

Automatic Generation of Exercises for Complex Sentence Composition



Communications & Information

Computer/AI/Data Processing and Information Technology

Opportunity

Among existing mobile applications for language learning, the most popular include Duolingo, Learn Spanish 24/7, LearnEnglish Grammar by the British Council, and Rosetta Stone. They provide a variety of speaking, listening, translation, matching and multiple choice exercises, on various proficiency levels. None of these applications attempt automatic generation of exercises for composing complex sentences, or offer the personalization options, such as carrier sentence retrieval, exercise item generation and automatic feedback.

For students of English as a second language (ESL), learning to write complex sentences is an important part of the curriculum. As exercise, students are typically given two or more simple sentences (e.g., "The teacher entered the classroom" and "He was carrying lots of books"), which they must combine to form a complex sentence ("The teacher, carrying lots of books, entered the classroom.").

The potential market include all students of English as a second language (ESL). According to the British Council, there are up to 1.5 billion English language learners worldwide.

Technology

Currently, language teachers must author these exercise items manually. Since this is a time consuming process, it is usually infeasible to customize these items to suit the learning needs of individual students.

This invention enables automatic and personalized generation of these items. Our algorithm not only expedites item authoring, but also provides personalized items that can be tailored to an individual's level of vocabulary, subject domain of interest, as well as the type and complexity of the target sentence.

Advantages

- Automatic generation of exercises for complex sentence composition
- Automatic generation of fill-in-the-blank vocabulary exercise items

Applications

- Language learning
- Complex sentence composition

IP Status

Patent granted

Technology Readiness
Level (TRL) ?

4

Inventor(s)

Prof. LEE John Sie Yuen

Enquiry: kto@cityu.edu.hk



