Dissertation Title:
The effectiveness of computer-based materials
as a means of teaching the English article system

Researcher:
Fei-Yu Chuang
University of Warwick, UK
F-Y.Chuang@warwick.ac.uk

Research Supervisor:
Dr. Hilary Nesi

Fei-Yu Chuang

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Summary:

This study aims to evaluate the effectiveness of a set of electronic self-access grammar materials as a means of treating the article misuse of Chinese students on a British higher education foundation programme. It consists of a materials refinement, materials trialling, and materials evaluation. This final report will mainly document the process and results of the materials evaluation conducted between June and August 2005.

Materials Evaluation

A materials evaluation was conducted between June and August 2005, in which 24 Chinese college students participated. 15 students (the experimental group) volunteered to use the materials one hour per week for five consecutive weeks, and 9 others served as the control group. The evaluation aimed to investigate the effectiveness of the materials in improving students' use of the English article system as well as students' responses to the GrammarTalk materials. It collected the students' proofreading pre-test, immediate post-test vs delayed post-test data, and pre-treatment vs post-treatment essay writing. Students' responses to the materials were also collected through a questionnaire, and data analysis was conducted subsequently. The process of the evaluation study is shown in Table 1.

Table 1: The process of the evaluation study

Step	Date	The Control Group	The Experimental Group
1	Fri 7th Feb	Pre-treatment essay writing, Proofreading pre-test	Pre-treatment essay writing, Proofreading pre-test
2	Fri 11th Feb 1-2 pm	No treatment	GrammarTalk Session 1
3	Mon 14th Feb 9-10 am	No treatment	GrammarTalk Session 2
4	Mon 21st Feb 9-10 am	No treatment	GrammarTalk Session 3
5	Mon 7th March 9-10 am	No treatment	GrammarTalk Session 4
6	Mon 14th March 9-10 am	No treatment	GrammarTalk Session 5
7	Fri 18th March 1-2 pm	No treatment	GrammarTalk Session 6 (extra session in case of earlier problems)

8	Fri 18th March 4:30 pm	Immediate post-test	Immediate post-test Questionnaire survey
9	Maybe a month later (Beginning of April)	Delayed post-test	Delayed post-test
10	After the delayed post-test (April ~ May)	No treatment	Providing further opportunity for the students to use the materials on a self-access basis
11	May	Post-treatment essay writing	Post-treatment essay writing
Data Analysis and Report			
12	June ~ August	The two sets of data (pre-treatment vs post-treatment essays, proofreading pre-test vs post-test) will be analysed	
13	August ~ September	Preparation of final report	

Data analysis

This section briefly reports on the analysis of three two sets of data (proofreading pre-test, immediate post-test vs delayed post-test, pre-treatment vs post-treatment essays , and questionnaire data) and the results as follows.

Proofreading pre-test, immediate post-test and delayed post-test

Data from the three proofreading tests were processed (the proofreading text can be seen in Appendix 1). Invalid cases (cases with missing scores) were first excluded from the data set, and the remaining samples (11experimental cases and 7 control cases), although quite small, were analysed using SPSS. A t-test was calculated to assess whether the mean test scores of the two groups are statistically different in the pre-test, immediate post-test and delayed post-test respectively. No significant differences were found between the two groups in the three test scores.

The results show that the materials did not seem to be effective in improving students' use of the English article system. This might have resulted from the three reasons below.

- The students did not fully understand the materials because of their low English proficiency level. GrammarTalk was designed based on the writing of Chinese foundation students with a proficiency level of IELT 6.0 or equivalent, and was then piloted on different groups of Chinese ESL learners with proficiency levels no lower than IELT 6.0. The participants of the evaluation study, however, had an average proficiency level of IELT 5.5. Their lower proficiency level could possibly hinder them from fully understanding the instructions, questions and feedback provided in the materials. This speculation was made based on the evidence that the students showed difficulties in understanding grammar terms in the exercises when using GrammarTalk. This implies that the explicit knowledge (e.g. grammar rules) they have formulated is likely to be incorrect, which can reduce the effectiveness of the materials. To test this speculation, a follow-up case study was carried out (see below).

- The article system is not an easy area to treat. A longer treatment may be necessary. In addition to self-study materials, it would be desirable to provide supplementary face-to-face sessions to help students clarify their misconceptions about articles
- The proofreading text was too difficult for the students

Pre-treatment vs post-treatment essays

Because the results of pre- and post- proofreading tests were not significantly different, it was predicted that the difference in article use between pre-treatment and post-treatment essays would not be significant. In order to probe the reasons why the students' use of articles did not seem to improve through the use of GrammarTalk, my research plan was slightly altered and the pre-treatment vs post-treatment essay comparison was cancelled. Instead, effort was spent on a case study in which a student (P) was interviewed regarding the errors she made in her essay writing and proofreading tests. She was also asked to state the grammar rules she formulated from using the materials.

Case study

Four types of errors (marked in red) from P's essay and proofreading tests were selected for examination. P described why she used the article in each case, and the results are summarised as follows.

Error 1 (in P' essay writing)

> *Many young people look forward to the New Year celebrations because they can eat traditional food…*
>
> *Many Chinese people think the traditional New Year's celebrations are very important for them. They will wear the new clothes. Children will say the lucky sentence to adults….*

Student P explained why she used *the* in the first sentence of her essay (*Many young people look forward to the New Year celebrations because…*). She said that the celebrations were specific to her, as she is very familiar with Chinese New Year celebrations. She used *the* in *They will wear the new clothes* because she thought that *the new clothes* referred to the clothes specially bought during the Chinese New Year, not other new clothes bought for other occasions. She used *the* in *Children will say the lucky sentence to adults*, because she thought that the lucky sentence was specific and she knew exactly what it was.

