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**Title:**

Appendix to: A Study of Web Page Understandability for Consumer Health Search

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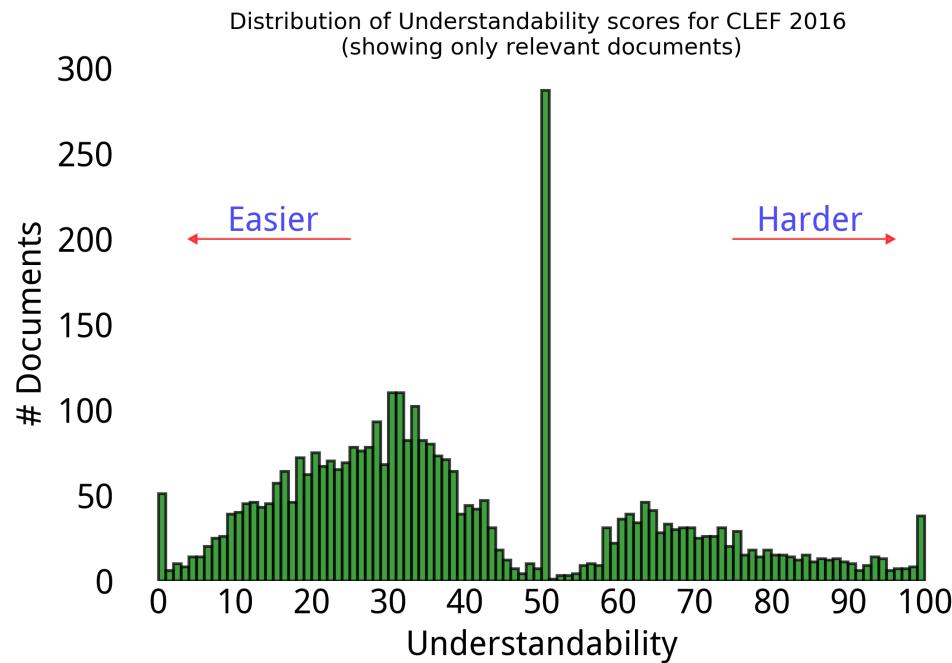
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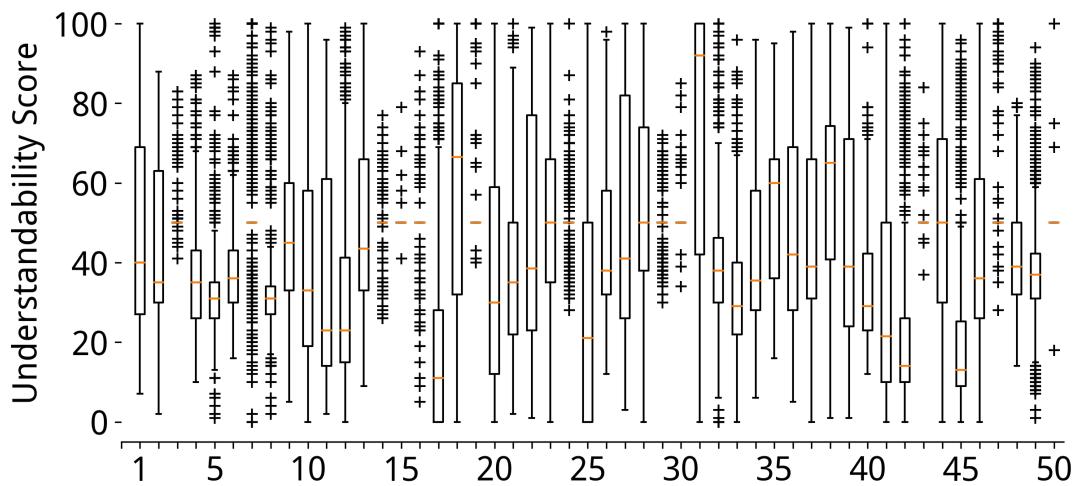
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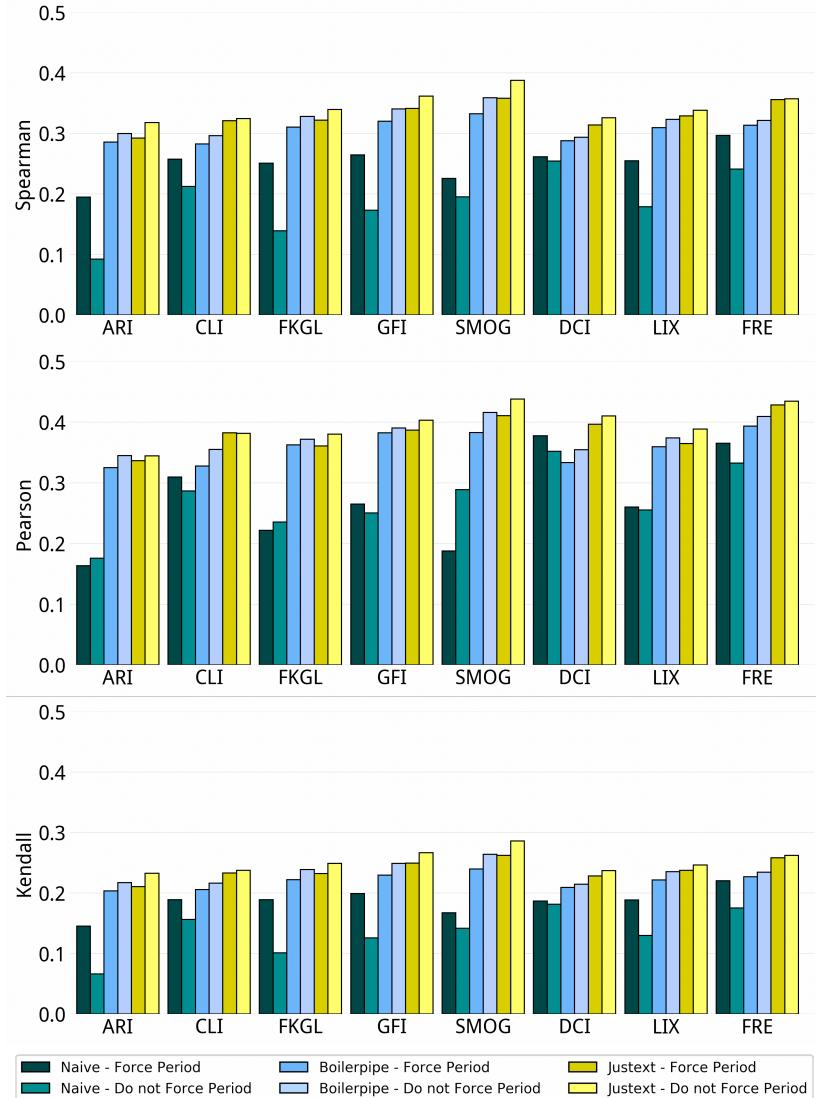
## Appendix



