

Dialog-Creator: A Semi-Opened Learning Game for Pupils' Second Language Acquisition

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Abstract—The attitude and motivation influence children's learning performance in Second Language Acquisition (SLA). The content designs of many current language tools and platforms are too closed, which results in the learner's passive learning. The article first analyzes some related research on Children's English Learning, especially on dialogues. And at the same time, it points out the shortages of some prevailing software for Children's English Language Dialog in China. Then, a semi-structured dialogue model was put forward to guide the design of learning game. After that, a Semi-Structured Flash game named Dialog-Creator is developed and pilot study is demonstrated and discussed. Author explores to enhance pupils' conversational language proficiency with Dialog-Creator. Finally, the author discusses some problems emerged during the preliminary use, and predicts the future development.

Keywords—edutainment; semi-opened dialog model; second language acquisition; learning game

I. INTRODUCTION

With the internationalization of China, closer attention is attached to English learning by parents as well as society. As a result, there appears more and more children's English software. The author finds that the majority of English tools and learning platforms are considerably closed in content design. To a great extent, this will lead to the learner's passive learning.

The present research on children's SLA in China shows that the focus of it lies in the research on Oral English and Dialogue. And research in Educational Psychology reveals that attitude and motivation is closely connected with learning outcome. Therefore, Edutainment Technology springs up and is applied in SLA immediately, and some learning games also appear in the field of language learning.

A. Computer use in SLA

Major SLA studies that used computers are focused on two main types of computer use: (a) reaction-time studies and (b) experimental studies in L2 instruction/learning. Hulstijn tries to categorize types of computer use, ranging from grammaticality judgment tasks to L2 learning experiments [1]. He ended up with eight categories.

Computer applications actually used in these studies differ across researchers. Some of the applications, especially those used in earlier studies, are highly complicated and require a high level of skills and knowledge to handle them for learners. On the other hand, recent applications are more user-friendly and flexible as well so that fairly complicated experiments can be designed after a little amount of learning and practice. Games and cartoons begin to play an importance function into this areas.

B. Games and learning

Games are rapidly becoming omnipresent in our culture, especially in the lives of many child and adolescents [2]. McFarlane, Sparrowhawk, and Heald linked game-playing with the potential to develop skills in decision making, design, strategy, cooperation, and problem solving [3].

C. Learning goals' shift in learning games

As language learning pedagogy increasingly moves away from cognitive models to more socioconstructivist approaches to learning, language learners assume a central role in the language learning experience.

According to the attendance and cognitive status of the learners in the whole learning process, learning can be divided into passive learning、active learning and creative learning.

The possible application of learning games is summarized in Table I. The learning goals are shifted from fact-based education to creating thinks capable of understanding and finding "optimal" solutions to real world problems.

TABLE I. POSSIBLE APPLICATION OF FLASH GAMES

Forms	Characteristics	Examples
passive learning	manipulative play, look	match game, shooting and bouncing games
Learning while playing	brain, creative, puzzles, questions and answers	Sliding and jigsaw
Learning within an environment	role-play	Food Force

Food Force [4] is supplied by United Nations World Food Programme. In this Flash game a major crisis has developed in the Indian Ocean, on the island of Sheylan. A new team was sent to step up the World Food Programme's presence there and to help feed millions of hungry people.

II. SEMI-OPENED DIALOG MODEL

Conversational language proficiency [5] is the easiest skill to acquire for pupils. It involves communicating about things that are familiar to all participants in the communication or that are supported by objects, pictures, or actions in the environment.

Conversational language proficiency is acquired during social interaction with others who speak the language being acquired. The optimal conditions for this interaction are situations in which the topic of the communication is meaningful to the learner and the language used is comprehensible at the learner's level of language ability. Language is made more comprehensible by familiarity with the topic, clarity in speech, simplicity in sentence structure and vocabulary, and support from objects, pictures, and actions in the environment.

