

ASEE: An Automated Question Answering System for World History Exams

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Identifying Item Types

Normal Items

Choose the one sentence that is correct in regard to the Tibetan Empire.
 (1)The Tibetan Empire primarily flourished in ...
 (2)The Tibetan alphabet was created in ...
 (3)Islamic culture and Chinese culture were ...
 (4)The Tibetan Empire fell after being ...

Slot-Filling Items (SF)

However, triggered by the October 1929 stock price crash on the <Slot> stock exchange ...
 (1)London (2)Paris (3)Berlin (4)New York

Single-Word Answer Items (SW)

Choose the one correct option that is the name of a country that participated in the war ...
 (1)Switzerland (2)Italy (3)Belgium (4)Bulgaria

Combination Items (CB)

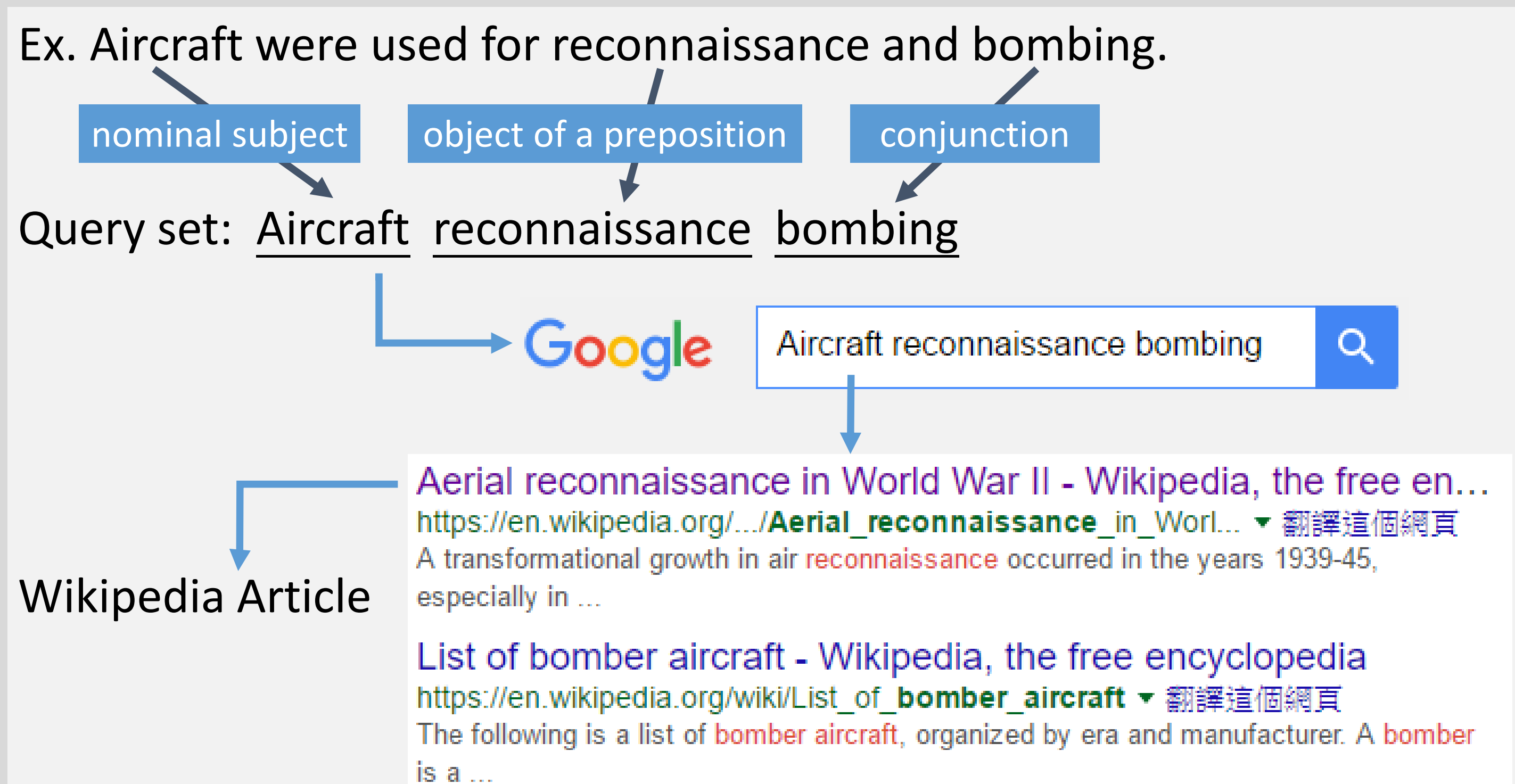
Choose the option that shows an incorrect combination of Southeast Asian colony and the colonial power ...
 (1)Cambodia - France (2)Burma (Myanmar) - UK
 (3)Singapore - UK (4)Philippines - Spain