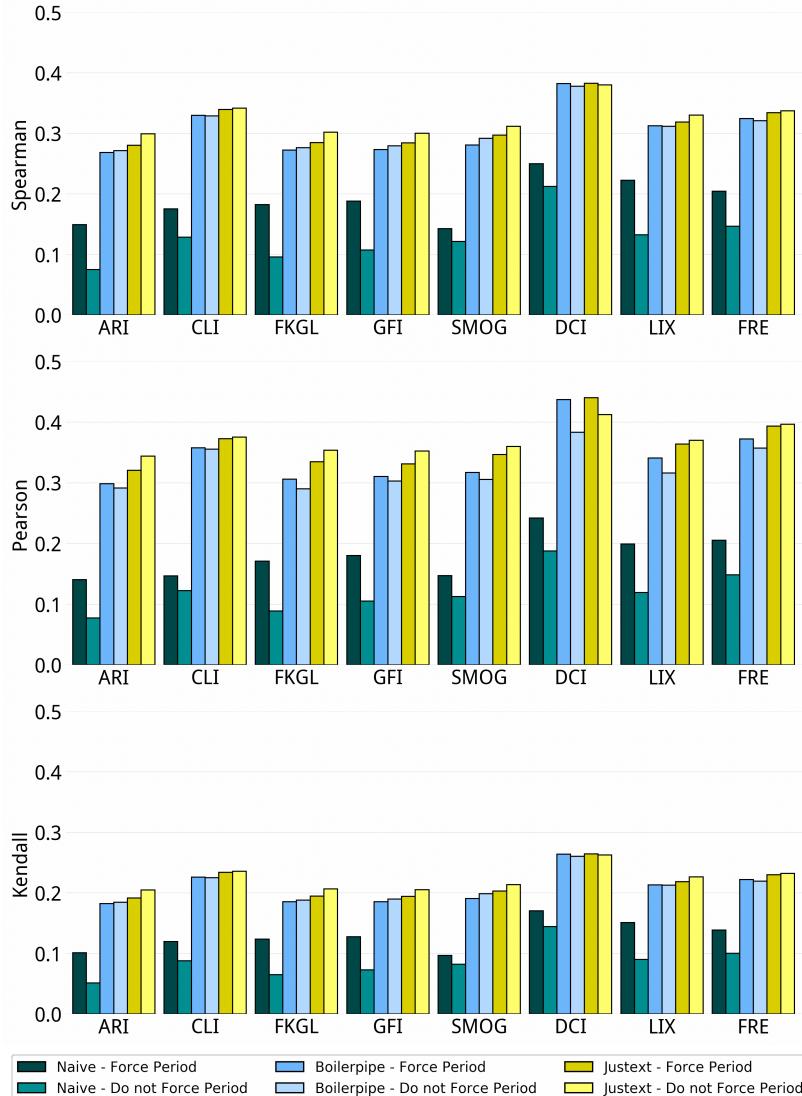
**Figure 1.** Understandability label distribution for CLEF eHealth 2016.