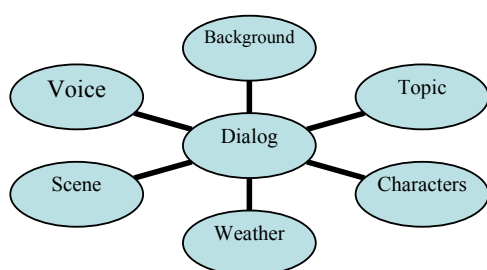


Figure 1. Learner's Dialogue Structure

Dialog is habitual language use in a set condition. And without condition, dialog will make no sense. Actually, dialog is a process during which the subjects exchange ideas and construct meaning through language. Only through dialogs can the learner deepen their understanding of acquired language knowledge and meaning construction and avoid considering language learning as a dull study of abstract symbols. Dialog focusing on some topics must happen in some background and between characters.(see Fig. 1)

TABLE II. SEMI-OPENED DIALOG MODEL

Learning platform elements	Closed	←-----●-----→	Open
		Semi-Opened	
background /weather /characters/...	Fixed	←-----●-----→	Upload
		User Choose	
Dialog texts	Fixed	←-----●-----→	User Generated
		User Input	
Speech voices	None	←-----●-----→	User Generated
		Text to Speech	

There was lack of context design in traditional dialog exercises. Learners can't modify the elements in the learning game, such as background, characters, texts, voices. We proposed a semi-opened dialog model, in which the learning platform elements were designed within continuum from closed to open. For example, learner can choose background,

characters, and type dialog texts which most were generated.(see Table II)

Table III shows one dialog example using semi-opened model. In this example, all elements are user generated. The dialog has two characters, Kathy and Lily, and the topic of it is "greeting". Some elements were chosen by user, and dialog texts were typed by user.

TABLE III. ONE DIALOG EXAMPLE

Background	Weather	Characters	Topic
School	Sunny	Kathy & Lily	Greeting
A: Hello! B: Hi! A: Good morning! My name is Kathy B: Good morning! I am Lily. Nice to meet you. A: Nice to meet you, too. How are you? B: Fine, thank you, and you? A: I'm fine, too. Goodbye. B: Bye!			

III. DIALOG LEARNING PLATFORM'S LEARNING PATH

The author develops an interactive Flash game named Dialog-Creator [6], which is an Internet-based conversational English game system designed primarily for English language pupils and includes special support for cartoon. In Dialog-Creator, players design their own dialog (choosing a background, an environment, a plot, scenes, and characters) and type the characters' dialogues, in which creative thinking is embodied. After the players select the background music, their own dialogs have been created. Different dialogs are reviewed by others, and excellent dialogs can be pushed up. Figure 2 shows the learner's learning path.

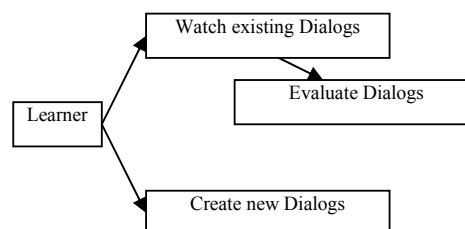


Figure 2. Learner's learning path

For a beginning learner, he can watch the existing the dialogs created by others, then he evaluates the dialog which effects its sequence showed on web. Thus, best recommended dialogs can be seen by most learners.



Figure 3. Learner chooses the weather and background

The learner with good conversational language proficiency can create new dialogs directly. After he has chosen the background, environment, conversational style, and characters, the dialogs can be inputted. Figure 3 and 4 are captured pictures of it.

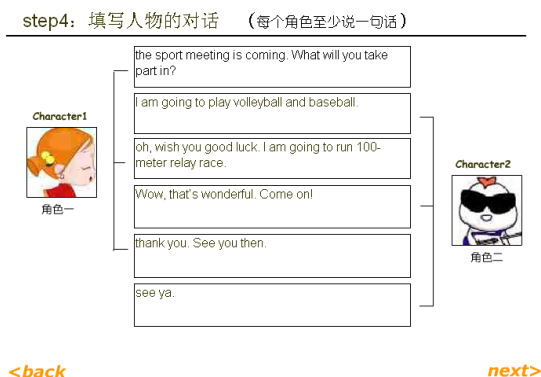


Figure 4. Learner inputs the dialog

After inputting the dialog, learner can choose the background music and type the title, a cartoon dialog is created and can preview in Internet Explorer. Figure 5 shows this.