The results show that the student misunderstands the functions of the definite article, *the*. She has a vague idea of what *the* is used for, but her understanding is incorrect. She thinks that *the* should be used when a noun is specific to the writer; she uses *the* in *the New Year celebrations*, *the new clothes* and *the lucky sentence* because these three things are specific to her. It shows that she does not know *the* involves both the writer's and reader's knowledge of the thing in question. Treatment is needed to help her to build the concept that *the*, the identifier, is used to define something which is known both to the writer and the reader in the discourse. In other words, she needs to learn to distance herself from the things she is familiar with, and to consider the reader's knowledge of them as well.

Error 2 (in P's essay writing)

> *The technology is improving a lot in these days. I think the industrialisation will give us some good things.*

P said that *technology* was a noncount noun in this instance, but she did not mention its specificity. She did not mention the rule that *the* cannot be used with a non-specific noncount noun, either.

The results show that P is not aware of specific and non-specific references and the form for non-specific noncount nouns.

Error 3 (in P's proofreading test)

> *In the free societies (society), people are free to choose how to travel.*

P said that the two patters, "∅ + plural" and "the + singular noun", were the same in this instance (i.e. *in free societies* vs *in the free society*). She did not mention the specificity/non-specificity of the noun, *societies*, in this context.

The results show that P does not know clearly the use of different forms of generic/non-specific count nouns. She does not pay enough attention to the specificity or non-specifcity of a noun, either.

Error 4 (in P's proofreading test)

> *People cannot be coerced onto the public transport, they have to be enticed, and the automobile is formidable competitor. In order to reduce the traffic congestion and air pollution…*

P said that she did not know if transport is countable or uncountable. She said that she did not know the words 'competitor' and 'congestion', including their countability.

The results show that P makes the errors because she does not know the meaning or countability of the three nouns (transport, competitor and congestion).

The grammar rules Student P formulates

To help pinpoint P's problems with the article system, she was asked to use each unit of the materials and state the rules she had formulated. Her formulated rules are in italics, as follows:

- Unit: "Specific or nonspecific? Definite or indefinite?"

  > *A person who knows the object or the thing, then it is specific.*
  > *On the contrary, if a person doesn't know the object or the thing, it is nonspecific.*
  > *Specific can use "the".*
  > *Nonspecific can use "a/an".*
  > *And "definite" means the conversation or the article has a clear focus.*
  > *Indefinite is unclear about the focus.*

Comments on P's rules:

Her formulated rules are incorrect as she seems to consider only the writer's knowledge of the thing in question instead of both the writer's and the reader's knowledge.

- Unit: Generic and nonspecific (nuncount nouns)

  "Generic" is "general", and "specific" is "particular".

  In the sentence, "Cars have greatly boosted communication and make everyday life more convenient", there is no "the" immediately before "Communication" and "everyday life" because they are uncountable.

  Comments on P's rules:
  The grammar rules P has formulated are fine. However, when explaining the reason why "communication" and "everyday life" do not take *the*, P does not seem to consider if the two nouns are generic or specific.

- Unit: Bare count noun errors

  When we regard a thing as generic, we need to add "s" to form a plural noun. If we regard a thing as specific, then we need to add "a/an/the" before the noun.

  Comments on P's rules:
  P's understanding is incomplete.   She does not mention what a bare count noun is and the different forms for generic/non-specific count nouns.

- Unit: the and proper nouns/special words

  This unit talks about unusual nouns or proper nouns. Some of them should add "the" before them; some of them don't need that.
  However, I think that it is not very clear when I have to add the or not. For example, "the" UK and Britain. Why before UK we have to add "the", but we needn't add the before Britain?

  Comments on P's rules:
  P has asked a very good question about the use of *the* with special nouns or proper nouns. As the use of *the* in proper nouns can sound quite arbitrary to English language learners, this area is very problematic for them.

- Unit: Uniqueness

  Uniqueness is a particular thing or subject that nothing else is like it, so we have to add the definite article before the noun. Also, when we describe one thing that we already know, we have to add "the" before it.

  Comments on P's rules:

P's understanding of uniqueness is correct. However, she still does not mention the key concept of the writer's and reader's knowledge when describing the function of the definite article, *the*.

Students' responses to GrammarTalk

The students' responses to GramarTalk were gathered through a questionnaire (see Appendix 2) and their Learner Journal. The results suggest that students were fairly positive about the materials although the design might need further improvements (such as easy navigation and clear screen layout). The detailed results can be found in Appendix 3 and 4.

Conclusion

GrammarTalk does not seem to be effective in improving the participants' understanding of the English article system although the participants are fairly positive about the materials. It is still too early to draw a definite conclusion on the effectiveness of the materials as the sample size was quite small, the time the participants spent on the materials was quite limited and the students' English proficiency level was not the ideal level. However, some important findings are drawn from the study. First, students seem to have problems with the concept that the definite article, *the*, involves both the writer's and reader's knowledge of the thing in question. Second, the use of *the* with proper nouns or special groups of words is very problematic for learners. Third, self-study materials do not seem to be sufficient for teaching the English article system. Apart from using the GrammarTalk self-study materials, supplementary face-to-face sessions should be provided to help students clarify their misconceptions about articles.

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