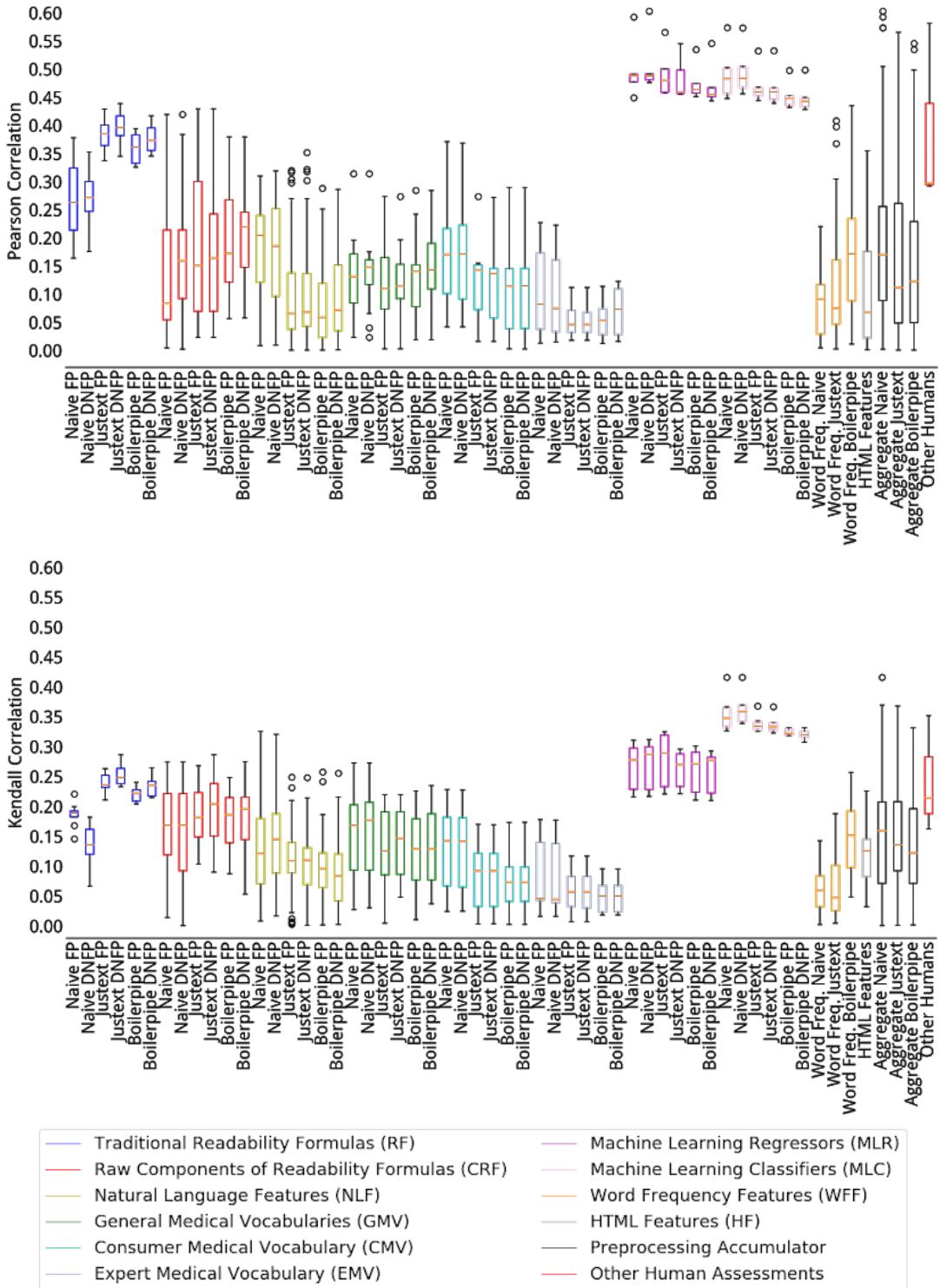
**Figure 2.** Understandability distribution broken per topic for CLEF eHealth 2016.



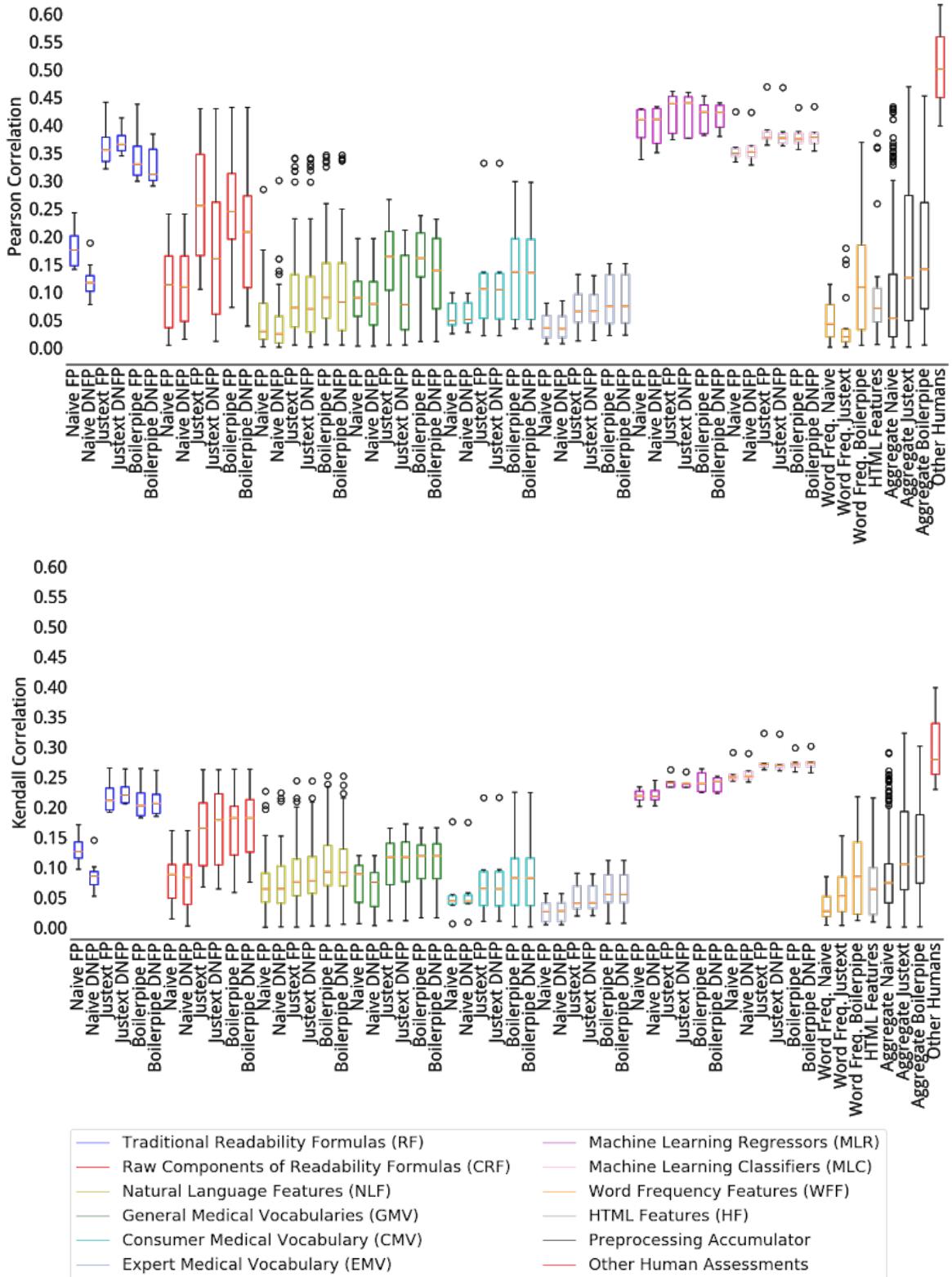
**Figure 3.** In Palotti et al. [1], authors investigate the influence of HTML preprocessing when readability formulas are used to estimate Webpage understandability. They found that readability formulas are heavily affected by the methods used to extract text from the HTML source, but they did not measure how correlated each method was with a human ground truth. We further extended Palotti et al.'s work to understand the influence of HTML preprocessing on automatic understandability methods and establish best practices. We show the correlation of each preprocessing combination with the ground truth assessments for CLEF 2015.



