The use of bilingual text-mining system is introduced to EdUHK courses for 3 types of learning analytics supports. 

(1) The system can **automatically identify and count the matching keywords** mentioned in students’ reflection texts, according to the frameworks of topic-specific keywords established by the teachers.

(2) The system can **automatically generate hierarchical visualization of text-mining results**, of which the zoom-able diagrams incorporate a number of statistical quantities for interpreting text-mining results from the individual, student-group, and whole-class perspectives.

(3) The system can **automatically analyze students’ major focuses in their learning reflection**, for checking students’ strengths and inadequacies in understanding the topic-specific concepts. 

These learning analytics supports are empirically examined to be effective for stimulating and guiding students to check learning inadequacies, identify areas of improvement, and re-think learning focuses in course learning.

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**LexRank analysis**

In this example, the student *for the LexRank analysis of pre-marking reflection text*. The LexRank result page showed three types of information for each ranked sentence:

- **“Sentence Value”**: the statistical value of LexRank analysis in the text for making the relative importance of the sentence in the set of reflection texts; the sentence value was rounded up to an integer of the highest ranked sentence.
- **“Produced by learner”**: the name of the student or group that wrote the sentence.
- **“Sentence”**: the text of the ranked sentence.

When passing the “Result for Chinese sentences” below, the student viewed all 30 Chinese sentences ranked by LexRank. When passing the “Result for English sentences” below, the student viewed all 21 English sentences ranked by LexRank.

**NE-Rank and HG-Rank analyses**

In this example, the teacher passed the NE-Rank summarization of student’s pre-postmark reflection text. The common-occurred words are highlighted words identified from the set of pre-marking reflection texts and the set of post-marking reflection texts, respectively. After passing the “Text”, the NE-Rank summarization text automatically generated to show two types of information:

- **“Keyword”**: a frequent word.
- **“Weight”**: the statistical value of NE-Rank analysis in the text for making the relative importance of the text in the set of reflection texts, which was computed with a score of 1 for the high-ranking word.

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**What is e-Learning?**

**What is academic integrity?**

**Students’ major focuses in the learning reflection**

**Keywords extraction from students’ reflection texts**