Degree of Improvements and Types of Errors in EFL Revision on Computer: An Analysis of an Essay Project

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ABSTRACT

This paper reports the results of qualitative and quantitative analyses of an essay project in which 40 EFL learners each wrote a 600-word-long essay using a computer. Through 6 rounds of revisions, the essays were gradually polished into their final forms and published in a booklet format. Analyses of the (1) total number of words, (2) mean sentence length, (3) mean T-unit length, (4) Flesch Reading Ease, and (5) Flesch-Kincade Grade Level of drafts 1-7 showed that the quality of the drafts significantly improved in the course of rewriting based on direct/indirect suggestions by instructors. Errors observed in the drafts were tallied, classified, and scrutinized, revealing some of the learners' interlanguage rules and L1 transfer.

1. INTRODUCTION

1.1 Quality vs. Quantity in Writing

Whether to pay more attention to the quality or to the quantity of writing has always been and still remains one of the most divisive issues in ESL/EFL writing instruction (Okihara 1985). Those who put more emphasis on the former generally have learners write in a relatively controlled situation, before, during, and after which they attempt in some way to prevent, correct, and minimize learner errors. On the other hand, those who take a pro-quantity position seem to believe in the power of the writing experience itself. They often argue

that quantity will take care of quality in the course of time and naturally tend to downplay the necessity of conscious instructor attempts to free learners from errors. ESL research has sometimes shown the superiority of the quality approach (Dykstra and Paulston 1972), but at other times has indicated a greater promise in the quantity approach (Briere 1966).

In Japanese EFL one of the best known and thus influential studies in this field may be the series of experiments conducted at Tokyo Gakugei University (Hatori et al. 1990; Kanatani et al. 1993; Tono et al. 1995; Tono 1995) The Gakugei series was carried out to substantiate the researchers' basic position that "direct correction of surface errors by the teacher would not bring about any benefit that counterbalances the time spent on it" (Kanatani et al. 1993, p. 11). The results of the experiments for the most part supported their hypotheses, consequently giving the impression that teachers could dispense with the time-consuming practice of direct correction, letting their students write more freely, more casually, and more frequently.

However, though the Gakugei series was excellent research in its own right, we cannot but notice a limitation in the design with respect to allowing the direct application of the results in classrooms. For one thing, during the studies feedback was given not by the classroom teacher in charge of the students but by researchers from outside the school. Every classroom teacher knows that student behavior in general depends very highly on who is giving instructions. One undeniable possibility is that the learning behavior of the subjects, and consequently the results, of the Gakugei series could have been almost totally different had the feedback been provided by someone who, for example, the students were eager to learn from or who they knew they had better listen to for their own benefit, interpersonal or academic.

For another thing, the effect of rewriting was unfortunately not within the scope of the study, although writing is and should be a

cyclical process in the real world. It is not a very realistic situation for any writer to have someone give them feedback on their writing of whatever type but not do anything further about it. Regardless of whether or to what extent the original writer complies with the suggestions in the feedback, they will most likely produce a second draft.

In short, teacher correction could have produced different effects if, for example, rewriting based on the feedback was required by the classroom teacher, which was indeed the case reported by Shizuka (1996). After all is said and done, a desirable course of action to take —though neither a new nor an impressive one—seems to be to incorporate both quality or accuracy-oriented tasks and quantity or fluency-oriented tasks into a writing course, something which certainly sounds right, but is it feasible?

1.2 Writing on Computer

One promising answer seems to lie in the use of computers. Since the advent of the computer age, EFL researchers/teachers have been testing and utilizing this wonderful invention in their writing courses (Fujieda & Mann 1983—1995, Mann 1994; 1995; Narisawa 1993; 1995; Kobayashi 1995). For the past several years, in particular with the rapid expansion of computer networks, there has been a still greater surge of interest in switching from paper and pencil to keyboard writing.

Although using computers instead of pencils to produce only the first draft—which is at the same time the final product—does not by and of itself seem to improve learner writing quality (Hult 1985), there are reasonable grounds to believe that the use of word processors for the recursive process of revising can and will. By freeing writers from manual rewriting of the whole text and thereby increasing the frequency and thoroughness of editing work, word processors may help refine quality. This may also increase the quantity of the final draft

because the computer can store in its memory everything the writer has typed in before.

In addition, a small but significant feature may be the spelling checker that most word processing software today is equipped with. If one of the most prominent differences between EFL writers of upper and lower levels is their ability to spell correctly (Itagaki and MacManus 1995), and if the use of a spelling checker, as expected, does decrease the number of incorrect spellings in EFL writing (Yano 1996), the use of word processors can be expected to greatly reduce the psychological burden on EFL students.

2. THE STUDY

2.1 Research Questions

This paper reports the results of the qualitative and quantitative analyses of an essay writing project similar to that reported by Mann (1995). Though small in scale, the study attempted to shed some light on the following research questions:

(1) Does the quality of EFL writing indeed improve in the course of revising with a computer?
(2) Does the quantity of the written product indeed increase as the drafts are revised with a computer?
(3) What types of errors are made in the rewriting process?

2.2 Essay Writing Project

Under the name "Essay Project 96", 40 first-year students at Fukushima National College of Technology (equivalent to first year high school students) each wrote an approximately 600-word-long essay using laptop computers. They were free to choose any topic they liked as long as the content was of a persuasive rather than a narrative nature. The reason for this restriction was that essays for persuasion were considered to be more appropriate for introducing Western-style

text organization. Students spent approximately 30 hours in class on this project, and reportedly a similar amount of time outside class over a three-week period in January, 1996. Prof. Ronald J. Craig and I were in charge of the editing work. The final products (drafts 7) were compiled into a booklet entitled "Lend Me Your Ears."

2.3 Types of Editing Suggestions

The types of feedback adopted in this project were verbal comments, coded indirect suggestions, and direct corrections. In the first phase of editing, it was mainly organization that received the greatest attention. Suggestions at this stage were provided in the form of verbal comments in L1. Only when the organization was considered to be satisfactory were suggestions concerning grammatical problems provided. Used for this purpose were the eight Japanese codes shown in Table 1. When a problem was detected, one of the codes was inserted immediately after the part that contained a problem. Japanese characters, instead of more commonly used English coding (e.g., WC for "WORD CHOICE"), were adopted for their transparency of meaning and their high visibility for EFL learners in English texts.

