

Effects of Interaction Enhancement on Constraining Overgeneralized Errors of English Articles

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Abstract

One of the most hotly discussed issues in classroom-oriented second language (L2) research is to determine optimal ways to incorporate form-focused instruction into communication-oriented language teaching. This study examines the effect of an instructional technique in which a teacher leads L2 learners to restructure their interlanguage grammar by providing form-focused feedback (*e.g.*, clarification requests and recasts) in a communicative problem-solving task. The technique is termed 'interaction enhancement' because both 'input' and 'output' are enhanced in this interactive instruction. Two types of interaction enhancement are proposed in this study; one is 'interaction enhancement with meaning-focused debriefing' and the other is 'interaction enhancement with form-focused debriefing'. The effects of the two types of interaction enhancement on the learning of English articles were compared with that of non-enhanced interaction in a quasi-experimental study with 78 Japanese L1 learners of EFL. The three different types of instruction were given to three intact groups over 3 weeks and their improvement in the use of English articles was measured by a pretest, an immediate posttest, and a delayed posttest. The results of statistical analyses indicate that both types of interaction enhancement had a positive effect on the learners' constraining of overgeneralized errors with English articles.

1. INTRODUCTION

This paper describes a quasi-experiment on the effect of an instructional treatment termed interaction enhancement in which second language (L2) teachers lead their learners to focus on form by providing enhanced feedback in interactive communicative L2 classrooms. This instruction was developed based on the findings obtained in focus-on-form research, which has become one of the hottest issues in L2 acquisition research (Doughty, 1993a; Long, 1988, 1991). Though a number of previous focus-on-form studies have revealed that formal instruction has positive impacts on L2 learning (*e.g.*, Doughty, 1988, 1991; Fotos, 1992, 1993, 1994; Spada & Lightbown, 1993), there are still many questions to be tackled. Further research, for instance, is needed to identify a way to integrate form-focused instruction into meaning-oriented communicative language teaching in a timely fashion (Doughty, 1993a; Lightbown & Spada, 1990; Spada, 1987; Spada & Lightbown, 1993). There is also an urgent need for research which investigates effects of classroom instruction with an appropriate research design (Chaudron, 1991; Doughty, 1991; Ellis, 1990; Long, 1988; Harley, 1989). The present study has been motivated by these needs for further research on the effect of form-focused instruction. That is, the goal of this study is to conduct a carefully

designed research to measure the effect of an instructional technique which aims at incorporating form-focused instruction into communication-oriented instruction by emphasizing the role of feedback in leading L2 learners' attention to form.

2. RELATED STUDIES

Though the impact of negative feedback (or negative evidence) on first language acquisition has been considered to be minimal by the nativists (Brown & Hanlon, 1970; McNeil, 1966; Pinker, 1984; Wexler & Culicover, 1980), positive effects of feedback on language acquisition have been recognized by a number of researchers who take interactionist or cognitive approaches to language acquisition (see Pica, 1992, 1994 for the interactionist view, see Anderson, 1983; Gass, 1988; Karmiloff-Smith, 1986, 1992; Nelson, 1987; Slobin, 1985 for cognitive approaches). Positive effects of feedback on L2 acquisition, specifically on leading L2 learners' attention to form, have been proven by many classroom-oriented researchers¹. Tomasello and Herron (1988, 1989), for example, report the positive effect of a treatment termed the "garden path" technique, which leads learners to induce the target rule and then corrects their resulting overgeneralized error. Carroll and Swain (1993) compared differential effects of different types of negative feedback (*i.e.*, explicit hypothesis rejection, explicit utterance rejection, modeling/implicit negative feedback, and indirect metalinguistic feedback). They found significant differences between all of the feedback groups and a control group on the learning of abstract linguistic generalizations and narrowing of the application of those rules². In an extensive observation of classroom interaction, Doughty (1993b) obtained findings which suggest that teachers finely tune their feedback to L2 learners just as parents do when interacting with child language learners and that learners notice the finely tuned feedback. Examining ESL students acquiring English in contexts where comprehensible input was rich, Lightbown and Spada (1993) found that corrective feedback along with form-focused instruction had positive effects on the learners' acquisition of forms. The often-reported fact that learners in acquisition-rich contexts did not necessarily attain high levels of accuracy³ led Swain (1985, 1994) to recognize the importance of output which is elicited by interactional modifications or feedback. She claims that being pushed to produce output is necessary for L2 learners to modify their interlanguage grammar. Swain's assumption has been verified by empirical studies (Pica, Holliday, Lewis & Morgenthaler, 1989; Takashima, 1994).

