Dialog Strategy in a FonF-Based Language Education System: Relative Necessity of a Form in a Task

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Abstract: In a pedagogical approach called focus on form (FonF), a teacher lets learners focus their attention on using grammatically correct forms. However the learners may use forms different from targeted linguistic forms (forms that the teacher intends to teach). This study aims at improving FonF instruction in our system in such a way that the system guides learners to use targeted forms. In guiding the learners, the system behaves differently in accordance relative necessities of forms in a task.

Keywords: Focus on Form, second language education, dialog system

Introduction

In the field of second language education, a pedagogical approach called focus on form (FonF) has attracted much attention. FonF is a teaching method to let learners focus their attention on using grammatically correct forms. Thus dialog practice with FonF instruction would improve learners' grammatical and conversational abilities. In the present study, we aim at the construction of Japanese language education system that realizes such goals.

One of the typical dialog practices is role playing. In role playing, the teacher gives the learner his/her role to play and a task to achieve. We use the term "situation" to refer to the roles and goals in role playing. The teacher also sets some linguistic forms as targeted linguistic forms (forms that the learner should acquire in the lesson). Under a given situation, the teacher and the learner have a dialog in which the learner decides what to say and how to say. If the learner makes an error in the targeted linguistic forms, the teacher gives FonF instruction.

The goal of our system is to play a part of the role-play partner and to play a role of the teacher. Our previous system [1] has the basic dialog function to act as a partner of the role playing, and the mechanism to estimate the meaning of erroneous sentences in consideration of the situation. The system also detects the targeted linguistic forms in the learner's utterances, and performs an error judgment of the directed forms.

In some situation, the learner may use a non-targeted linguistic form in place of a targeted linguistic form, and the non-targeted linguistic form may still be compatible with the situation. In such a case, the targeted linguistic form may have a higher degree of necessity in the task, in the sense that the use of the targeted form is more suitable than the use of the non-targeted form. Further, the targeted linguistic form may have the same

degree of necessity as the non-targeted form. In order for the learner to acquire the correct use of the targeted linguistic form, the teacher should lead the learner to use the targeted form. The difference in relative necessities of the targeted and non-targeted forms (see Table 1) may affect how to lead the learner [2]. However the previous system does not take into account the relative necessities of linguistic forms in a task.

This study aims at improving the quality of the system's instruction by implementing dialog strategy that takes into account three types of forms' necessity in a task.

Table 1: Classification of relative necessity of linguistic forms in a task

task essentialness (TE)	A form has task essentialness if a task cannot be successfully performed unless the form is used.
task utility (TU)	A form has task utility if a task becomes easier with the form though it is possible to complete the task without the form.
task naturalness (TN)	A form has task naturalness if the form arise naturally during the performance of a task, but the task can often be performed perfectly well, even quite easily, without the form.

1. Dialog Strategies Based on Relative Necessity of Forms in a Task

Since forms with task essentialness do not allow synonymous expressions, the learner must use the targeted form to accomplish the task. Therefore, if the learner does not use the targeted form with task essentialness, the system gives explicit instruction on the form.

If a targeted form has task utility or task naturalness and if the learner uses its synonymous expression, he/she may notice by himself/herself that he/she can use the targeted form in the situation. Therefore it would be better to let the learner notice the targeted form by implicit instruction than by explicit instruction. Further, the implicit instruction should be differentiated depending on whether the learner's non-targeted form has the same degree of necessity as the targeted form or it has lower necessity than the targeted form.

When the learner's non-targeted form has the same degree of necessity as the targeted form (the targeted form has task naturalness), the learner might have used the non-targeted form though he/she knows the targeted form can also be used in the situation. Accordingly it would be effective to give him/her an implicit instruction which we call a *"playback"*. In the playback, the system highlights the non-targeted form in the learner's utterance and encourages him/her to use another expression in place of the non-targeted form. This is because we may expect the learner to use the targeted form by reconsidering his/her own utterance.

When the learner's non-targeted form has lower necessity than the targeted form (the targeted form has task utility), the learner used the form with lower necessity though the form with higher necessity can be used in the situation. Therefore a playback would not be as effective as in the above case. Accordingly the system gives the learner an implicit instruction which we call a *"recast"*. In the recast, the system repeats the learner's utterance in which the learner's non-targeted form is changed into the targeted form.

2. Implementation and Operation Example

In this study, we implemented the dialog strategy so that the system responds differently to the learner depending on the relative necessity of linguistic forms in a task. Fig. 1 shows examples in which targeted linguistic forms have task utility and task naturalness.

Targeted linguistic form:

(e.g.1) Cause/reason connective "because" (a linguistic form having task naturalness)

(e.g.2) Potential predicate "… be possible." (a linguistic form having task utility)

(e.g.1) Targeted linguistic form: because	(e.g.2) Targeted linguistic form: … be possible
Situation: to inform arrival time U1: It is possible to arrive at the hotel by 19 <u>since</u> I will go by car. S1: "It is possible to arrive at the hotel by 19 '<u>since</u>' I will go by car." <- Do you have another expression? U2: It is possible to arrive at the hotel by 19 <u>as</u> I will go by car. S2: "It is possible to arrive at the hotel by 19 <u>as</u> I will go by car." <- Do you have another expression? Let's try again. Situation : to inform payment method U3: It is possible to pay by credit card <u>because</u> I stayed there last year. S3: … … … [dialog continues]	Situation: to inform arrival time U1: I <u>have potentail</u> to arrive at the hotel by 19 because I will go by car. S1: Do you mean "It <u>is possible</u> to arrive at the hotel by 19 because I will go by car."? U2: Yes. S2: Let's try again under a new situation. Situation : to inform payment method U3: I <u>have potential</u> to pay by credit card because I stayed there last year. S3: "I <u>have potential</u> to pay by credit card because I stayed there last year." is acceptable, but "It <u>is possible</u> to pay by credit card because I stayed there last year." is better. [end]
S1: The learner uses "since" to convey reason while the targeted form is "because". Since both "since" and "because" have task naturalness , the system gives an implicit instruction (playback). S2: The learner uses "as" to convey reason in the second utterance. Since both "as" and "because" have task naturalness, the system gives an implicit instruction (playback) and engages in a new dialog. S3: Since the learner uses the targeted form "because", the system continues the dialog.	S1: The learner uses "have potentail" to convey potential while the targeted form is "is possible". Since the learner's form has task naturalness and the targeted form has task utility, the system gives an implicit instruction (recast). S2: The system repeats the learner's first utterance with the non-targeted form changed into the targeted form. Since the learner answers "Yes" to the system's question, the system changes the situation and engages in a new dialog. S3: Since the learner does not use the targeted form in the new dialog, the system gives an explicit instruction.

Fig.1: Operation Example (English translation)

3. Conclusion

We implemented dialog strategies for our FonF-based language education system. The dialog strategies take into account the deference in relative necessities of forms in a task. The dialog strategies enable the system to change its behavior in accordance with whether a targeted linguistic form has task essentialness/task utility/task naturalness.

References

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