True-False Items (TF)

a. During the Eastern Jin period, development ...
 b. Throughout the Ming period, migration ...
 (1)a-Correct b-Correct (2)a-Correct b-Incorrect
 (3)a-Incorrect b-Correct (4)a-Incorrect b-Incorrect

Searching the Relevant Wikipedia Article

We generated a vocabulary set (named query set) for each option that could be input to the Google search engine, and find the Wikipedia article.



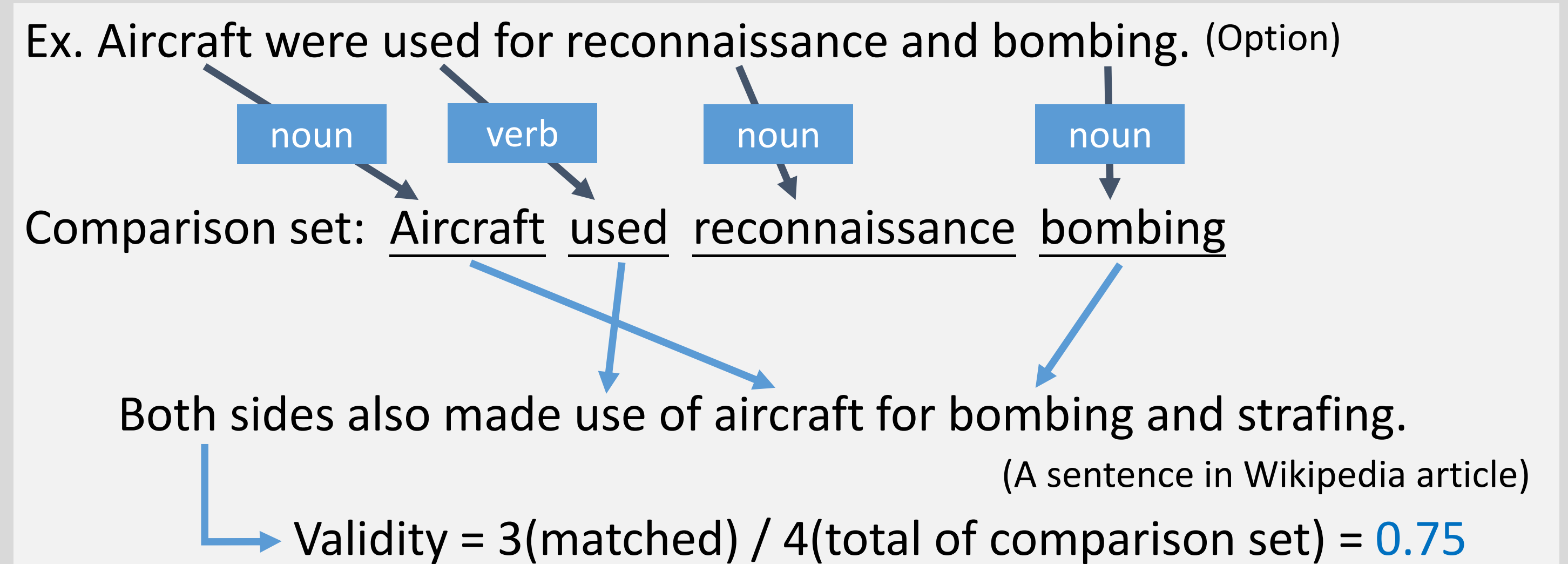
Experimental Results

	Number of Items	Number of Correct Answers	Accurate Rate
Normal	26	17	0.65
SF	3	1	0.33
SW	0	0	N/A
CB	1	0	0.00
TF	6	3	0.50
Total	36	21	0.58