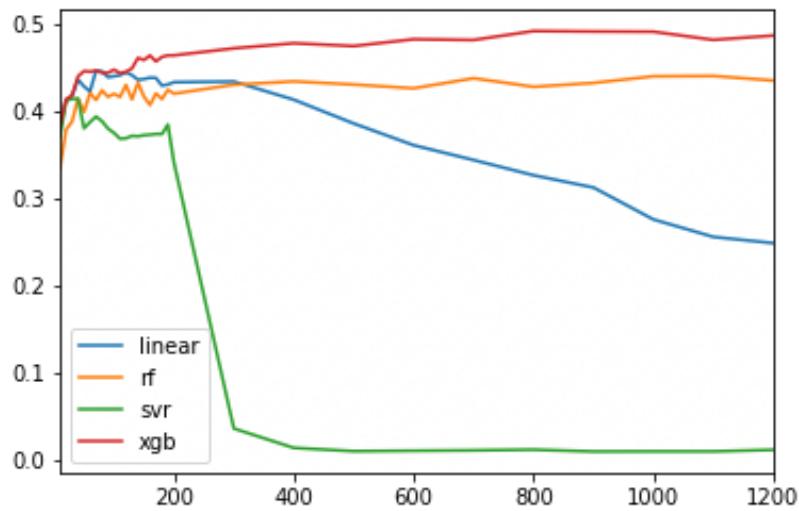
**Figure 4.** In Palotti et al. [1], authors investigate the influence of HTML preprocessing when readability formulas are used to estimate Webpage understandability. They found that readability formulas are heavily affected by the methods used to extract text from the HTML source, but they did not measure how correlated each method was with a human ground truth. We further extended Palotti et al.'s work to understand the influence of HTML preprocessing on automatic understandability methods and establish best practices. We show the correlation of each preprocessing combination with the ground truth assessments for CLEF 2016.



**Figure 5.** Correlations between understandability estimators and human assessments for CLEF 2015.



**Figure 6.** Correlations between understandability estimators and human assessments for CLEF 2015.



**Figure 7.** To study the impact of feature sets, we varied the number of features each regressor algorithm was trained with. For that, we selected features with Python's `f_regression` algorithm from Sklearn package. The eXtreme Gradient Boosting (XGB) and Random Forest Regressor were marginally influenced by the selection of features, therefore we used XGB with all features devised in our experiments.