It is very true that "the biggest dilemma any teacher who is required

Table 1 : Editing Codes

Code	Meaning
数	Number/Agreement Problem
時	Tense/Aspect Problem
動詞形	Verb/Quasi-Verb Form Problem
品詞	Word Class Problem
ひとつの文に	Choppy sentences. Combine them into one.
ない	Something is missing here.
主語述語？	Though understandable, needs a complete change in structure.
わからん	Totally Incomprehensible.

to guide students through the process of extended writing and rewriting faces" is, "after all is said and done, who is doing the rewriting, them or me? ... Will I ever be able to look at a 'final product' which I can honestly say is *their* writing instead of mine?" (Mann 1995, p. 157-158) However, it did not seem a wise choice to completely exclude direct correction or provision of more desirable forms. For example, word choice problems are known to prove rather difficult for self-correction (Itagaki and MacManus 1995). Therefore, indirect codes were used when a problem was judged to be one caused by lack of attention or one that could be solved by simply checking a dictionary, whereas alternative forms were explicitly provided—ALL IN CAPITAL LETTERS—when the problem seemed to be the result of a lack of, rather than the non-activation of, knowledge. Capital letters were used to force students to retype the part in small letters themselves, which was expected to heighten, to some extent at least, their awareness of the readily provided form.

2.4 Data Collection

2.4.1 Drafts

Since a computer network was not yet available, editing/revising was carried out by exchanging floppy disks, on which drafts were saved as text files, between students and instructors. First, students each wrote a Draft 1 (D1) with their own NEC laptop personal computer and submitted the disks to me. Reading the disks with an Apple PowerBook 5300 CS, I made a copy of D1, typed in editing suggestions or corrections, and saved the results as E1, and then returned the disks to the students. This process was repeated until the students had produced a D6 and submitted their disks, this time, to Prof. Craig. He then gave the drafts a final polishing, saved the results as E6, and returned the disks to the students. Finally, students handed in to me their final product, D7, on floppy disks on which were saved 13 files

(D1, D2,..., D7, and E1, E2,..., E6, if they had not failed to submit the disks as scheduled). The whole data of 15.5 megabytes was saved onto the PowerBook 5300 hard disk for quantitative and qualitative analyses.

2.4.2 Retention Test

For the purpose of assessing the extent to which learners were able to retain the writing quality of their final drafts—and of encouraging them to do so to the best of their ability—a pre-announced writing test was given in a class period 30 days after the final drafts were submitted. In this test, students were required to reproduce in 50 minutes exactly the same essays as their D7. Due to external constraints, they wrote this time not with keyboards but with paper and pencil. Scoring was by the exact word method; that is, the reproduced essays were marked according to the extent of their closeness to the original essays in terms of exact wording. The retention score was calculated using the following formula:

$$\text{Retention Score} = \{To - ((To - Tr) + ID)\} / To \times 100$$

To: the total number of words in D7

Tr: the total number of words in the reproduced essay

ID: the number of words incorrectly or differently reproduced

It can be seen that the obtained value shows what percentage of the D7 text was correctly reproduced by the student. Students had been informed of the date and the significance of this test, and preparation was strongly recommended.

2.4.3 Questionnaire

After the retention test was given, printed questionnaires were given out to investigate subject perceptions of writing with computers and their behavior in the essay project.

2.5 Scope of the Data Analysis

For the examination of the overall improvement by draft and of the degrees of retention, drafts 2-7 and the reproduced essays of 25 students who submitted all seven drafts were analyzed. The D1 texts were not included in the analysis because most of these were written in Japanese, in an outline format. On the other hand, for the investigation of the types of errors made, all the edited drafts (E1-6) by all 40 learners were scrutinized. The responses of all 40 subjects to the questionnaire were investigated as well.

2.6 Methods of Analysis

2.6.1 Overall Improvement

Indices used to measure the overall quantitative and qualitative changes by draft were (1) the total number of words in a draft, (2) the average number of words in a sentence, (3) the average number of words in a T-unit, (4) Flesch Reading Ease, and (5) the Flesch-Kincade Grade Level. All these values, except (3), were automatically calculated using Nisus Writer 4.1J's "Word Count" function. The number of T-units was calculated by first manually inserting a slash (/) after every T-unit and then counting the number of slashes with the "Find/Replace" function. All this information was stored into data sheets of Statview J4.11 and one-way repeated measures ANOVAs were run.

2.6.2 Types of Errors

In order to examine the types of errors, a share-ware search tool "Fairu Kensaku Ken Pochi (File Search Dog Pochi)" was used. This software searches for a given keyword in all the files in a given folder, shows the number of occurrences, and lets the user browse through the context in which the keyword appears without actually opening the files. Using the above mentioned codes in Japanese characters as

Table 2 : Types of Errors Analyzed

Missing Problem	Missing word or words
Number Problem	Incorrect use of singular or plural noun forms
Agreement Problem	Non-agreement of a subject and a verb, or a verb and a complement
Word Class Problem	Correct word choice but incorrect word class
Time Problem	Tense and/or aspect problems
Verb Form Problem	Problem with verb or quasi-verb usage

keywords, the occurrences of the following problems shown in Table 2 were tallied and analyzed.

Although what types of errors most successfully lend themselves to self-correction is an issue of great interest, its investigation was not within the scope of this study. The results of sentence combining prompted by the code「ひとつの文に」were not explored in this study, either. The results concerning these issues will be reported in a future study.

3. RESULTS AND DISCUSSION

3.1 Overall Improvements

Overall changes by draft from D1 to D7 measured using the five indices are shown in Table 3 and Figures 1-3. It can be seen that, in the course of repeated revising, (1) the total number of words increased significantly to approach the predetermined goal of 600; (2) the mean sentence length also significantly increased from 9.9 to 12; (3) the mean T-unit length also significantly increased from 9.1 to 10.7; (4) Flesch Reading Ease significantly decreased from 82.3 to 77.; and (5) the Flesch-Kincade Grade Level significantly increased from 6.4 to 7.4.

