BERT-based distractor generation for Swedish reading comprehension questions using a small-scale dataset

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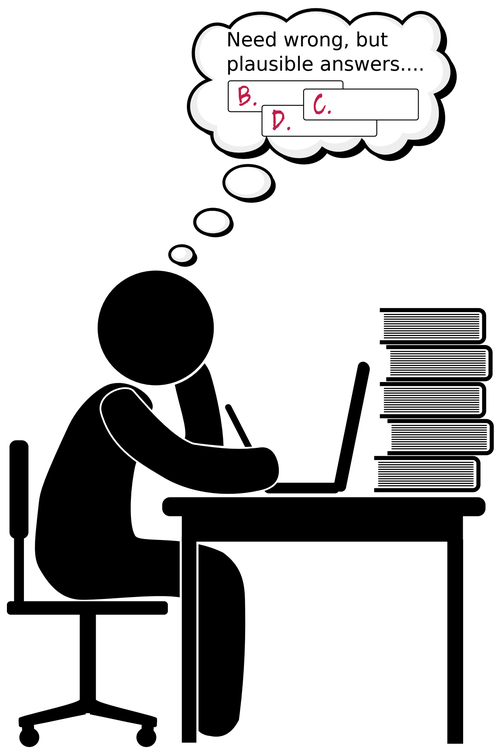
Test designers TODAY



STEP 1

DATA COLLECTION

The new **SweQUAD-MC** dataset - 1190 multiple choice questions (MCQs) in **Swedish**.

Why/What/How ... ?

A. Correct (key) B. Distractor 1
C. Distractor 2

STEP 2

TRAINING MODELS

Left-to-right variant
predict next token or [SEP]

D. Since Mr. Henry was young

u-PMLM variant
predict multiple tokens (no [SEP])

D. Since Mr. Henry was young

Both variants are based on **BERT**

STEP 3

STUDENT EVALUATION

Question 1. Can students guess the key without reading the text?
Result 1. On average, students guessed the key for 61% of MCQs

Question 2. How much attention were the distractors able to draw?
Result 2. Quantified using entropy:

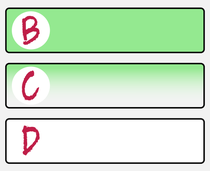
$$0 \leq H(A, D_1 \cup D_2 \cup D_3) \leq 0.69$$

Turns out
$H \geq 0.6$
for **50%** of MCQs!

STEP 4

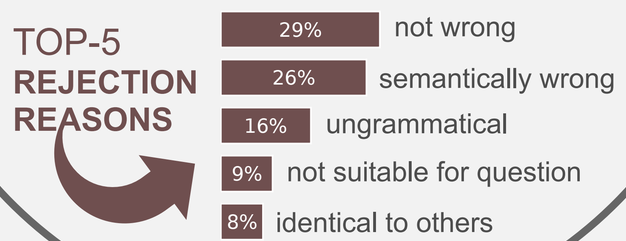
TEACHER EVALUATION

Used distraction entropy from step 3 for downsampling



1.47 of 3 were accepted by majority of teachers

TOP-5 **REJECTION REASONS**



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With funding from: VINNOVA Sweden's Innovation Agency

Need more details? Read our paper