Index	Rerank	Run	Official CLEF 2016 Metrics				New Metrics to Evaluate Underst. in Retrieval - Sec. 3							
			RBP	RBP Res.	uRBP	uRBP Res.	RBP <sub>a</sub>	RBP <sub>a</sub> Res.	HRBP	HRBP Res.	Unj	RBP <sub>r</sub> <sup>*</sup>	RBP <sub>w</sub> <sup>*</sup>	HRBP <sup>*</sup>
1	No Rerank	GUIR [1] (Best Run)	<b>28.11</b>	7.65	<b>18.12</b>	7.19	<b>45.69</b>	8.86	<b>25.61</b>	6.50	0.01	<b>28.29</b>	<b>46.03</b>	<b>25.79</b>
2		ECNU [2] (Runner Up)	27.70	7.37	17.55	<b>7.34</b>	43.89 <sup>o</sup>	8.66	25.35	6.26	0.01	27.77	44.18 <sup>o</sup>	25.48
3		Plain BM25 Baseline	25.28 <sup>o</sup>	<b>8.24</b>	16.05 <sup>o</sup>	6.94	42.08 <sup>o</sup>	<b>10.97</b>	22.97 <sup>o</sup>	<b>7.19</b>	<b>0.06</b>	26.01 <sup>o</sup>	43.89 <sup>o</sup>	23.93 <sup>o</sup>
4	Dale-Chall Top 15	Based on GUIR	24.70 <sup>o</sup>	8.70	16.83 <sup>o</sup>	7.27	49.10 <sup>o</sup>	10.62	24.94	7.50	0.03	25.24 <sup>o</sup>	50.33 <sup>o</sup>	25.54
5		Based on ECNU	24.78 <sup>o</sup>	7.83	16.64 <sup>o</sup>	7.16	48.88 <sup>o</sup>	9.71	24.80	6.50	0.02	25.12 <sup>o</sup>	49.64 <sup>o</sup>	25.21
6		Based on BM25	23.22 <sup>o</sup>	8.78	15.85 <sup>o</sup>	6.94	47.09 <sup>o</sup>	11.83	24.01	7.42	0.07	24.04 <sup>o</sup>	48.60 <sup>o</sup>	24.82
7	Dale-Chall Top 20	Based on GUIR	22.19 <sup>o</sup>	9.37	15.36 <sup>o</sup>	6.98	48.71 <sup>o</sup>	12.30	23.21 <sup>o</sup>	8.12	0.06	23.26 <sup>o</sup>	51.39 <sup>o</sup>	24.45 <sup>o</sup>
8		Based on ECNU	23.01 <sup>o</sup>	8.93	15.70 <sup>o</sup>	6.91	48.99 <sup>o</sup>	11.69	23.73 <sup>o</sup>	7.80	0.05	23.84 <sup>o</sup>	51.00 <sup>o</sup>	24.66
9		Based on BM25	21.58 <sup>o</sup>	9.51	14.83 <sup>o</sup>	7.02	46.99 <sup>o</sup>	13.00	22.89 <sup>o</sup>	8.06	0.09	22.93 <sup>o</sup>	49.55 <sup>o</sup>	24.26
10	Dale-Chall Top 50	Based on GUIR	16.18 <sup>o</sup>	15.24	11.56 <sup>o</sup>	6.80	41.79 <sup>o</sup>	24.49	18.10 <sup>o</sup>	14.42	0.22	20.90 <sup>o</sup>	53.28 <sup>o</sup>	23.27 <sup>o</sup>
11		Based on ECNU	16.88 <sup>o</sup>	17.37	11.78 <sup>o</sup>	<b>7.30</b>	40.76 <sup>o</sup>	23.77	18.30 <sup>o</sup>	<b>15.57</b>	<b>0.24</b>	21.34 <sup>o</sup>	52.07 <sup>o</sup>	23.33 <sup>o</sup>
12		Based on BM25	15.06 <sup>o</sup>	15.35 <sup>o</sup>	10.55	6.62	40.03 <sup>o</sup>	23.88	16.55 <sup>o</sup>	13.83	<b>0.24</b>	19.42 <sup>o</sup>	51.69 <sup>o</sup>	21.59 <sup>o</sup>
13	XGB Top 15	Based on GUIR	<b>25.16<sup>o</sup></b>	8.09	<b>17.27<sup>o</sup></b>	7.12	<b>50.96<sup>o</sup></b>	10.11	<b>25.16</b>	6.89	0.02	<b>25.61<sup>o</sup></b>	52.00 <sup>o</sup>	<b>25.68</b>
14		Based on ECNU	24.18 <sup>o</sup>	7.69	16.54 <sup>o</sup>	7.09	50.00 <sup>o</sup>	9.91	24.56	6.65	0.02	24.56 <sup>o</sup>	50.74 <sup>o</sup>	25.01
15		Based on BM25	22.33 <sup>o</sup>	8.14	15.46	6.76	47.90 <sup>o</sup>	12.13	22.89 <sup>o</sup>	7.25	0.07	23.11 <sup>o</sup>	49.43 <sup>o</sup>	23.69 <sup>o</sup>
16	XGB Top 20	Based on GUIR	22.38 <sup>o</sup>	9.49	15.61 <sup>o</sup>	7.05	50.45 <sup>o</sup>	12.08	23.30 <sup>o</sup>	8.16	0.05	23.62 <sup>o</sup>	52.98 <sup>o</sup>	24.68
17		Based on ECNU	22.95 <sup>o</sup>	8.82	15.95 <sup>o</sup>	7.02	50.42 <sup>o</sup>	11.70	23.97 <sup>o</sup>	7.56	0.04	23.68 <sup>o</sup>	52.15 <sup>o</sup>	24.73
18		Based on BM25	20.65 <sup>o</sup>	9.42	14.46 <sup>o</sup>	6.84	47.74 <sup>o</sup>	13.56	21.93 <sup>o</sup>	8.34	0.09	21.98 <sup>o</sup>	50.28 <sup>o</sup>	23.27 <sup>o</sup>
19	XGB Top 50	Based on GUIR	16.65 <sup>o</sup>	15.73	12.39 <sup>o</sup>	6.84	43.49 <sup>o</sup>	23.63	18.70 <sup>o</sup>	13.74	0.22	21.13 <sup>o</sup>	<b>55.07<sup>o</sup></b>	23.58 <sup>o</sup>
20		Based on ECNU	16.19 <sup>o</sup>	<b>17.01</b>	11.82 <sup>o</sup>	7.27	43.05 <sup>o</sup>	<b>24.75</b>	18.27 <sup>o</sup>	14.41	<b>0.24</b>	20.16 <sup>o</sup>	54.70 <sup>o</sup>	22.96 <sup>o</sup>
21		Based on BM25	15.43 <sup>o</sup>	15.37	11.33 <sup>o</sup>	6.48	41.93 <sup>o</sup>	23.65	17.43 <sup>o</sup>	13.40	0.26	19.58 <sup>o</sup>	54.04 <sup>o</sup>	22.17 <sup>o</sup>
