

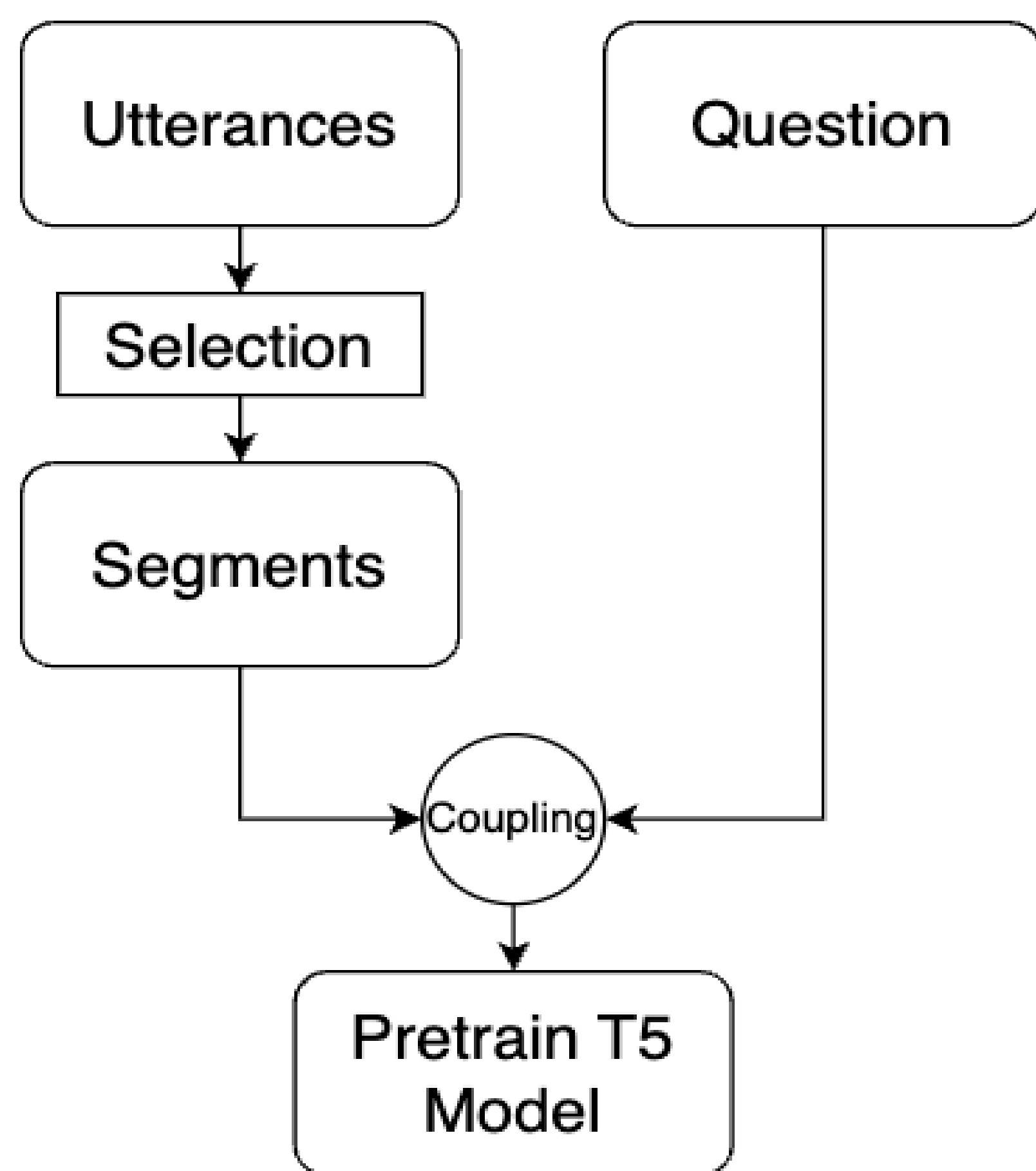
AKBL at the NTCIR-17 QA Lab-PoliInfo-4 Task

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Question Answering-2

1. Method

Segments extracted from the questionnaire and the minutes are combined and inferred to the pre-trained T5 model.