Though these previous studies on the role of feedback have revealed that corrective feedback is beneficial to L2 learners to develop their interlanguage grammar, there are still a number of issues to be addressed. For example, optimal ways to provide learners with form-

focused feedback have not been fully identified. Also effects of feedback need to be determined in more appropriately designed research (*e.g.*, proper operationalization of instruction, accurate measures of improvement, etc.). In the present study, the effect of the proposed instruction was determined taking these two issues into careful consideration. That is, this study proposes a way to incorporate a type of form-focused treatment into interactive communicative language teaching and investigates the effect of the treatment by conducting a quasi-experiment with careful operationalization of the teaching procedures and valid measurements of learners' development in interlanguage.

3. THE PRESENT STUDY

The instruction proposed in this study was termed 'interaction enhancement' in which L2 teachers enhance interaction by providing form-focused feedback within an interactive problem-solving task (see section 4.4 for the detailed operationalization of instruction). The following research questions have guided the present studies:

- 1) Does interaction enhancement have a greater effect on L2 learners' restructuring of their interlanguage grammar than non-enhanced interaction?
- 2) Do two types of interaction enhancement, which are different from each other in the manner of focus on form, have different effects on L2 learners' restructuring of interlanguage grammar?

4. METHOD

4.1. Subjects

78 Japanese college EFL learners enrolled in three intact EFL courses of first year English majors at a university in Japan were the subjects in this experiment. One class was randomly assigned to each one of the three treatment groups: Experimental Group 1 (a group receiving interaction enhancement with form-focused debriefing, $N = 26$), Experimental Group 2 (a group receiving interaction enhancement with meaning-focused debriefing, $N = 27$), and a control group (a group participating in unenhanced strategic interaction, $N = 25$) (see section 4.4 for the treatments).

4.2. The instructional focus

The English article system was the target of the instruction. This system was chosen because this is one of the most difficult forms for non-native speakers of English to acquire properly (Pica, 1985; Shirahata, 1995). Most errors with articles are caused by

overgeneralization of rules. For example, overgeneralization of the definite article (the) into definite contexts and overgeneralization of zero article into definite and indefinite contexts have been often reported in studies on the acquisition of English articles (Chaudron & Parker, 1990; Cziko, 1986; Thomas, 1989). The instructional treatments proposed in this study aim at helping L2 learners constrain such overgeneralized errors.

4.3. The English Article Diagnostic Test

A test consisting of four tasks was devised to measure the subjects' abilities to use English articles in both oral and written modes. The four tasks were an oral story description task, an oral picture description task, a written picture description task and a grammaticality judgment task. In the oral story description task, the subjects were shown two 90-second scenes taken from two American movies and required to describe what was going on in each scene orally. Their accuracy rate in using English articles in this task was the score on this task. The oral picture description task elicited 12 definite contexts and 9 indefinite contexts in which the subjects were required to produce the definite article and the indefinite article respectively. The written picture description task elicited 9 definite contexts and 8 indefinite contexts in the written mode. The number of correct suppliances of articles in the obligatory contexts was the score on the picture description tasks. The grammaticality judgment task consisted of 16 sentences with 7 definite noun phrases, 8 indefinite noun phrases, and 30 distracters. Half of the noun phrases were ungrammatical in terms of the use of articles. The subjects were required to judge the grammaticality of the noun phrases and correct them. Each task carried 25 percent of the English Article Diagnostic Test and the possible total score of the test was 100.

The subjects took this English Article Diagnostic Test before they received instruction (the pretest), immediately after the last training session (the immediate posttest), and 5 weeks after the last training session (the delayed posttest). The three tests were different from each other in the sequencing of the four tasks and nouns used in the elicitation tasks.