22	RRF (XGB & Orig.) Top 15	Based on GUIR	<b>27.23<sup>o</sup></b>	7.76	<b>18.31</b>	<b>7.23</b>	49.69 <sup>o</sup>	9.18	26.49 <sup>o</sup>	6.62	0.01	<b>27.46<sup>o</sup></b>	50.07 <sup>o</sup>	<b>26.69<sup>o</sup></b>
23		Based on ECNU	26.60 <sup>o</sup>	7.41	17.81	7.19	48.67 <sup>o</sup>	8.80	26.02	6.09	0.01	26.76 <sup>o</sup>	49.10 <sup>o</sup>	26.27 <sup>o</sup>
24		Based on BM25	24.57 <sup>o</sup>	8.15	16.51 <sup>o</sup>	6.91	46.76 <sup>o</sup>	11.23	24.16 <sup>o</sup>	7.20	0.06	25.32 <sup>o</sup>	48.52 <sup>o</sup>	25.08 <sup>o</sup>
25	RRF (XGB & Orig.) Top 20	Based on GUIR	26.21 <sup>o</sup>	7.96	17.73	7.19	50.29 <sup>o</sup>	9.58	25.89	6.73	0.03	26.53 <sup>o</sup>	50.98 <sup>o</sup>	26.25
26		Based on ECNU	26.15 <sup>o</sup>	7.64	17.69	7.09	49.70 <sup>o</sup>	9.28	<b>26.07</b>	6.39	0.02	26.38 <sup>o</sup>	50.32 <sup>o</sup>	26.35
27		Based on BM25	24.04 <sup>o</sup>	8.24	16.32 <sup>o</sup>	6.87	47.69 <sup>o</sup>	11.40	24.08 <sup>o</sup>	7.35	0.06	24.82 <sup>o</sup>	49.52 <sup>o</sup>	25.01 <sup>o</sup>
28	RRF (XGB & Orig.) Top 50	Based on GUIR	24.09 <sup>o</sup>	<b>9.44</b>	16.85 <sup>o</sup>	7.02	50.55 <sup>o</sup>	11.76	24.76	<b>8.01</b>	0.07	25.08 <sup>o</sup>	<b>52.84<sup>o</sup></b>	25.84
29		Based on ECNU	24.17 <sup>o</sup>	8.67	16.75 <sup>o</sup>	7.12	<b>50.63<sup>o</sup></b>	11.66	25.00	7.61	0.07	24.90 <sup>o</sup>	52.50 <sup>o</sup>	25.84
30		Based on BM25	22.28 <sup>o</sup>	8.87	15.50	6.76	48.79 <sup>o</sup>	<b>12.90</b>	23.13 <sup>o</sup>	7.82	<b>0.10</b>	23.46 <sup>o</sup>	51.89 <sup>o</sup>	24.57
*	RRF (DCI & Orig.) Top 15	Based on GUIR	26.93 <sup>o</sup>	7.95	<b>17.96</b>	7.34	48.40 <sup>o</sup>	9.28	26.20	6.77	0.02	<b>27.20<sup>o</sup></b>	48.86 <sup>o</sup>	26.49
*		Based on ECNU	<b>26.94</b>	7.53	17.76	7.30	47.78 <sup>o</sup>	8.94	26.18	6.22	0.01	27.10	48.29 <sup>o</sup>	26.42 <sup>o</sup>
*		Based on BM25	24.91	8.12	16.58	7.09	45.85 <sup>o</sup>	10.75	24.67 <sup>o</sup>	6.99	0.06	25.68	47.55 <sup>o</sup>	25.56 <sup>o</sup>
*	RRF (DCI & Orig.) Top 20	Based on GUIR	26.09 <sup>o</sup>	8.11	17.58	7.27	48.79 <sup>o</sup>	9.76	25.88	6.88	0.03	26.47 <sup>o</sup>	49.58 <sup>o</sup>	26.29
*		Based on ECNU	26.51 <sup>o</sup>	7.88	17.56	<b>7.37</b>	48.57 <sup>o</sup>	9.53	<b>26.27</b>	6.59	0.02	26.75 <sup>o</sup>	49.33 <sup>o</sup>	<b>26.58<sup>o</sup></b>
*		Based on BM25	24.73	8.21	16.63	7.12	46.63 <sup>o</sup>	11.00	24.85 <sup>o</sup>	7.11	0.06	25.51 <sup>o</sup>	48.44 <sup>o</sup>	25.77 <sup>o</sup>
*	RRF (DCI & Orig.) Top 50	Based on GUIR	23.39 <sup>o</sup>	<b>9.72</b>	16.21 <sup>o</sup>	7.16	<b>49.11<sup>o</sup></b>	12.40	24.20 <sup>o</sup>	<b>8.33</b>	0.07	24.60 <sup>o</sup>	<b>51.45<sup>o</sup></b>	25.52
*		Based on ECNU	24.26 <sup>o</sup>	9.23	16.43 <sup>o</sup>	7.34	48.90 <sup>o</sup>	11.54	24.84	7.81	0.06	25.15 <sup>o</sup>	50.91 <sup>o</sup>	25.85
*		Based on BM25	22.64 <sup>o</sup>	9.26	15.47	7.16	47.25 <sup>o</sup>	<b>12.79</b>	23.67	7.86	<b>0.09</b>	23.89 <sup>o</sup>	50.26 <sup>o</sup>	25.11
31	XGB LeToR	Combo 1 on BM25	20.42 <sup>o</sup>	17.61	13.00 <sup>o</sup>	7.41	32.17 <sup>o</sup>	24.61	18.39 <sup>o</sup>	14.41	0.28	25.25 <sup>o</sup>	43.19 <sup>o</sup>	23.83 <sup>o</sup>
32		Combo 2 on BM25	24.98 <sup>o</sup>	19.83	15.30 <sup>o</sup>	8.09	35.09 <sup>o</sup>	25.14	22.26 <sup>o</sup>	17.50	0.24	30.41	46.09	28.28 <sup>o</sup>
33		Combo 3 on BM25	26.35 <sup>o</sup>	<b>20.48</b>	15.88 <sup>o</sup>	8.16	34.73 <sup>o</sup>	24.69	21.81 <sup>o</sup>	17.41	0.22	32.25 <sup>o</sup>	45.44	28.22 <sup>o</sup>
34		Combo 4 on BM25	16.16 <sup>o</sup>	19.48	10.76 <sup>o</sup>	7.27	<b>36.75<sup>o</sup></b>	<b>28.51</b>	16.77 <sup>o</sup>	<b>17.80</b>	<b>0.29</b>	22.20 <sup>o</sup>	<b>50.06<sup>o</sup></b>	23.32 <sup>o</sup>
35		Combo 5 on BM25	<b>26.76<sup>o</sup></b>	20.48	<b>16.19<sup>o</sup></b>	<b>8.34</b>	35.26 <sup>o</sup>	24.13	22.96	17.59	0.22	<b>32.60<sup>o</sup></b>	45.87	<b>29.20<sup>o</sup></b>