2. Result

Result of Formal Run

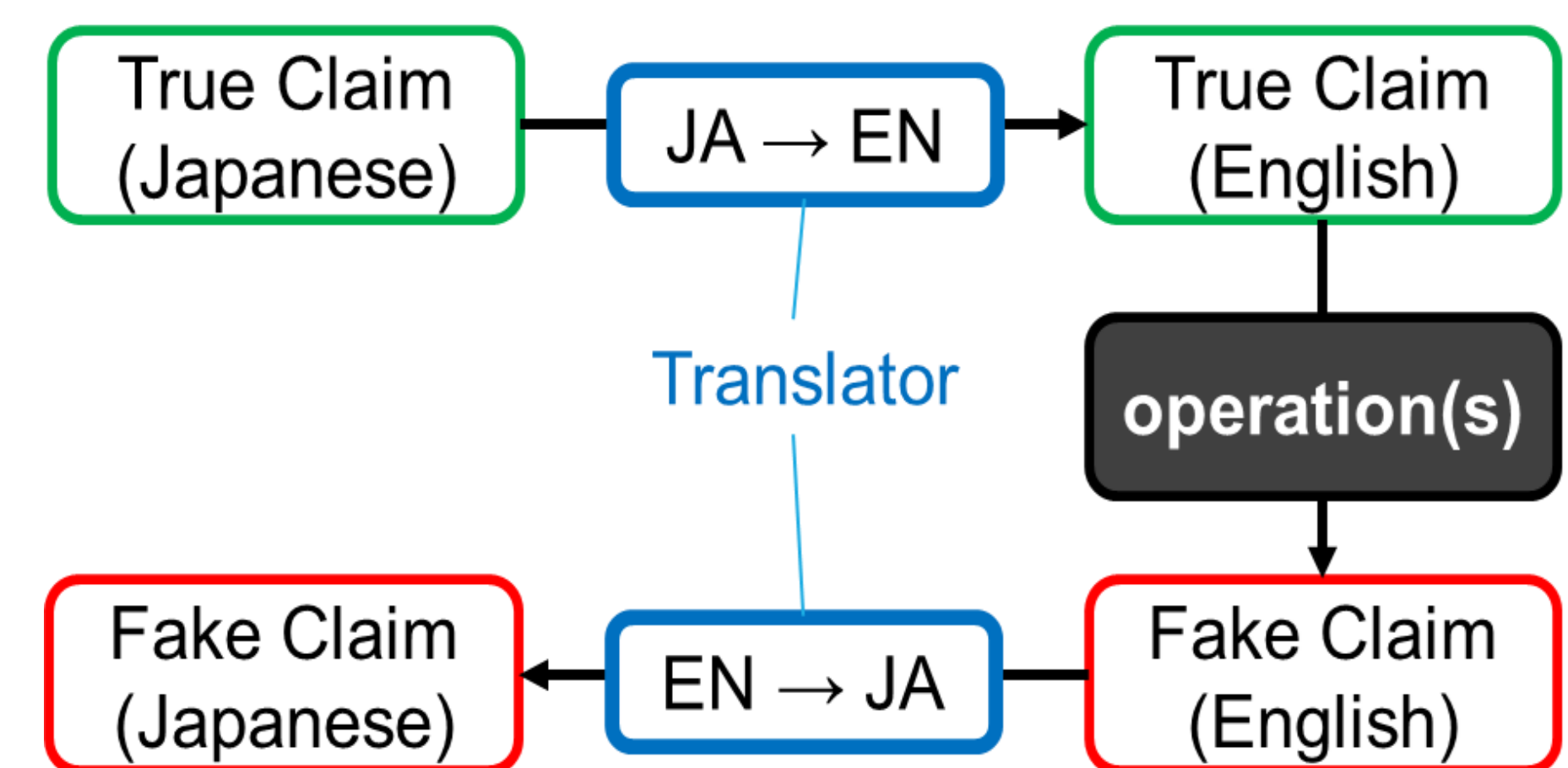
	F-measure
Baseline(TO)	0.2736
Formal Run	0.1162

Answer Verification

1. Method

step1. Round-Trip Manipulation (RTM)

Generating pseudo-fake data using round-trip translation.



step2. Retraining the Baseline model with that data.

Examples of generated data

Method	Example of generated sentence	True/Fake
ORG	国は有効な対策打ち出していない。 The State has not put forward effective measures.	True
RTT	政府は有効な対策を打ち出せていない。 The State has not put forward effective measures.	True
RTM	NEG 政府は効果的な対策を打ち出して います 。 The State <u>has put</u> forward effective measures.	Fake
	SOE その 対策 は、効果的な 政府 には至っていない。 The <u>measures</u> has not put forward effective State.	Fake
	ANT 政府は 効果のない 対策は打ち出していない。 The State has not put forward <u>ineffective</u> measures.	Fake