4.4. Instructional Treatments

The subjects received three training sessions over the period of three weeks⁴. Each session lasted approximately 30 minutes. All subjects in the two experimental groups and the control group received communicative instruction which was developed borrowing basic ideas from Di Pietro's (1987) strategic interaction. Strategic interaction is an interactive problem-solving task in which teachers use scenarios to create contexts which guide learners to use their target language in a real-like discourse. This is a teaching technique which emphasizes negotiation of meaning with only minor attention paid to the accuracy of forms. Interaction

enhancement, which is proposed in this study, is modified strategic interaction in that the teacher leads learners' attention to a particular form while preserving the communicative features of strategic interaction. The instructional treatment was operationalized as follows:

Interaction Enhancement: An instructional treatment in which a teacher pushes L2 learners to produce output and provides them with interactional modifications in order to lead them to notice a mismatch between their interlanguage grammar and the target language grammar, and to lead them to modify the incorrect output within the framework of strategic interaction.

Example 1 (Successful modification)

S: I saw rat in my room. --- incorrect output
T: You saw what? --- clarification request (input/output enhancement)
S: I saw a rat in my room. --- successful modification
T: Uh-huh, you saw a rat --- recast (input enhancement)
in your room! That's terrible.

Example 2 (no modification --> teacher's recasts)

S: I saw rat in my room. --- incorrect output
T: You saw what? --- clarification request (input/output enhancement)
S: I saw rat. --- incorrect output
T: Could you say it again? --- clarification request (input/output enhancement)
S: I saw rat in my room. --- incorrect output
T: Uh-huh, you saw a rat --- corrective recast (input enhancement)
in your room! That's terrible.

S = student, T = teacher

Examples 1 and 2 illustrate ways in which interaction is enhanced during the modified strategic interaction. In Example 1 the teacher's clarification request leads to the learner's correct modification of the interlanguage grammar with the indefinite article. The clarification request has a dual function here: it works as an enhanced input to attach a 'flag' to an incorrect form (input enhancement) and as a facilitator which guides the learner to produce modified output (output enhancement). After hearing the learner produce modified output, the teacher provides a recast by repeating the correct form (input enhancement). In Example 2 the teacher's clarification requests do not assist the learner in noticing the error. When the learner does not modify output after receiving clarification requests twice, the teacher provides a corrective recast which presents a grammatical form by modifying what the learner produced.

Strategic interaction has three phases: an introductory phase, a performance phase, and a debriefing phase. During the introductory phase the instructor gives the class a scenario which provides them with a problem to be solved through interaction (see Appendix for an example of the scenarios used in the training sessions of this experiment). Students form small groups and prepare for the performance. During the performance phase the scenario is performed by a pair of a representative student and the instructor. The use of a

student-teacher pair as a performance pair distinguishes the modified strategic interaction from the original strategic interaction; in the original strategic interaction roles are performed by student-student pairs. A student-teacher pair was employed in the modified strategic interaction because the teacher needed to manipulate feedback intentionally in interaction. Three to four representatives (three to four student-teacher pairs) played their roles in a training session of this experiment.

The performance phase is followed by the debriefing phase in which the teacher and students (both the representatives and the audience) evaluate how well interaction was carried on. In the original strategic interaction, the focus of debriefing is on meaning. That is, the degree of accuracy in conveying the meaning has the first priority. In the modified strategic interaction proposed in this study two types of debriefing were administered:

(1) Interaction enhancement with form-focused debriefing (IEF)

- Debriefing was given based on the accuracy of the target forms; explicit grammatical explanation on the use of English articles was provided following Master's (1990) instruction on the English article system⁵.

(2) Interaction enhancement with meaning-focused debriefing (IEM)

- Debriefing was given based on how successfully the intended communication was carried out; the focus was on the degree of accuracy in conveying the meaning, not on the accuracy of the target forms.

In this experiment all three groups participated in strategic interaction. However, each group received a treatment which was different from the other two treatments in terms of focus on form. One group (Experimental Group 1) received the IEF treatment, which provides both indirect form-focused feedback and explicit grammatical explanation of the target form and another group (Experimental Group 2) received the IEM treatment, which provides indirect form-focused feedback to errors and meaning-focused debriefing. For these two experimental groups the introductory and performance phases of strategic interaction were administered in the same manner while the debriefing phase for each group had different focal points (form versus meaning). The control group participated in strategic interaction in which no particular attention was paid to the form during both the performance and debriefing phases. This assignment of different treatments to the three groups is summarized as follows:

