

# Task-Based Second Language Learning Game System

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**Abstract.** In traditional English learning as a second language, learners rarely have the opportunity to practice oral communication, so the acquisition of oral proficiency is a slow process. In this paper, we propose a task-based second language learning game system. The task-based learning method enables learners to obtain communicative skills through the practice of particular “missions” using voice and gesture communications with life-size 3D game character.

**Keywords:** Task-based language training, Conversational game character, Locomotion control, Negotiation of meaning

## 1 Introduction

In traditional English learning in Japan, learners rarely have the opportunity to practice oral communication, so the acquisition of oral proficiency is a slow process. On the other hand, the task-based learning method enables learners to obtain communicative skills through the practice of particular “missions”. As a result, the efficient improvement of communication skill becomes achievable. In this paper, we propose a task-based second language learning game system. The task-based learning method enables learners to obtain communicative skills through the practice of particular missions using voice and gesture communications with life-size 3D game character.



**Fig. 1.** A snapshot of using second language learning game system and the map of the town. Many daily conversational tasks can be experiences.

## 2. Game System Design

Fig. 1 shows a snapshot of using second language learning game system. The use environment of the system is a public classroom or a personal study room. The learners are assumed to be people who studied English in junior high school and high school. As a result, further study should build upon the skills one has learned, instead of wasting the knowledge acquired in school. The interface of the system consists of a large screen, a camera for the user behavior analysis, and a voice recognition system. The game character recognize user's voice and return conversation sentences based on the negotiation of meaning model.

The learner experiences task-based language training in various daily situations such as shopping, cooking, and job. The task-based learning method enables learners to obtain communicative skills through the practice of particular missions using voice and gesture communications with life-size 3D game character.

This system, using TBLT methodology, provides the negotiation of meaning function, and through its use, the imperfect understanding between the learner and the game character can be resolved. The learner advances through tasks by 'talking' with English-speaking characters in a virtual city environment. The content of the conversation is displayed in a balloon above the heads of the characters, and the learner types their response.

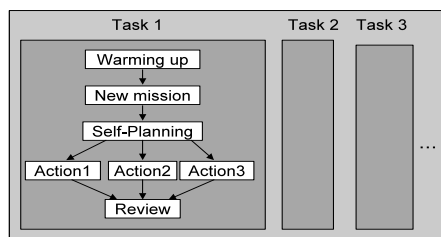


Fig. 2. Task model for TBLT

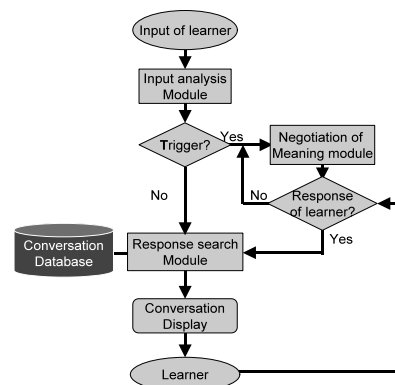


Fig. 3. Flow chart of conversation

## 3 CONCLUSIONS

We have presented an approach to promoting communication and achieved learner's greediness for learning through the negotiation of meaning model in the task-based learning system. Moreover, the effectiveness of the game character's was acknowledged in the learner's evaluations of the experiment. In future, it will be necessary to evaluate a series of tasks in order to improve the conversation function of game character's.