

	Simulation				Real data
	BLEU	Reward	SuccessRate	SlotError	BLEU
S2S	0.5931 $\pm$ 0.0182	0.8478 $\pm$ 0.0724	0.6667 $\pm$ 0.0302	0.0708 $\pm$ 0.0061	0.1278 $\pm$ 0.0039
ST-S2S	0.4297 $\pm$ 0.0099	0.4485 $\pm$ 0.0606	0.5310 $\pm$ 0.0302	0.4103 $\pm$ 0.0026	0.1411 $\pm$ 0.0078
ST-E-S2S	0.5856 $\pm$ 0.0123	1.0121 $\pm$ 0.0633	0.7691 $\pm$ 0.0285	<b>0.0627 <math>\pm</math> 0.0048</b>	0.1513 $\pm$ 0.0046
PT-S2S	<b>0.6685 <math>\pm</math> 0.0050</b>	<b>1.1493 <math>\pm</math> 0.1086</b>	<b>0.7945 <math>\pm</math> 0.0503</b>	0.0638 $\pm$ 0.0038	<b>0.1609 <math>\pm</math> 0.0055</b>
HRED	0.6575 $\pm$ 0.0029	1.1187 $\pm$ 0.0241	0.8095 $\pm$ 0.0112	0.0862 $\pm$ 0.0120	0.1387 $\pm$ 0.0032
ST-HRED	0.5058 $\pm$ 0.0048	0.7860 $\pm$ 0.1085	0.7199 $\pm$ 0.0650	0.3763 $\pm$ 0.0046	0.1477 $\pm$ 0.0062
PT-HRED	<b>0.7193 <math>\pm</math> 0.0148</b>	<b>1.5247 <math>\pm</math> 0.0413</b>	<b>0.9587 <math>\pm</math> 0.0164</b>	<b>0.0405 <math>\pm</math> 0.0051</b>	<b>0.1588 <math>\pm</math> 0.0093</b>