	PERFORMANCE PHASE	DEBRIEFING PHASE
EXPERIMENTAL GROUP 1 (IEF) ¹	STRATEGIC INTERACTION (FOCUS ON MEANING)	FOCUS ON FORM
	INTERACTION ENHANCEMENT (FEEDBACK TO FORM)	
EXPERIMENTAL GROUP 2 (IEM) ²	STRATEGIC INTERACTION (FOCUS ON MEANING)	FOCUS ON MEANING
	INTERACTION ENHANCEMENT (FEEDBACK TO FORM)	
CONTROL GROUP (NEI) ³	STRATEGIC INTERACTION (FOCUS ON MEANING)	FOCUS ON MEANING
	NON-ENHANCED INTERACTION (FEEDBACK TO MEANING)	

¹ Interaction enhancement with form-focused debriefing

² Interaction enhancement with meaning-focused debriefing

³ Non-enhanced interaction with meaning-focused debriefing

The interaction which the IEF group and the IEM group received during the training sessions was equal in terms of the frequency of interaction enhancement. Table 1 shows how many clarification requests and recasts the instructor provided during the three training sessions and how many times the students who received the feedback modified their output successfully. It indicates that 10 students played their roles framed by scenarios as representatives and the teacher provided both IEF and IEM groups 9 clarification requests during the three training sessions. In the sessions with the IEF group the teacher's clarification requests led to the learners' successful modifications four times and in the sessions with the IEM group the teacher's clarification requests were utilized successfully three times by the learners. A chi-square test revealed that there was no difference in the frequencies of interaction enhancement and learners' modifications between the two groups ($\chi^2 = 0.24, ns^7$).

Table 1. Interaction enhancement and learners' modification (Sessions 1, 2 & 3)

	IEF	IEM
Student representatives	10	10
Interaction enhancement		
Teacher's clarification requests	9	9
Learners' successful modification	4	3
Teacher's corrective recasts	5	6

Exposure to the target form during the training sessions was also equal between the three groups. Table 2 indicates how many correct noun phrases the subjects in each group received during the performance phase. A chi-square test revealed that there was no significant difference in the frequencies of correct NPs between the three groups ($\chi^2 = 1.59$, ns).

Table 2. Exposure to correct NPs during the performance phase

	IEF	IEM	NEI
Exposure to correct NPs with articles during interactions			
Correct definite NPs in teacher's output	85	85	76
Correct indefinite NPs in teacher's output	85	98	75
Correct definite NPs in students' output	17	13	19
Correct indefinite NPs in students' output	27	25	26
TOTAL	214	221	196

4.5. Research Hypotheses

The following research hypotheses were tested in this study to address the research questions:

Hypothesis 1: Interaction enhancement with form-focused debriefing will have a greater effect on L2 learners' restructuring of their interlanguage grammar of English articles than non-enhanced interaction.

Hypothesis 2: Interaction enhancement with meaning-focused debriefing will have a greater effect on L2 learners' restructuring of their interlanguage grammar of English articles than non-enhanced interaction.

Hypothesis 3: Interaction enhancement with form-focused debriefing will have a greater effect on L2 learners' restructuring of their interlanguage grammar of English articles than interaction enhancement with meaning-focused debriefing.

5. RESULTS

Table 3 indicates the means and standard deviations on the pre- and posttests for the English Article Diagnostic Test. Figure 1 displays the mean total scores graphically. To

measure the effects of interaction enhancement the data were submitted to a repeated-measures analysis of variance (ANOVA). The result of the ANOVA revealed a significant main effect for group ($df = 2, F = 8.638, p = .000$), a significant main effect for test ($df = 2, F = 128.011, p = .000$), and a significant interaction between group and test ($df = 4, F = 32.994, p = .000$).

Between group comparisons were made to determine significant differences among the groups. Results are shown in Tables 5, 6, and 7. Table 5 indicates that on the pretest there was no significant difference between the three groups. This means that the three groups were at the same developmental stage of English articles prior to the training sessions. On the immediate posttest the means of the IEF group were significantly different from those of the IEM and NEI groups (Table 6). There was a trend toward a significant difference between the IEM group and the NEI group ($p = .058$) on the immediate posttest. On the delayed posttest the means of the three groups were significantly different from each other (Table 7). The between-group comparisons revealed that the effect for instruction was due to the following contrasts: IEF better than IEM, IEF better than NEI, IEM better than NEI. In other words, the results revealed that interaction enhancement with form-focused debriefing was superior to the other two treatments and interaction enhancement with meaning-oriented debriefing was superior to the treatment in which interaction was not enhanced. Though no posthoc test was available on the significant interaction between test and group, in light of the results shown in Figure 1 it would seem that the interaction was due to the fact that the three groups were different from each other on the posttests.

