

Designing Sentence Combining System to Enhance Students' Proposition Comprehension

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Abstract: Most studies indicated that reading is very important for learning of students. However, not all students know how to read an article. The sentence combining is a key point, because the strategy help students not only know sentence structure but also understand sentence proposition, and the meaning of article. In order to address this issue, we first examined and clarify the Taiwan's elementary textbook about sentences learning. Furthermore, we proposed a Sentence Wizard, to enhance students' proposition and reading comprehension. In future we will add peer review function which each student can closely inspect and active give comments of their classmates.

Keywords: sentence combining, writing skill, proposition comprehension

Introduction

In recent years, schools increasingly emphasize reading, because reading is very important for learning of students. Moreover, schools have come to promote reading from a young age to teach how to read. No matter what kind of books, students can absorb the knowledge of books into their brain. Besides, this study examined three popular versions of elementary textbooks (1-5 grades) about sentences learning in Taiwan. We also clarified some exercises of sentence types. There are 10 types of sentences that are most commonly used in the instruction or homework. The top three of 10 types of sentences are: undertake sentence: we have to understand the previous sentence before following with an undertake sentence; progressive sentence: it means a sentence that moves forward progressively, further expressing; causal sentences: it means one thing always has a beginning, but later there will be a consequent result.

All three sentence types above have one thing in common, the first sentence needs to be understood, and it will show what kind the next sentence should be. Although sentence combining is not common in Mandarin exams in Taiwan, when we have such exams there are many benefits, such as: in teaching, teachers can have diverse methods to teach students; in learning, it can test students' knowledge of sentence patterns and grammar which will be a great help to students in the future.

Besides, some studies (Gijlers & de Jong, 2005) also proposed discovery learning encourages students to be active agents in their own learning process. Sentence combining and discovery learning's purpose are to develop capabilities of students, nurturing their spirit of exploration. Therefore, sentence combining is also discovery learning. The above studies also indicate that the strategy of sentence combining enlarges student's capabilities

to become more understanding of the meaning of the article. They lead one to consider that the design of sentence combining is a significant research issue. Hence, this study develops a sentence combining system to enhance students' proposition and reading comprehension.

1. The Design of Sentence Combining

The definition of sentence combining is taking two or more sentence to combine them into different meaningful sentences (Komolafe & Yara, 2010). This study also mentions that this make students try to restructure sentences which can enhance students' creativity. There are some familiar sentences combining advantages: ability to enhance writing skills to increase understanding, so we have to learn sentence combining. Therefore sentence combining is a way of teaching sentence grammar and skill, which can contain several core sentences combined into a longer sentence and more complex sentences. In sum, the strategies of sentence combination helps students not only know sentence structure but also understand sentence pattern, and even the meaning of the article (Komolafe, & Yara, 2010; Harbusch, Itsova, Koch, & Kühner 2008; Zamel, 1980).