Accuracy Rate of the Experiment

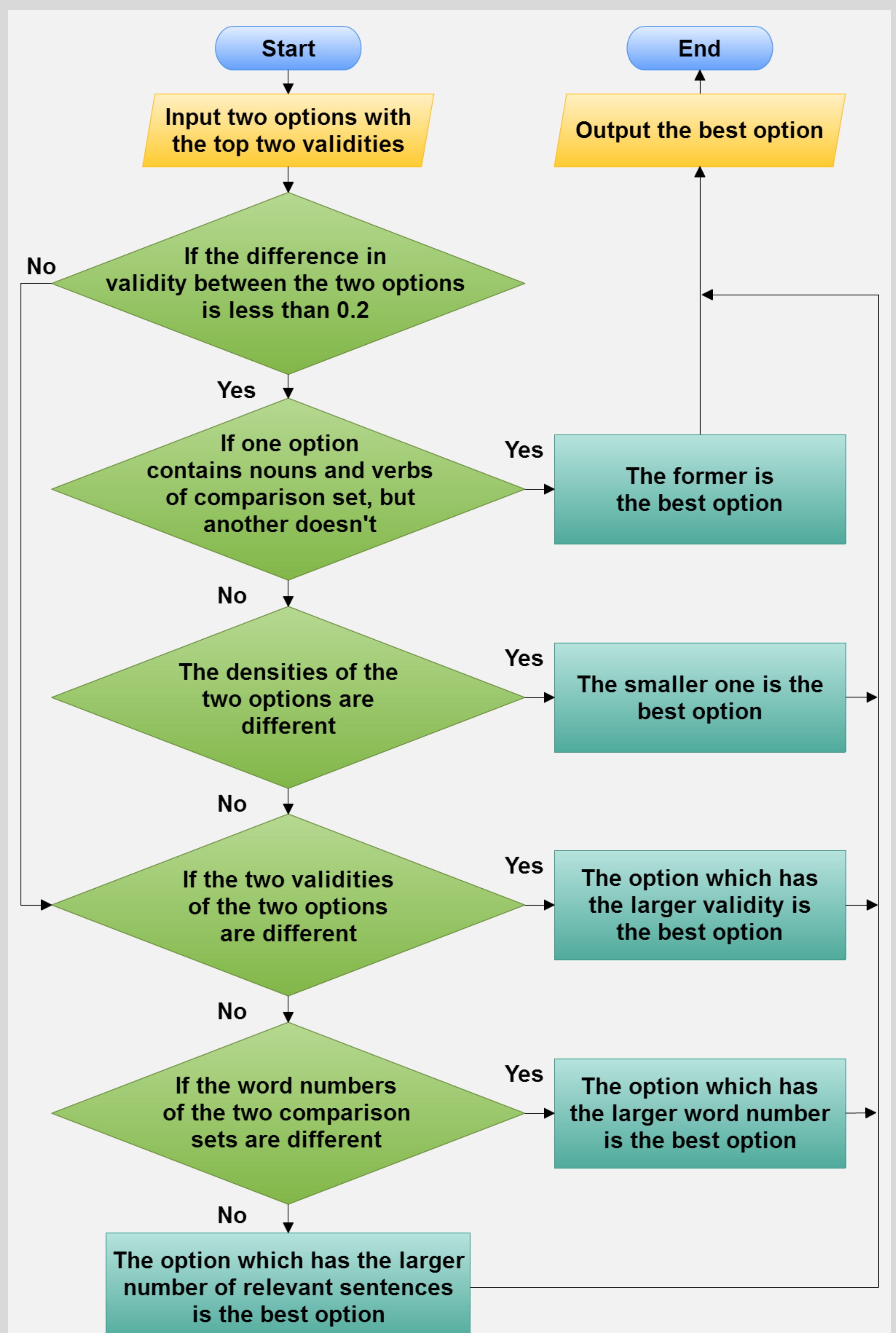
Computing Option Validity

We collected the nouns and verbs from the option and the question, formed a word set, and named it the comparison set. After collecting the comparison sets from each option, each sentence on the article could be examined. We called the relevance level the validity.



Defining the Best Option

After calculating the validity of each option, we selected the top two options with the highest validity and applied the algorithm



The Algorithm for Determining the Best Option