The significant growth of the total number of words demonstrates that the quantity of the product indeed increased in the course of revis-

Table 3 : Overall Mean Changes and ANOVA Results

	D2	D3	D4	D5	D6	D7	F	p
Total # of Words	321	509.5	555.4	575.5	578.9	585	31.17	<.0001
SD	203	98.3	78.1	56.9	61.5	40.5		
Mean Sentence Length	9.9	10.3	11	11.3	11.8	12	12.89	<.0001
SD	1.9	1.6	2.4	1.8	2	1.9		
Mean T-unit Length	9.1	9.4	9.9	10.2	10.7	10.7	23.55	<.0001
SD	1.6	1.3	1.5	1.6	1.7	1.7		
Reading Ease	80.7	80.2	79.4	78.7	77.6	77.2	10.32	<.0001
SD	5.9	6	5.4	4.9	4.4	4.6		
Grade Level	6.4	6.6	6.9	7.1	7.3	7.4	12.49	<.0001
SD	1.1	1.1	1.1	1	1.1	0.8		

ing. The significant change measured by the other four yardsticks indicates that the quality of writing, mainly in terms of syntactic maturity, also improved, as was expected. According to Flesch (1948), a Reading Ease score between 80 and 90 is classified as "Easy" whereas one between 70 and 80 is described as "Fairly Easy". Therefore the change from D2 to D7 could be described as a shift from an "Easy" to a "Fairly Easy" style by native speaker standards. All these results indicate that the quantity increased and the quality of the drafts improved steadily in the process of revising based on the feedback provided by the instructor.

3.2 Retention Test

The mean score of the retention test was 89.4 and the standard deviation was 11.8. This means that, 30 days after its completion, approximately 90% of the final draft was correctly reproduced on the average.

Figure 1 : Total Number of Words

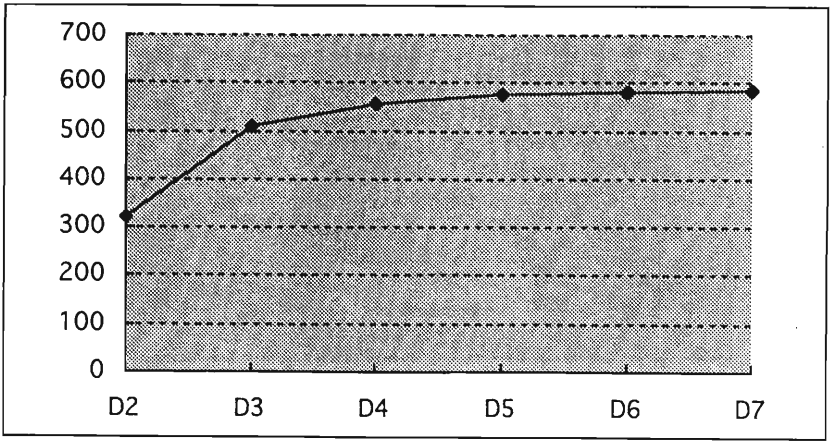


Figure 2 : Mean Sentence & T-unit Length

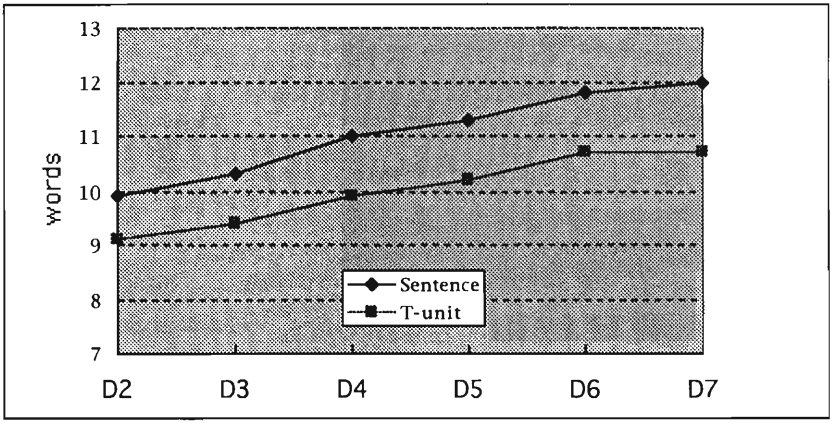


Figure 3 : Reading Ease & Grade Level

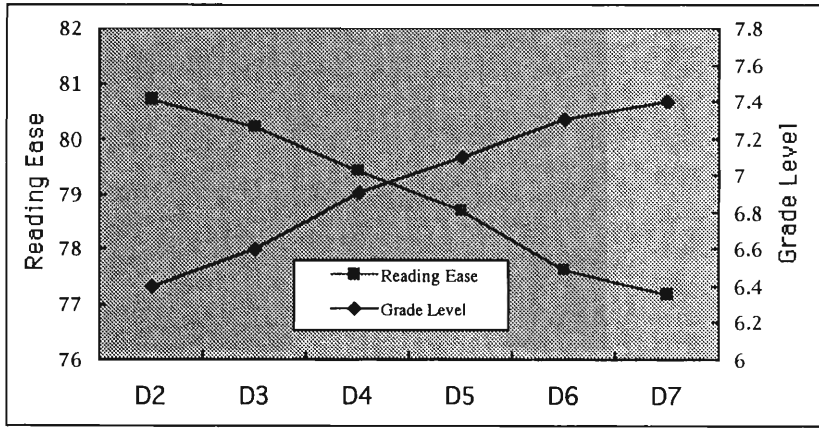


Table 4 : Frequencies of Each Type of Error

Type	Missing Problem	Agreement Problem	Number Problem	Word Class Problem	Time Problem	Verb Form Problem
Tally	284	104	145	50	172	112

3.3 Types of Errors

The number of occurrences of each type of error in E1-E6 is tabulated in Table 4.

3.3.1 Missing Problem

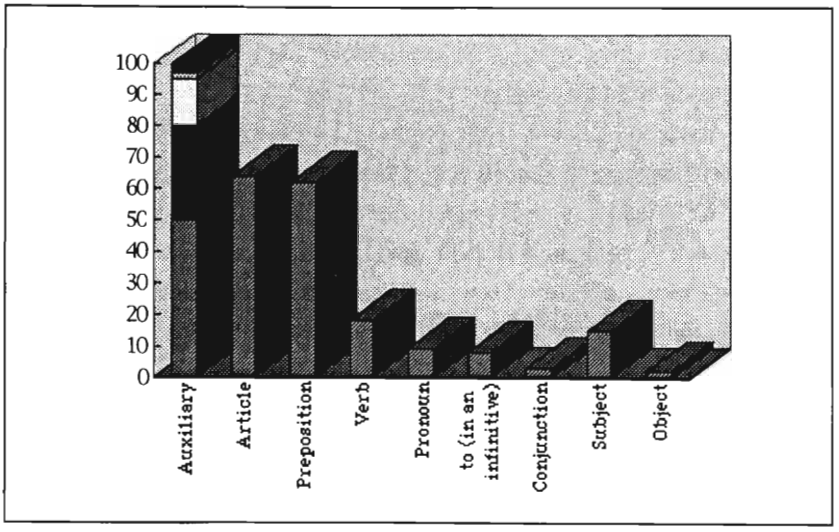
Frequencies of missing words are shown in Table 5 and in Figure 4. By far the most frequently omitted words were auxiliary verbs, followed by articles and prepositions.