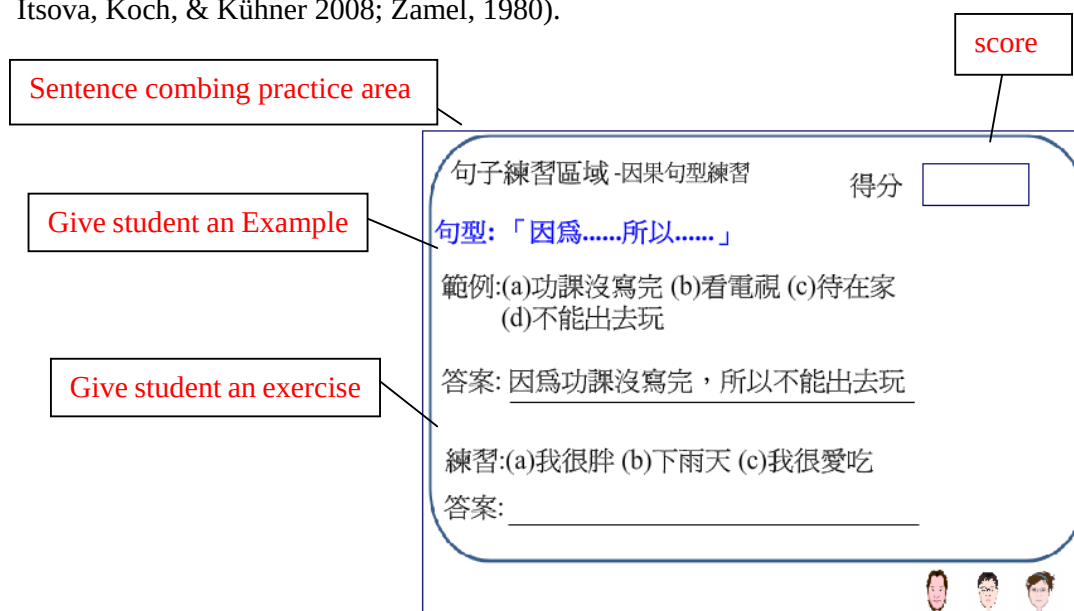


Figure 1: Screenshot of Sentence Wizard.

One study (Sung, Chang, & Huang, 2008) focused on teaching students to use strategies to improve reading comprehension; another study (Harbusch, Itsova, Koch, & Kühner, 2008) mentioned using NLP technology to enable students to better increase their output of the grammatical quality of sentence. This study adopts sentence combining with discovery learning strategies which let students think and solve the sentence combining questions and design a system, entitled Sentence Wizard.

See figure 1, Sentence Wizard consists of three parts: top, middle, and bottom. The top introduces what kind of sentence pattern we want to teach. The middle part gives the students a sentence combination to let students use as a reference. The bottom part is an exercise that give students the core of 3 to 5 sentences, and then lets the students merge several of core sentences in the bottom of the screen. Marion Blank(1992) noted that: teachers spending time in repeating the same tasks over and over, is unbelievably boring. A teacher must simultaneously wipe out all creativity and adopt saint-like patience to be able

to give children the time and practice they require. Now there are many new technologies for teaching to encourage students' learning. But many teachers teach students spending much time to repeat again and again, if we can change teachers' teaching methods to make teaching and learning become more interesting, I think we can implement the Sentence Wizard in Chinese class. Besides, each student's learning ability is not the same, the speed of learning is also not the same, and it would be good to use different strategies to learn. Sentence combining can make students have discovery learning abilities and can increase the ability of thinking.

2. Future Works

In future we will add peer review functions which each student can closely inspect and can actively give comments of their classmates. This way will enhance students' critical thinking, reading comprehension and even writing skills. Moreover, we will also conduct case studies to examine the influence on student abilities, as well as incorporate more scaffolding designs to promote students' proposition comprehension and to support students' learning.

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References

- [1] Gijlers, H., & de Jong, T. (2005). The relation between prior knowledge and students' collaborative discovery learning processes. *Journal of Research in Science Teaching*, 42(3), 264–282.
- [2] Harbusch, K., Itsova, G., Koch, U., & Kühner, C. (2008). The Sentence Fairy: a natural-language generation system to support children's essay writing. *Computer Assisted Language Learning*, 21(4), 339. doi:[10.1080/09588220802343496](https://doi.org/10.1080/09588220802343496)
- [3] Komolafe, A. T., & Yara, P. O. (2010). Sentence Combining Strategy and Primary School Pupils Achievement in Written English in Ibadan, Nigeria. *European Journal of Scientific Research*, 40(4), 531–539.
- [4] Sung, Y., Chang, K., & Huang, J. (2008). Improving children's reading comprehension and use of strategies through computer-based strategy training. *Computers in Human Behavior*, 24(4), 1552-1571. doi:[10.1016/j.chb.2007.05.009](https://doi.org/10.1016/j.chb.2007.05.009)
- [5] Blank, M. (1992). The Sentence Master: a new approach for problem readers. *Computing Applications to Assist Persons with Disabilities, 1992., Proceedings of the Johns Hopkins National Search for* (Page. 73-74). doi:[10.1109/CAAPWD.1992.217442](https://doi.org/10.1109/CAAPWD.1992.217442)