Table 3. Means and standard deviations on the pre- and posttests

<u>Experimental Group 1 (IEF) N = 26</u>		
<u>Test</u>	<u>Mean (%)</u>	<u>Standard Deviation</u>
(Pretest)	40.00	12.97
(Posttest 1)	72.15	19.99
(Posttest 2)	74.62	17.15
<u>Experimental Group 2 (IEM) N = 27</u>		
<u>Test</u>	<u>Mean (%)</u>	<u>Standard Deviation</u>
(Pretest)	40.93	17.24
(Posttest 1)	55.00	14.42
(Posttest 2)	56.89	19.91
<u>Control Group (NEI) N = 25</u>		
<u>Test</u>	<u>Mean (%)</u>	<u>Standard Deviation</u>
(Pretest)	43.56	9.38
(Posttest 1)	46.00	11.89
(Posttest 2)	47.28	13.47

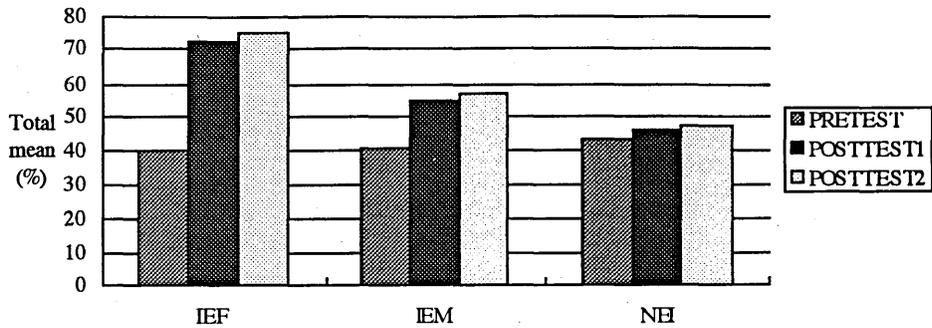


Figure 1. Mean total scores of the pre- and posttests

Table 4. Results of repeated measures analysis of variance for the total means.

Source	SS	df	MS	F	p
Between Subjects					
Groups	11119.646	2	5559.823	8.638	0.000*
Error	48273.350	75	643.645		
Within Subjects					
Test	15436.204	2	7718.102	128.011	0.000*
Test by groups	7957.110	4	1989.277	32.994	0.000*
Error	9043.907	150	60.293		

* p < .05

Table 5. Between-group comparison of means of the pretest

Mean	Group	Group		
		IEF	IEM	NEI
40.00	IEF			
40.93	IEM	.806		
43.56	NEI	.356	.490	

Table 6. Between-group comparison of means of the immediate posttest

Mean	Group	Group		
		IEF	IEM	NEI
72.15	IEF			
55.00	IEM	0.000*		
46.00	NEI	0.000*	0.058†	

*p < .05

†p < .10

Table 7. Between-group comparison of means of the delayed posttest

Mean	Group	Group		
		IEF	IEM	NEI
74.62	IEF			
56.89	IEM	0.000*		
47.28	NEI	0.000*	0.047*	

* $p < .05$

6. DISCUSSION

Hypothesis 1, which predicted that interaction enhancement with form-focused debriefing would have a greater effect on L2 learners' restructuring of their interlanguage grammar of English articles than non-enhanced interaction, was supported by this study. This finding suggests that providing explicit grammar instruction along with implicit form-focused feedback within the framework of communicative language teaching can be effective in helping L2 learners constrain their overgeneralization errors. This finding supports the assumption that explicit linguistic knowledge has positive effects on L2 learning (Ellis, 1993; Sharwood Smith, 1981).

Hypothesis 2, which predicted that interaction enhancement with meaning-focused debriefing would have a greater effect on L2 learners' restructuring of their interlanguage grammar of English articles than non-enhanced interaction, was supported by this study. This result suggests that form-focused feedback which accompanied no explicit grammatical explanation was beneficial for L2 learners to restrict their overgeneralized rules. This finding parallels Carroll and Swain's (1993) finding on a positive effect of implicit negative feedback.