50 out of 70 auxiliary omissions were those of "will". This could be regarded as an example of negative transfer from Japanese, since both English "will+root form verb" (e.g., will go) and its present form (e.g., go) can often be expressed by an identical form in Japanese

Table 5 : Missing Problem

[One Word Missing]		[Words Missing]	
Auxiliary	100	S + V	3
will	50	Subject	15
be	30	Object	2
should/must	15		
can	2		
do	3		
Article	64		
Preposition	62		
Verb	18		
Pronoun	9		
to (in an infinitive)	8		
Conjunction	3		
Total	261		20

Figure 4 : Missing Problem



(e.g. *iku*). Out of the 50 "will" omissions, as many as 22 occurred in a main clause in the conditional structure beginning with "If..." (e.g., If we have a little courage, Japan (will) become a good country.)

The second most frequently omitted auxiliary verb was "be". Examples were:

Many desks (are) made of grand trees.

If you (are) smoking, you should stop it.

I want to help other people who (are) worried [about] something.

They (are) loved by young girls.

This also is quite explicable since an auxiliary "be" does not bear much substantial meaning and therefore may well be paid little attention to when EFL learners are struggling to find words to convey what they mean.

The recurrent elision of "will" and "be" was in sharp contrast with much fewer omissions of other auxiliary verbs like "should" or "can". These two words convey more concrete meanings than the first two. Also, the Japanese equivalents of these two auxiliaries, *beki* and *dekiru*, respectively, may have been too salient to be overlooked or disregarded by the subjects.

With regard to articles, the commonly held belief by classroom teachers that their omission is one of the most persistent problems with Japanese EFL learners was indeed demonstrated to be true. It seems that the use of articles, which do not have counterparts in Japanese, need to be even further emphasized to Japanese EFL learners.

A closer look into the third most frequently omitted class of words, prepositions, revealed an intriguing pattern. That is, in all 62 cases, omitted prepositions were those which would be translated by one-mora Japanese case markers. Examples were:

I was told (by) them. [karera ni]

Chibi was barking (in) a loud voice. [ookina koe de]

Many kinds (of) animals are disappearing. [shurui no]

If you are afraid (of) dogs, .. [inu wo]

She didn't listen (to) what I said. [iu koto wo]

This phenomenon may be interpreted as evidence that the subjects were conducting word-by-word translation from Japanese to English rather than "thinking in English"; in so doing, they may have overlooked these little particles, every one of which would be written with only one Japanese kana character.

3.3.2 Agreement Problem

There were 104 cases where a noun and a verb did not agree with one another when they should have (Table 6). The first thing noticed upon examination of Figure 5 is the two longest bars in the row of "Other Verbs", which indicate that the majority of instances of this problem occurred in relation with verbs other than "Be". This could be explained by the fact that the difference between a non-Be verb in the 3rd person singular (e.g., likes) and its unmarked present form (e.g., like) is far less prominent than that between different forms of "Be" (e.g., is and are).

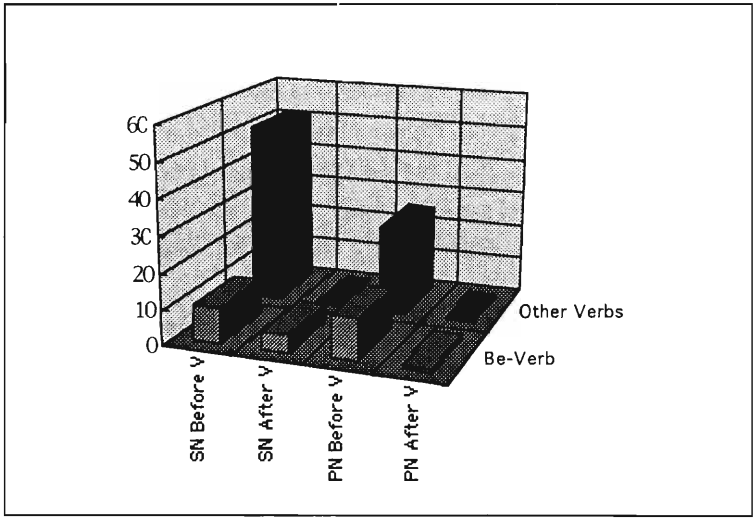
3.3.3 Number Problem

The number of instances of Number Problem is shown in Table 7

Table 6 : Agreement Problem

	Be-Verb	Other Verbs	Total
Singular Noun Before Verb	10	51	61
Singular Noun After Verb	5	0	5
Plural Noun Before Verb	12	25	37
Plural Noun After Verb	1	0	1
Total	28	76	104