2. Result

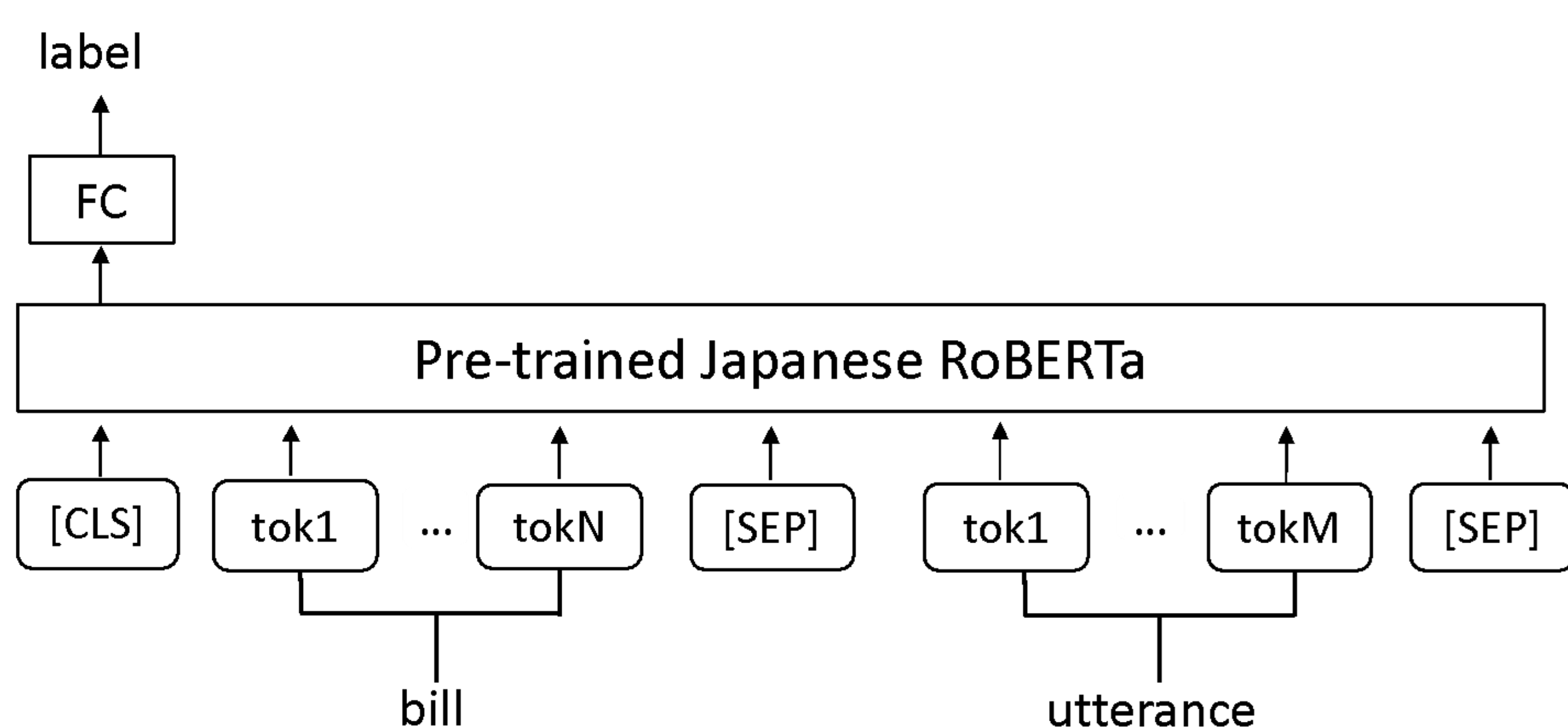
Result of Formal Run

model	accuracy	F-measure
Baseline (only ORG)	0.79	0.8073
Proposed	0.88	0.8966

Stance Classification-2

1. Method

Bill and utterance are concatenated and fed into RoBERTa model.



2. Result

Result of Stance Classification-2

	accuracy
Dry Run	0.9271
Formal Run	0.9308

Minutes-to-Budget Linking

1. Method

The top 4 scores of BM25 are used as the result.

• BM25

$$score(q, d) = \sum_i idf(q_i) * \frac{(k_1 + 1)f(q_i, d)}{f(q_i, d) + k_1(1 - b + b \frac{|d|}{avg(dl)})}$$

D : Document set

q : query

d : document ($d \in D$)

q_i : word ($q_i \in q$)

$idf(q_i)$: idf of q_i

$f(q_i, d)$: frequency of q_i in d

$|d|$: number of words in d

$avg(dl)$: average number of words in D

2. Result

Result of Minutes-to-Budget Linking

	F-measure
Formal Run	0.2577