**Table 1.** We expanded retrieval results including the experiments with Reciprocal Rank Fusion (RRF) of Dale-Chall Index Runs (indices 4-12) and the original runs (indices 1-3). These results confirm the superiority of using XGB rather than DCI in terms of understandability of the results retrieved.

Index	Rerank	Run	Official CLEF 2016 Metrics				New Metrics to Evaluate Underst. in Retrieval - Sec. 3							
			RBP	RBP Res.	uRBP	uRBP Res.	RBP <sub>u</sub>	RBP <sub>u</sub> Res.	HRBP	HRBP Res.	Unj	RBP <sub>u</sub> <sup>*</sup>	RBP <sub>u</sub> <sup>*</sup>	HRBP <sup>*</sup>
1	No Rerank	ECNU (Best Run)	<b>51.57</b>	<b>8.95</b>	<b>50.51</b>	<b>8.95</b>	59.55	10.09	<b>46.22</b>	8.62	0.00	<b>51.57</b>	59.55	<b>46.22</b>
2		KISTI (Runner Up)	36.72°	8.06	35.92°	7.32	64.50	11.54	37.56°	7.89	<b>0.03</b>	37.07°	65.31	37.96°
3		Plain BM25 Baseline	31.20°	8.76	30.51°	7.65	<b>67.60</b>	<b>12.20</b>	35.75°	<b>8.76</b>	<b>0.03</b>	31.57°	<b>68.94°</b>	36.42°
4	SMOG Top 15	Based on ECNU	<b>38.16°</b>	20.09	<b>37.36°</b>	<b>8.95</b>	55.11°	22.14	<b>37.59°</b>	18.98	0.14	<b>45.45°</b>	62.58	43.65
5		Based on KISTI	31.28°	10.21	30.59°	7.48	67.05	13.95	34.23 °	10.05	0.05	33.12°	69.10°	36.02°
6		Based on BM25	24.39°	11.46	23.83°	7.16	<b>67.69</b>	17.66	28.97°	11.46	0.10	26.28°	72.82°	31.53°
7	SMOG Top 20	Based on ECNU	34.88°	25.96	34.13°	<b>8.95</b>	54.15°	27.91	35.34°	25.02	0.20	44.87°	66.20°	<b>44.88</b>
8		Based on KISTI	28.01°	11.05	27.39°	7.32	66.61	15.44	30.93°	10.82	0.08	30.87°	69.99°	33.81°
9		Based on BM25	22.83°	13.48	22.31°	7.32	63.61	22.44	26.52°	13.48	0.15	26.22°	72.72°	30.87°
10	SMOG Top 50	Based on ECNU	21.83°	<b>36.63</b>	21.34°	<b>8.95</b>	41.71°	<b>46.89</b>	23.65°	<b>36.63</b>	<b>0.45</b>	39.88°	71.61°	43.86
11		Based on KISTI	21.00°	18.67	20.53°	7.32	59.72	26.67	24.88°	18.67	0.23	27.20°	72.47°	31.90°
12		Based on BM25	15.20°	18.73	14.86°	6.51	49.87°	36.41	17.79°	18.73	0.32	21.22°	<b>73.17°</b>	25.78°
13	XGB Top 15	Based on ECNU	<b>34.94°</b>	22.28	<b>34.31°</b>	9.11	40.84°	24.50	28.60°	20.64	0.17	45.21°	52.18°	<b>38.14°</b>
14		Based on KISTI	31.86°	11.65	31.26°	7.32	49.38°	15.90	<b>29.82°</b>	10.97	0.06	34.48°	53.55°	32.33°
15		Based on BM25	23.48°	10.51	22.98°	6.67	<b>53.69°</b>	14.56	25.89°	10.35	0.08	24.95°	<b>58.40°</b>	27.92°
16	XGB Top 20	Based on ECNU	31.03°	30.50	30.50°	<b>9.27</b>	34.80°	27.97	23.89°	24.70	0.26	<b>45.68°</b>	50.53°	37.78°
17		Based on KISTI	29.05°	15.53	28.53°	7.81	43.04°	19.55	26.07°	13.45	0.12	34.02°	50.45°	30.65°
18		Based on BM25	21.54°	13.70	20.85°	6.51	44.97°	21.53	22.84°	13.00	0.15	25.10	55.55°	27.43°
19	XGB Top 50	Based on ECNU	19.11°	<b>38.27</b>	18.61°	8.79	16.62°	<b>37.25</b>	11.58°	<b>28.01</b>	<b>0.55</b>	43.46°	45.35°	33.65°
20		Based on KISTI	19.95°	21.43	19.66°	7.32	22.01°	24.45	13.22°	14.22	0.35	29.50°	36.58°	21.61°
21		Based on BM25	17.94°	16.20	17.45°	6.51	23.18°	26.72	12.82°	12.44	0.37	26.14	42.20°	21.16°
22	RRF (XGB & Orig.) Top 15	Based on ECNU	<b>44.59°</b>	13.25	<b>43.73°</b>	<b>8.95</b>	51.11°	14.52	<b>38.04°</b>	12.44	0.10	<b>47.76°</b>	54.68°	<b>41.13°</b>
23		Based on KISTI	34.89°	9.65	34.16°	7.48	57.54°	14.06	34.27°	9.48	0.05	36.31°	60.30°	35.73°