Figure 5 : Agreement Problem

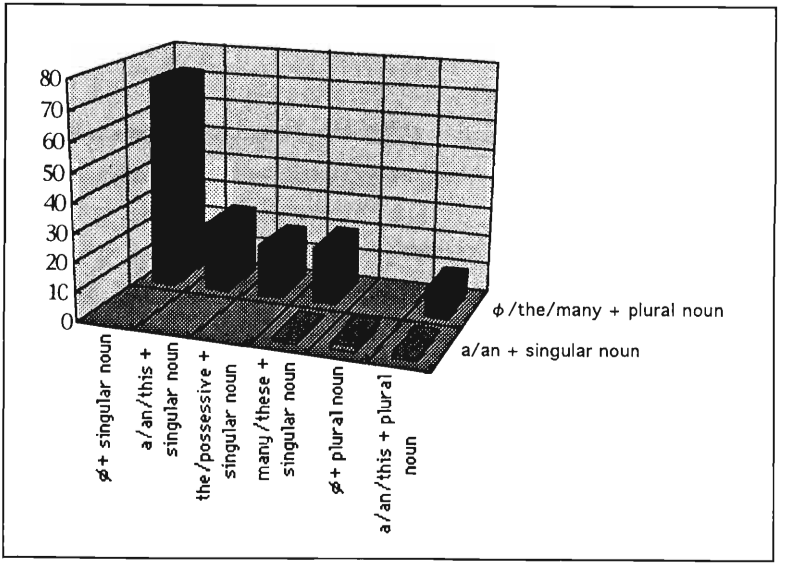


and Figure 6. A single glance at the figure shows that the overwhelming majority of these cases involve using a singular noun in place of a plural one, rather than using a plural noun instead of a singular one. 134 out of 145 cases, or 92%, were of the former type. Of the 134 should-be-plural nouns, 72 or 54% were singular nouns without any determiner, or "bare" nouns. This tendency is quite understandable when we remember that the L1 of the students, Japanese, has no dichotomy of singular vs. plural. Therefore the above mentioned phenomenon of using singular nouns rather than plural ones should not be interpreted as the subjects tending to opt for singular but rather as indicating that they are most often not even conscious of the singular/plural concept itself. Therefore, it is believed that repeatedly reminding the learners of the number concept and persistently telling them never—except in some cases, of course—to use a noun in its "bare" form can prevent the occurrence of the bulk of prospective number problems.

Table 7 : Number Problem

	a/an+singular noun	ϕ/the/many+plural noun
ϕ+singular noun		72
a/an/this+singular noun		23
the/possessive+singular noun		18
many/these+singular noun	1	19
ϕ+plural noun	2	
a/an/this+plural noun	1	9
Total	4	141

Figure 6 : Number Problem



The second highest frequency of 23 was that for using a singular determiner and a singular noun (e.g., Young people today often act in ?a group/There are many career women in ?a foreign country) where a plural noun was preferable. Unlike using a noun in its "bare"

form, this type of error is a sign of an activated awareness of the number concept but also of a need for further instruction.

Of interest is the fact that there were 30 cases in all where a plural determiner co-occurred with a singular noun (e.g., many foreigner) or vice versa (e.g., this reasons). These cases could also be interpreted as the number concept being paid some, but insufficient, attention.

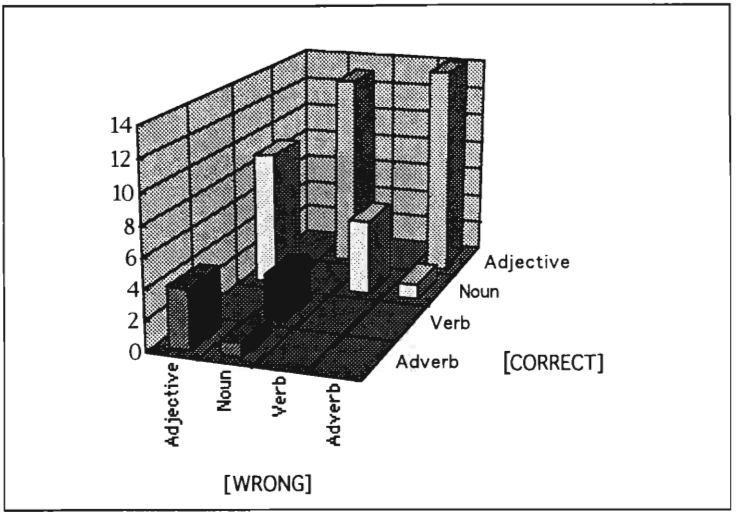
3.3.4 Word Class Problem

The most frequently observed error type in this problem was that of using an adverb with an -ly ending instead of the corresponding adjective (e.g., He barked in a *loudly voice/The girls are gay and *showily). Actually this type of error is quite commonly seen in EFL classrooms in Japan. There seems to be an interlanguage rule among Japanese EFL learners that a word ending with -ly modifies a noun. However, how they formulate this rule is not quite clear. This cannot be a negative transfer from L1 since the Japanese equivalents of an adverb and the corresponding adjective are clearly different in their forms. Nor does it seem to be an error made by analogy or overgeneralization because learners cannot have received much input of the rare collocation of "an -ly ending adjective+noun". When and how this inappropriate rule is formulated needs further research.

Table 8 : Word Class Problem

[WRONG]	Noun	Verb	Adjective	Adverb	Total
[CORRECT]					
Noun		5	9	1	15
Verb	3				3
Adjective	13			14	27
Adverb	1		4		5
Total	17	5	13	15	50

Figure 7 : Word Class Problem



The second largest frequency (13) for this problem can be found in the category of using a noun in the meaning of an adjective (e.g., The teachers have to teach what kind of bullying is *danger/People today are *luxury). The psychology behind this type of error can easily be understood because the Japanese equivalents for the noun and the adjective of these words are identical; e.g., "danger" and "dangerous" can both be translated as "kiken". It can be assumed that the students first thought of a Japanese word and then translated it directly into the noun, probably with the help of Japanese-English dictionaries. This supposition seems plausible since most of the words incorrectly used in this category were relatively difficult ones for the subjects in this study; e.g., society, freedom, convenience, cleanness, obedience, indifference, pleasure, enthusiasm, etc.

In addition, nine cases were found where an adjective was used in place of a noun (e.g., I was brought up in an only child *environmental/I like his natural *funny). No systematic theory seems to be able

to explain this type of error except that it is caused out of mere carelessness or faulty memory.

Whatever the reason or the psychology behind them, the two most dominant tendencies were (1) the confusion between an adjective and an adverb and (2) the mix-up between a noun and an adjective. 36 out of 50 occurrences, or 76%, of the Word Class Problem cases in this study fell into either of these two categories. It is therefore expected that intensive instruction in these two areas would prevent the majority of possible future word class confusions.