Hypothesis 3 was supported by this study. It predicted that interaction enhancement with form-focused debriefing would have a greater effect on L2 learners' restructuring of their interlanguage grammar of English articles than interaction enhancement with meaning-focused debriefing. This result suggests that explicit grammar instruction combined with implicit grammar instruction is more effective than implicit grammar instruction only. It should be noted here that the explicit grammar explanation provided during the form-focused debriefing lasted for a very short time (3-5 minutes per session). It seems that such short explicit grammar instruction was not effective by itself. It is more plausible to assume that the grammatical explanation was effective because it was incorporated in task-based instruction in which the function of the target form was made transparent. In other words, the grammar instruction exerted impact on learners' restructuring of interlanguage because the communicative function of the target form was clarified in the preceding training phase.

The results obtained in this study indicate that interaction enhancement was effective to assist L2 learners in restricting their overgeneralized errors with English articles. What should be emphasized here is that the amount of the form-focused feedback provided in interaction enhancement was very limited. During three 30-minute training sessions only 9 clarification requests were provided. Except for this form-focused feedback the emphasis of instruction was placed on exchanging information with other speakers of English to solve a problem throughout the training sessions. What the present study suggests, therefore, is that such a short form-focused treatment was effective to guide L2 learners to notice their overgeneralized errors and modify them when it was integrated into a meaning-oriented task. The results give strong evidence to the assumption that L2 instruction which incorporates form-focused instruction into meaning-focused instruction in a timely fashion is the most effective for L2 acquisition (Doughty, 1993a; Lightbown & Spada, 1990; Spada, 1987; Spada & Lightbown, 1993).

Another issue to be noted in the findings of this study is that the effect of instruction lasted at least for five weeks after the instructional treatments. In the previous focus-on-form studies, confusing results on long-term effects of instruction have been reported (see Ellis 1990 for a review). This study presents a finding which contributes to the better understanding of conditions which promote long-term effects of L2 instruction.

7. CONCLUSION

From the results of the present study it can be concluded that interaction enhancement in which L2 teachers enhance interaction by providing form-focused feedback has a positive impact on L2 learners' restructuring of their overgeneralized grammar. And the results also suggest that short explicit form-focused instruction can strengthen the effect of interaction enhancement. A pedagogical implication which this study has for L2 learning and teaching is that L2 teachers can help their students develop their interlanguage by providing them with form-focused feedback within the framework of communicative language teaching. The results of this study, along with the findings of the studies on the learners in acquisition-rich contexts, suggest that proper balancing 'focus on form' with 'focus on meaning' is crucially important in L2 learning and teaching. Further research to find various effective ways to fuse focus on form and focus on meaning is needed.

NOTES

- ¹ See Chaudron (1988) for an extensive review on early studies on the role of teacher feedback in L2 classroom.
- ² This finding contrasts with the finding of Carroll, Swain and Roberge's (1992) study, which revealed that learners who received explicit negative feedback could not extract the expected generalizations from the feedback.
- ³ See Harley and Swain (1984), Higgs (1991), and Higgs and Clifford (1982).
- ⁴ The present researcher was the instructor in this experiment.
- ⁵ Master (1990) developed a systematic way to teach English articles by making a clear distinction between 'identification' (definite NPs) and 'classification' (indefinite NPs). Master (1994) examined the effect of this binary system on learning English articles in ESL settings and reported its positive effect.
- ⁶ All the interactions during the training sessions were video-taped and transcribed for quantitative and qualitative analyses.
- ⁷ The level of significance was set at .05 in this study.
- * Further analyses of the data obtained in this experiment will be reported at the AAAL conference held in Chicago in 1996.

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APPENDIX

SCENARIO 2

ROLE A (student): You rented a one-bed room apartment last week, but you could not see the room because the former renter was still in the room. You decided on the room because your real estate agent told you that the apartment house was very new and clean. However, you have found some problems as described in the following pictures. Complain to the agent about the problems and tell him/her to offer you a better room.

ロール A (学生) :先週、一間のアパートを借りました。前の住人がまだ部屋に住んでいたため部屋を見ることはできませんでしたが、不動産屋がそのアパートは新しくきれいだと言ったのでその部屋に決めました。ところが、次の絵が示すようにいくつかの問題が見つかりました。不動産屋に抗議してもっといい部屋を与えるように言って下さい。