24		Based on BM25	27.71°	10.88	27.10°	7.65	<b>60.05°</b>	15.01	31.50°	10.88	0.07	28.75°	<b>63.50°</b>	33.17°
25	RRF (XGB & Orig.) Top 20	Based on ECNU	41.90°	16.06	41.11°	9.11	47.80°	17.59	34.95°	15.23	0.14	47.12°	53.34°	39.97°
26		Based on KISTI	34.55°	10.59	33.84°	7.65	55.02°	15.12	33.71°	10.43	0.07	36.37°	58.49°	35.65°
27		Based on BM25	26.01°	12.50	25.39°	7.65	56.23°	16.47	29.22°	12.53	0.10	27.63°	60.91°	31.60°
28	RRF (XGB & Orig.) Top 50	Based on ECNU	34.80°	<b>25.30</b>	34.18°	<b>9.44</b>	38.32°	<b>24.97</b>	27.26°	<b>21.84</b>	<b>0.25</b>	46.22°	50.59°	38.15°
29		Based on KISTI	30.05°	15.44	29.48°	7.97	43.57°	19.94	27.45°	14.76	0.14	34.36°	50.70°	31.93°
30		Based on BM25	18.97°	17.79	18.52°	7.48	43.90°	23.92	20.43°	17.84	0.19	24.19°	54.88°	26.55°
31	RRF (SMOG & Orig.) Top 15	Based on ECNU	<b>47.23°</b>	12.41	<b>46.24°</b>	<b>8.95</b>	59.57	13.88	<b>43.96°</b>	11.80	0.08	<b>49.21°</b>	61.45	45.42
32		Based on KISTI	34.84°	8.34	34.08°	7.48	67.87°	11.84	36.86°	8.18	0.03	35.32°	68.84°	37.37°
33		Based on BM25	27.16°	10.79	26.55°	7.32	66.44	14.65	32.24°	10.79	0.05	28.21°	69.38°	33.67°
34	RRF (SMOG & Orig.) Top 20	Based on ECNU	45.91°	14.14	44.94°	9.11	59.46	15.28	43.50°	13.55	0.09	48.67°	62.46°	45.93
35		Based on KISTI	34.17°	8.54	33.42°	7.48	68.23°	12.09	36.23°	8.38	0.03	34.79°	69.30°	36.89°
36		Based on BM25	25.80°	12.33	25.22°	7.48	64.98	16.18	30.69°	12.33	0.08	27.24°	69.14°	32.68°
37	RRF (SMOG & Orig.) Top 50	Based on ECNU	39.06°	<b>20.77</b>	38.20°	<b>9.27</b>	57.68	23.16	39.55°	<b>20.28</b>	<b>0.18</b>	45.59°	65.82°	<b>46.13</b>
38		Based on KISTI	29.51°	10.35	28.83°	7.48	<b>68.60°</b>	14.71	33.37	10.35	0.08	31.48°	<b>71.70°</b>	35.54
39		Based on BM25	18.70°	17.12	18.29°	7.16	57.50°	<b>24.59</b>	22.73°	17.12	0.15	22.95°	68.61	28.21°
40	XGB LeToR	Combo 1 on BM25	24.86°	17.39	24.32°	7.81	<b>55.60°</b>	24.11	28.89°	17.39	0.22	29.67°	<b>66.41</b>	34.76°
41		Combo 2 on BM25	<b>30.72°</b>	21.25	<b>30.08°</b>	8.46	48.87°	28.82	<b>31.76°</b>	18.99	0.26	37.09°	61.89°	<b>39.17°</b>
42		Combo 3 on BM25	28.92°	<b>24.35</b>	28.32°	8.46	49.02°	32.11	30.14°	23.83	0.31	<b>37.32°</b>	63.86°	39.84°
43		Combo 4 on BM25	25.65°	25.72	25.09*	8.30	49.00°	<b>33.39</b>	27.45°	<b>24.40</b>	<b>0.33</b>	35.82°	66.14	38.21°
44		Combo 5 on BM25	30.21°	20.79	29.59°	<b>8.62</b>	48.47°	27.88	30.95°	19.99	0.25	37.11°	61.25°	39.15°

**Table 2.** Results obtained by integrating understandability estimations within retrieval methods on CLEF 2015. Baseline runs are reported at table indices 1-3 (the index column is labelled Index). Re-ranking experiments are reported at indices 4-21. Fusion experiments are reported at indices 22-30. Learning to rank experiments are reported at indices 31-35. All measures were calculated up to rank n = 10. The highest result of each set of experiments is reported in bold face.

## References

- [1] Palotti J, Zuccon G, Hanbury A. The Influence of Pre-processing on the Estimation of Readability of Web Documents. In: Proceedings of the 24th ACM International on Conference on Information and Knowledge Management. CIKM '15. New York, NY, USA: ACM; 2015. p. 1763–1766. doi:10.1145/2806416.2806613.