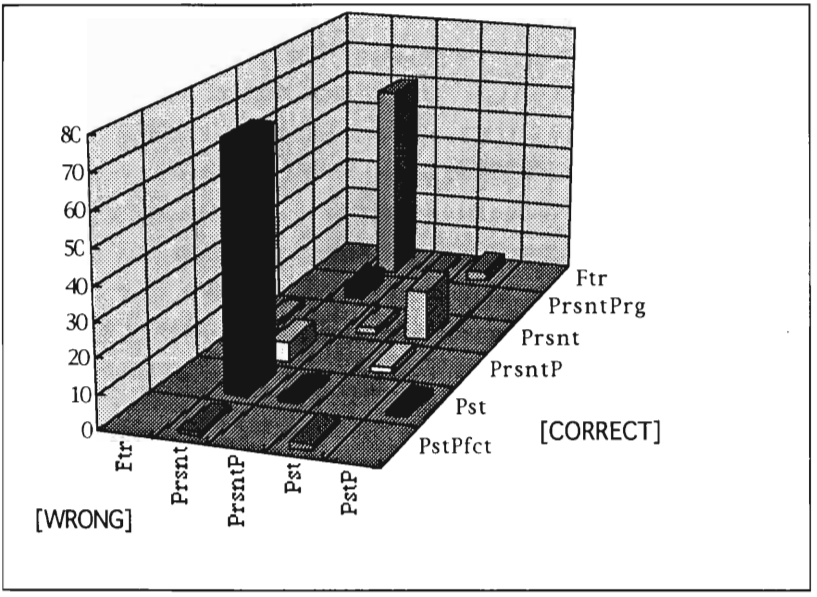
3.3.5 Time Problem

Table 9 and Figure 8 show frequencies of Time Problem cases. The largest number of occurrences was observed in the category of using the present tense in place of the past tense. The second most frequent phenomenon was using it where the future tense (which refers in this paper to "will+root verb") should have been used. The third most salient problem, though not so frequent as the first two, was the inversion of the first: using the past tense instead of the present. Let us con-

Table 9 : Time Problem

[Wrong]	PstPfct	Past	PrsntPfct	Present	Future	TOTAL
[Correct]						
Past Perfect		2		1		3
Past	1		1	73		75
Present Perfect		2		6		8
Present		15	2		1	18
Present Progressive				4		4
Future		3	1	60		64
Total	1	22	4	144	1	172

Figure 8 : Time Problem



centrate on and take a closer look at these three phenomena.

To explore the context of these problems, types of Time Problem were cross-tabulated against the contexts of occurrences in Table 10. The column of the wrong use of the present tense in place of the past shows that 14 cases took place in simple sentences, 50 cases in complex sentences, and 6 cases in compound sentences. The 50 cases in complex sentences consist of 11 in main clauses and 39 in subordinate clauses. Examples were:

I asked her why she *does not use her car.

(Watashi wa kanojo ni naze kuruma wo *tukawanai* no to tazuneta.)

I told CHIBI that they *have to go to a company or school.

(Watashi wa Chibi ni minna kaisha ya gakkou ni ikanakereba *naranai* to itta.)

I thought about where I *want to go.

(Watashi wa jibun ga doko ni *ikitai* ka wo kangaeta.)

It is apparent that most of these cases were results of negative transfer from Japanese since the incorrectly used present tense would have been expressed with the present tense equivalent in Japanese, as shown in italics above. Of the 39 cases, 24 took place in that-clauses.

Now let us take a look at the column of the use of the present tense in place of the future tense. Of the 60 total occurrences, 18 took place in simple sentences, 34 in complex sentences, and 6 in compound sentences. Most of these cases could be regarded again as caused by negative transfer from L1 since the wrongly used forms would have been expressed with the present tense equivalent in Japanese, as in the following examples:

I think they *don't become independent in the future.

(Karera wa shourai hitoridachi shinai to omou.)

They *are more and more popular.

(Karera wa masu masu ninki ga deru.)

In particular, 22 out of the 34 complex sentence cases took place in main clauses of complex sentences beginning with "If...".

If you don't put forth a courage, bullying *don't solve [won't be solved]

If Japanese people vote in this election, the Prime Minister *is chose [will be chosen] by Japanese people.

Let us now turn to the 15 cases of using the past tense in place of the present. Although at first sight this phenomenon of using a marked form (the past form) in place of an unmarked form (the present form) does not seem to be explicable except as being caused by mere carelessness, some could be explained as the negative influence of Japanese. In the following example, the past tense is likely to have been produced as a result of direct translation from Japanese.

We will have some advantages when bullying *was [is] solved.

Table 10 : Context of Time Problem

[CONTEXT OF OCCURRENCES				[WRONG]	Past Perfect	Past				Present Perfect			Present					Future	TOTAL
				[CORRECT]	Past	Past Perfect	Present Perfect	Present	Future	Past	Present	Future	PastPerfect	Past	Present Perfect	Present Progresive	Future	Present	
Simple Sentence						1	2	1				1		14	4	4	18	1	46
Complex S.	Main Clause							4	1					11	1		22		39
	Sub.	Noun C	that					1						24	1		11		37
			(other)					1					1	9					11
		Adv. C	when/as					2	1					2					5
			if			1		3			2								6
			although											1					1
			because											3			1		4
		Adj. C								1				3					4
Compound S	Before Conjunction				1			2	1								4		8
	After Conjuntion							1						6			4		11
TOTAL					1	2	2	15	3	1	2	1	1	73	6	4	60	1	172

(Ijime ga kaiketu saretara ikutuka riten ga aru.)

3.3.6 Verb Form Problem

Table 11 and Figure 9 show what type of verb/quasi-verb forms were incorrectly used in place of what others. The highest bar in Figure 9 consists of 28 cases where the root form of a verb was used where a gerund should have been.

(A) Big problem among children is *bully.

My mother is particular about *cook.

I think it (=smoking) is much the same as *break a body.

But she didn't stop *smoke.

This type of error could be interpreted in two ways. The first possibility is that they were caused by the learners' incorrect assumption

that these words could be used to express the meaning of a gerund or simply that they are nouns. The second is that they used the root forms in spite of their knowledge that they were verbs. My speculation is that the first theory is likely to explain the first two of the above examples while the second hypothesis seems to hold in the other two.

My classroom observation is that the word "bully" is most often memorized by the students as an English equivalent of "ijime" (bullying, bullying case, the act of bullying). "Cook" as well may have been remembered by the writer as an English equivalent of "ryouri" (cooking). On the other hand, the third and the forth examples seem to be products of overlooking Japanese particles when translating. That is, "the same as break a body" (=the same as injuring your body) seems to be a word by word translation of "karada wo kowasu *no* to onaji", and "didn't stop smoke" is likely to have been produced from "suu *no* wo yamenakatta". In both cases, the particle "*no*", which creates a gerund-like meaning when following a verb, seems to have been overlooked or disregarded.

The second and the third most frequent types both concerned the passive voice; one was using "be+root verb" and the other was using a root verb where they had to be "be+past participle". Examples were as follows:

[be+root verb]

They hope that this disease is *cure.

I was *ignore by my friend.

The Prime Minister is *support by many Japanese people.

[root verb]

This problem can *solve in the future.

AIDS will not *infect....

