of the class. If intrinsic motivation is to be developed, pedagogical steps must be taken to increase learner self-regulation and independence (van Lier 1986a), and to ensure that the handover takes place.

### **Application**

This now leads us to look at how these principles might be integrated in a course or Japanese science students, as a TBL course. The TBL course has its focus on developing presentation skills in the target language, English. Students are faced with the task of making a 20-minute academic presentation of their research in English. The presentation skills that students acquire are equally applicable to academic presentations made in Japanese. As such, it is believed that there could be an added benefit of “carry-over” of these skills for the students when they make presentations in Japanese. This “carry-over” may also serve

as a motivator for students in this program, especially since Japanese university students place a high value on English as a means to accomplishing something (McGuire, 2000; Yashima, 2000). As such, a TBL course should reflect an increase in motivation and perhaps even in intrinsic motivation.

Since educators should help students develop skills that will help them succeed in their studies, acquire skills and knowledge in English, and express that knowledge in English (Kasper, 1999), they also should help students connect classroom content to real life. I believe that this aspect makes this a much more meaningful task. The students complete a series of “mini-tasks” that are modular and when complete they will form the components of the final presentation. These modules consist of a writing module, a presentation theory module, design module, and a presentation skills module each lasting about 3 classes. I have found that dividing the 15-class term into three main sections for pedagogical purposes to be quite effective. In the first five-class section, expectations for the whole year are clearly explained and students are given simple assignments, but are not provided with models to work from. It is essential to note that the students require scaffolding not only for the tasks at hand, but also in how to function in a CLT class. Therefore, scaffolding must include the transition from IRF classroom that the students are accustomed to, to a CLT classroom. The assignments are then examined and feedback is given.<sup>4</sup> Students are then shown several possible models for that assignment. They then independently adapt their previous assignments to better suit the outcomes of their individual projects.

In the second section of the course, the kind of feedback changes. Rather than explicit explanations and corrections, the feedback becomes more generalized and the students need to independently assess their own work and that of their classmates.

In the final section, the instructor has stepped away from being a central part of the program and facilitates the actions of the students. The students perform their tasks independently. They control the content of their presentations and look to their peers for advice and guidance, rather than to their teacher.<sup>5</sup> This more CLT oriented approach, using scaffolding to assist students in being able to transition to more independent and meaningful language exchanges, follows the communication principle, the task principle and the meaningfulness principle as outlined by Richards and Rogers (1986: 66)

## Conclusion

There are several advantages of using a Task Based Learning curriculum for science students at Japanese universities. These can be summed up as increased motivation, an increase in student involvement, autonomy, and empowerment. However, these tasks must be carefully chosen to be meaningful in an academic and professional context so that they do have relevance and meaning for the students. The effective use of TLB also requires careful scaffolding with the task activities as well as with the pedagogical methodology. I believe that this approach is suitable for other fields as well, and

<sup>3</sup> This module is based upon the sentence headline approach to PowerPoint because of the cognitive and design advantages.

<sup>4</sup> It is important to point out that these assignments are not graded on content, but serve as a starting point for the students' to discover how to accomplish these tasks.

<sup>5</sup> Students have by this stage discovered that they can get more helpful feedback about the science aspects of their presentations from their peers than they can get from their instructor.

specifically well suited to engineering and business programs. Regardless of the field of study, the key aspect is the empowering of students so that they are directing their own learning in truly meaningful tasks in a CLT type classroom.

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Appendix 1: Traditionalism & Communicative Language Teaching<sup>6</sup>

	<b>Traditionalism</b>	<b>CLT</b>
Language theory	<ul style="list-style-type: none"> <li>• rule governed structures;</li> <li>• hierarchical in arrangement.</li> </ul>	<ul style="list-style-type: none"> <li>• system for expressing meaning;</li> <li>• interaction.</li> </ul>
Learning theory	<ul style="list-style-type: none"> <li>• by habit formation;</li> <li>• oral precedes written.</li> </ul>	<ul style="list-style-type: none"> <li>• real communication;</li> <li>• meaningful tasks.</li> </ul>
Goals are	<ul style="list-style-type: none"> <li>• native speaker level;</li> <li>• mastery of sound, form &amp; order structures.</li> </ul>	<ul style="list-style-type: none"> <li>• dependent on the learner;</li> <li>• functional and linguistic.</li> </ul>
Syllabus	<ul style="list-style-type: none"> <li>• a graded phonology, morphology &amp; syntax</li> </ul>	<ul style="list-style-type: none"> <li>• variable including structures, functions, notions, themes, tasks according to learner needs.</li> </ul>
Activities	<ul style="list-style-type: none"> <li>• drills &amp; model dialogs;</li> <li>• repetition &amp; memorization;</li> <li>• pattern practice.</li> </ul>	<ul style="list-style-type: none"> <li>• engage learner in communication activities;</li> <li>• are process focused.</li> </ul>
Learners	<ul style="list-style-type: none"> <li>• can be directed by a skilled teacher to produce the correct language.</li> </ul>	<ul style="list-style-type: none"> <li>• are negotiators in a give and take relationship.</li> </ul>
Teachers	<ul style="list-style-type: none"> <li>• control, active &amp; dominant.</li> </ul>	<ul style="list-style-type: none"> <li>• analyst, counselor, facilitator.</li> </ul>
Materials	<ul style="list-style-type: none"> <li>• teacher oriented and centered: audio CDs, DVDs, PowerPoint, flashcards, language labs</li> </ul>	<ul style="list-style-type: none"> <li>• authentic, task based.</li> </ul>

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<sup>6</sup> Adopted from Nunan & Lamb (2001)