Figure 5. Learner previews the cartoon dialog

IV. DEVELOPMENT PROCESSES AND TECHNICAL CHALLENGE

Computer-assisted Language Learning integrates multimedia and web technologies to make it practical so as to create an interactive environment for foreign language learning. We have built this web-based attractive English learning system which is a server-based Flash game for training conversational language proficiency.

We followed these development processes which include game goals design, game rules design, dialog modeling and platform development, and we eventually created dialogs' library to store user-generated dialogs (see Figure 6).

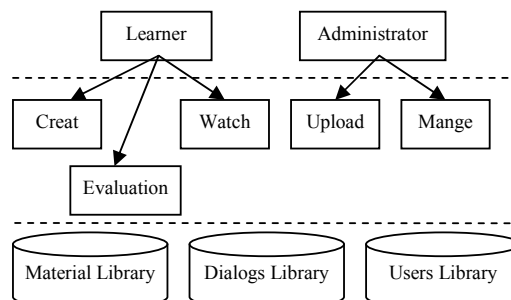


Figure 6. Learner previews the cartoon dialog

During development we had been facing some technical challenges. Dialog voices are a very importance aspect of dialog. Different Text-To-Speech engines were tied to realize the voice function, including Microsoft TTS engine, Neospeech TTS voice engine.

V. PILOT STUDY

Participants in pilot study were 20 students from a Grade 4 Class at the primary school. The students were introduced to Dialog-Creator.

At this stage we have not done a formal study of the advantages of the features, but informal observation shows that they clearly assist language learners in learning English. The students said this game most of them liked was very funny. However, They found it was difficult for them to type the words in Dialog-Creator.

We also interviewed 8 teachers who taught children English in primary school. They gave some advices to improve the design of learning platform. Some of them are: (1)It was better to give word suggestion for students. (2)Teachers can upload their own voices into the learning game.

VI. CONCLUSION AND DIRECTIONS

Malone and Lepper [7] provide valuable guidance with their list of key characteristics of a learning game: a) Challenge is created by having clear, fixed goals that are relevant for the learner; b) Curiosity exists in two different forms: sensory curiosity and cognitive curiosity; c) Control is experienced as feelings of self-determination and control on the part of the learner; d) Fantasy encompasses both the emotions and thinking process of the learner.

According to the key characteristics of a learning game, Dialog-Creator have the following unique features, which can be called semi-structured game.

The challenge is to design a Conversation in conformity with syntax and verbal features.

Sensory curiosity is stimulated by the variety of shapes and colors of environment and the animations. Language is made more comprehensible by familiarity with the topic, fostering cognitive curiosity

Some control is granted with the dialog design choices (with lots of possible combinations); even more control comes from the ability to complete the dialogues.

Fantasy elements are strong: the “enhanced reality” nature of the scenarios and illustrations. Thus the gameplay process is not arbitrary but addresses and embodies the actual content to be learned.

Dialog-Creator embodies all four of Malone and Lepper’s characteristics and thus qualifies as a true learning game.

Students actively participated in Dialog-Creator which showed semi-opened design model can enhance the usage of learning platform.

Collaboration and interaction among learners are seen as important elements in the learning process. At the same time, the flash game is no longer a mere transmitter of knowledge, but rather a facilitator who allows learners to take greater control of the whole process and provides them with opportunities for learning which are relevant to them. Within such a learner centered educational model, therefore, learning a language inevitably means more than acquiring a set of vocabulary items, grammatical rules, and communicative functions; it also involves empowering learners to identify and be in control of their own needs, social experiences, and goals.

We divided the learning process into three phases.

In the first phase—passive learning, pupils are learning the game pieces and rules of the game, and learning to play the game.

In the second phase-active learning, pupils understand the rules of the game, and are learning to play the game better, and are becoming a master.

In the third phase-creative learning, pupils are able to change some game pieces to create a new game.

Further research in this area will be guided by the following questions: What effects will the use of the Dialog-Creator have on learners’ learning outcome? How widely the semi-opened dialog model will be applied in other language learning platforms? Which elements will be modified in the new model of dialog?

We intend to investigate the implementation of new version of Dialog-Creator as multimedia learning tools in the future, and we actively seek partners in this ongoing design-based research initiative.

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