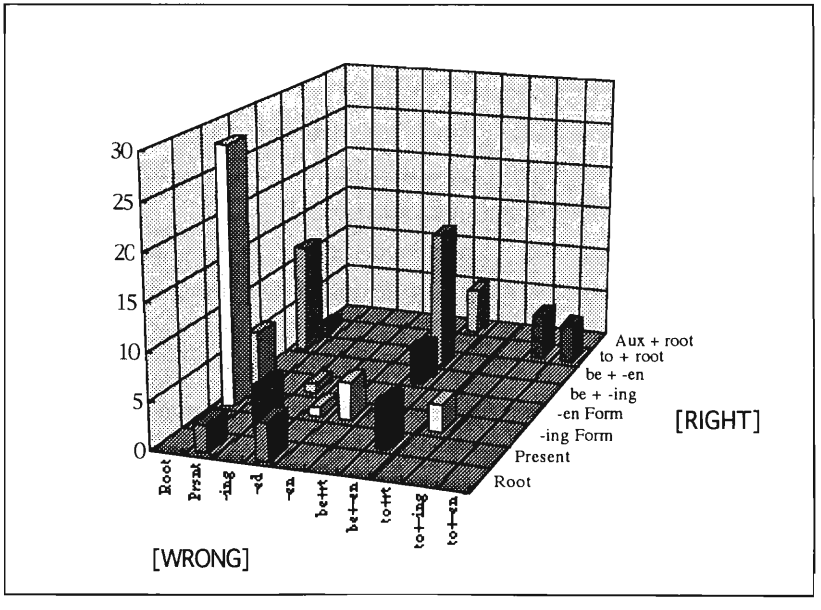
Modern life-prolonging treatment should *stop.

The former type seems to be mostly out of carelessness while some of the latter type may have been influenced by Japanese, since "kaiketu

Table 11 : Verb Form Problem

[WRONG]	Root	Present	-ing	-ed	-en	be+root	be+-en	to-root	to+-ing	to+-en	Other	TOTAL
[CORRECT]												
Root		3		4								7
Present			5				5					10
-ing Form	28			1	4			3				36
-en Form	6		1									7
be+-ing						4						4
be+-en	12					15						27
to+root	1								5	4		10
Aux+root						5						5
Other					1						5	6
TOTAL	47	3	6	5	5	24	5	3	5	4	5	112

Figure 9 : Verb Form Problem



dekiru" may well be translated as "can solve" and "yameru bekida" as "should stop".

When we look at the TOTAL row in Table 11, we notice that the two most frequently used wrong forms were "root" (47 cases in all) and "be+root" (24 cases). Although the excessive use of root verbs, namely unmarked forms, is predictable, such a frequent use of "be+root" seems to be of some interest. This may be a result of imprinting "be verb" at the earliest stage of learning English. It is known that in Japan, structures using "be", e.g., "This is a pen", "He is a student" are among the first to be introduced and orally practiced at junior high schools. It may be possible that this "imprinted" image of "be" is so strong that it is, even after several years of learning the language, still subconsciously felt to be an all-purpose predicate.

Lastly, let us discuss one type which was not large in number of occurrences but which was of interest: the use of the past form in place of the root form. All four examples were observed along with a past auxiliary verb as follows:

She would *came to my seat at first.

If I didn't go to school, I would not *learned many things.

...but I couldn't *understood and said....

Why did they *had to suffer from friends?

These could be regarded as hyper-correction, where writers made a mistake by using one too many past forms in describing a past event.

3.4 Questionnaire

In the questionnaire, the subjects rated the 13 statements below on a 7-point scale, 7 being "I completely agree" and 1 being "I completely disagree". The results are shown in Figure 10, which shows the mean score of the ratings.

S 1 : I prefer computer writing to paper pencil writing.

S 2 : I can type on a keyboard faster than I can write on paper.

S3: I can notice my own mistakes more easily on the computer screen than on paper.

S4: A computer is effective for revising my writing because it can save what I write.

S5: I can write a better quality draft with a computer than with paper and pencil.

S6: I can write a longer draft with a computer than with paper and pencil.

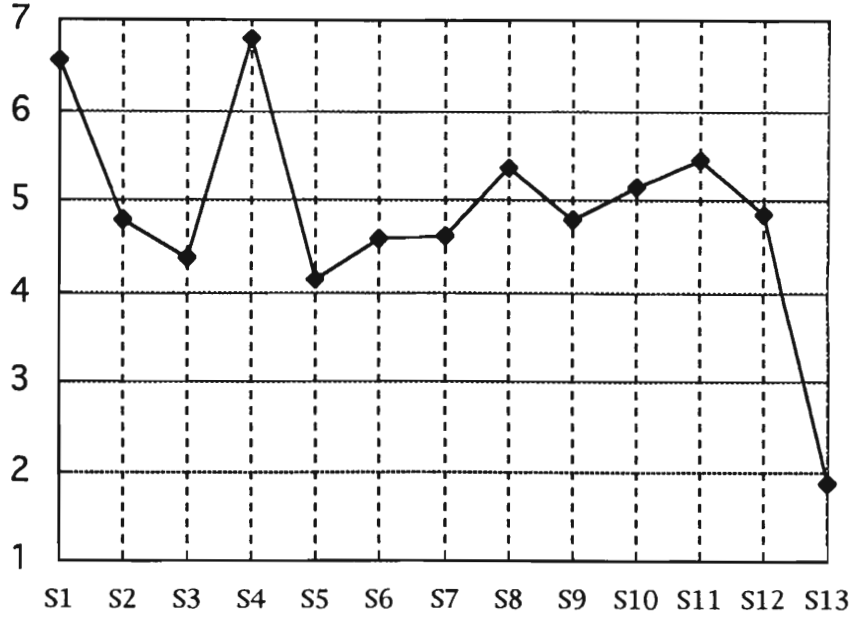
S7: When writing with a computer, I often delete, add, or rearrange words or sentences.

S8: I always use the spelling checker.

S9: Editing suggestions from the instructor were easy to understand.

S10: When copying the expressions provided by the instructor, I paid

Figure 10 : Results of the Questionnaire



much attention to their forms and meanings.

S11: When writing the drafts, I always consulted my English-Japanese dictionary.

S12: When writing the drafts, I always consulted my Japanese-English dictionary.

S13: When writing the drafts, I always consulted my English-English dictionary.

What can be seen from the figure is that most of the students preferred writing with a computer to paper pencil writing in spite of the fact that most of them cannot really (yet) type faster than they write on paper. They felt the computer's function of saving their writing was a great help for revising work though they were not very sure to what extent the use of a computer changed the quality or the quantity of their writing. Although copying is always easy with a computer, many of them tried not to do it mechanically. When writing, they often made use of the spelling checker and English-Japanese dictionaries, sometimes Japanese-English dictionaries, and rarely English-English dictionaries.

4. SUMMARY AND IMPLICATIONS FOR THE CLASSROOM

4.1 Summary

The results of this study can be summarized as follows:

4.1.1 Improvement

In the course of the repeated revising work with the help of suggestions and corrections by the instructors, the subjects' drafts significantly increased in total number of words and improved in terms of syntactic maturity.

4.1.2 Retention

The quality and the quantity of the final polished drafts were fairly

well retained when encouraged by the instructor.

4.1.3 Types of errors

The most frequently observed grammatical problems were:

- Omissions of auxiliary verbs, articles, and prepositions.
- Non-agreement between the subject and the verb, especially when the verb was not "be".
- Use of a "bare" noun, or a singular noun without any determiner, in place of a plural noun.
- Use of an adverb ending with "-ly" in place of an adjective, and a noun in place of an adjective.
- Use of the present tense instead of the past or the future tense, possibly caused by negative transfer from L1.
- Incorrect use of a root verb and the ungrammatical form "be+ root verb".

4.2 Implications

Although some claim that there is no need to correct grammar in teaching writing (Tono 1995), there are reasons to believe that there is. First, as was shown in this study, teacher correction, or rather teacher help, when provided repeatedly, does significantly improve the learner's written products. This seems especially true when computers are available as writing tools. It is evident that without the repeated help of the instructors, the essays could not have attained the quality and the quantity that they did in this project. It is also apparent that as many as 6 rounds of editing/rewriting would hardly been feasible had it not been done on computers.

It is true that guiding a large number of students, through whatever type of feedback or even with a computer, to accomplish an extended writing project should be described as time consuming by any standard. Nonetheless, whether or not the result of such dedication

"counterbalances the time spent on it" is a question which cannot be answered without referring to one's philosophy as a teacher and perception of the profession. Seeing the pride of my students in themselves when they had their own polished writings published in a booklet format was a joy which more than made up for three weeks of late nights and sleepy mornings. I believe this would be the same for many writing teachers as well if they agree with Mann (1994) when he writes, "Just as members of an orchestra or actors and actresses in a play look forward to the final polished performance, so should the writer" (295).

Second, as the mean score of the retention test in this study showed, the improved quality can be retained to a remarkable degree if students are encouraged to do so by the classroom teacher. Although it is an unrealistic expectation that all the newly learned structures, expressions, and vocabulary will be immediately carried over into their subsequent writing, it seems reasonable to believe that at least part of them will in time. Learners are, by definition, those who try to learn. If they try to learn, as was shown by part of the results of the questionnaire in this study, even from readily provided forms by teacher correction, they will learn. If they learn the new forms, it is only rational to assume that they will be able to use some of them in future writing.

Third and above all, dealing with errors in learner writings gives us an excellent opportunity to improve their "procedural knowledge" (Itagaki and MacManus 1995). Learner errors reveal to us, as this study did, in what contexts and to what extent learners can or cannot put their "declarative knowledge" to actual use, better than any grammar exercises per se ever could. They are like windows through which we can look into what students can actively do, not into what they know inertly. Grammatical rules which learners are reminded of or made aware of through teacher correction in the process of writing are

more likely to be stored into their procedural knowledge—knowledge they can actually put to use—than those which they only hear in lectures on grammar. Moreover, the corpus of learner writings, especially if stored as digital data in a computer, is a valuable resource from which grammar exercises can be produced which are truly relevant to those specific writers. Who can resist making use of learner writings to create writers who not only know about the grammar but can use it?

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APPENDIX

An Example of a D7

Is It Always Good to be Convenient?

When I was an elementary school student, the woods near my house were destroyed and an apartment house was built. My friends and I had always played in the woods and we liked the place very much. I saw a pheasant for

the first time in my life there. We had played hide and seek, we had caught butterflies, we had collected acorns all day long and we had been very happy. But the woods were gone. We lost our place to play in. Since then I came to wonder, "Is it really good to be convenient?"

My experience shows that places for children to play in are disappearing quickly. Of course there are parks. But most of them have no big trees and when children climb a tree, the adults get very angry. Some children want to stay home and play TV games because they think playing outdoors is no fun. They are making virtual nature in games and playing in the fancied forests instead of playing in the real forests. They stay home, just sit down and face to the TV screen and have fun.

In big cities, fields are also disappearing. There are many children who have never seen a vegetable growing in a field. They can see it only at grocery stores. The other day I watched a TV program about some elementary school students living in Tokyo. In the program they were drawing a picture of a corn field. To my surprise, in some students' pictures, the field was full of corns just like those you see in a shop! They thought corns are yellow and have no leaves, no long stem. I was shocked about it. Sadly, some adults just call these children "kids with no common sense".

Forests and fields are necessary not only for human beings but also for animals. I remember cats living in the woods near my house. Whenever I went there, I could always see them. The woods was their home. But now I can't see them any more because their home was gone. I don't know where they are living now. A lot of animals lose their home like the cats today. They wonder around towns and then the poor animals will be taken away to a public health center or will die on a street. Every year, the wild animals are disappearing because we are destroying their homes. Do you like zoos? I liked them very much when I was a little child. But many years ago, I knew they are prisoners. I was shocked and cried, "What a pity!" Don't you think so?

Many shops and buildings are being constructed and our lives are becoming more and more convenient. However it is clear that the forests and fields are getting smaller and smaller. We will have still less chances to touch nature. Therefore give children a chance to touch nature. We are living in a

very convenient world but everyone seems to be forgetting about nature. What a sad place this world would be if people forgot about nature! Please teach children what nature is before you call them "kids with no common sense."

Our world is always changing. Science and technology make our lives much more convenient and comfortable. We can go anywhere by car, we can buy anything in a shop and we can get any information from TV. However, at the same time Mother Nature is disappearing. Lots of animals lose their places to live. There are many children who do not know what the nature is because they can only see trees growing beside the roads. Whenever I see high buildings and a few trees growing near the roads, I wonder, "Is it always good to be convenient?"

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