Results: Add relation classifier before TransE

Dataset	Model	Hits@1	Hits@5	Hits@10	Hits@50	MR	MRR	Memos	Summary	Discussion
		avg.	avg.	avg.	avg.	avg.	avg.		1. To keep the model to be simple, I removed the iterative add alignment seeds parts and found it doesn't influence a lot. (ITransE vs ITransE-iteratively_alignment on C_S_271_5fold_1). So the baseline model is only the TransE with parameter sharing for aligned pairs. 2. In order to distinguish different relation types in SWOW, a relation classifier is added before the TransE model. The relation classifier is a two-layers of FNN with ReLU activation. The relation label is computed based on the head and tail entities. When this, the performance on alignment dropped (eg. the MRR dropped from 0.188 to 0.126) and takes longer timer to train. Because we have more parameters for the relation classification. 3. The problem is only the triples from the ConceptNet is used to train the relation classifier, and triples in SWOW cannot contribute to the relations learning. So for 'overlap-triples' in SWOW, I labeled the edges (relation types) from ConceptNet. This increased the relation training instances. And improved the MRR from 0.126 to 0.169.	1. Currently, we only evaluate the nodes representation and ignored the relation evaluation. How to create the test set for relation evaluation?
C_S_271	MTransE	0.0066	0.0202	0.0274	0.0605	781.1016	0.016	start_valid_epoch= 100		
	ITransE	11.69	22.27	27.77	42.69	334.358	0.173			
C_S_271_5folod_1	ITransE	12.947	24.94	30.489	45.644	310.208	0.191			
	ITransE - iteratively_alignment	12.768	24.582	30.390	43.676	329.209	0.188			
	ITransE - iteratively_alignment + relation_preiction	3.819	10.68	14.797	27.446]	418.100	0.077	start_valid_epoch= 100		
		6.504	14.021	18.616	30.37	417.541	0.107	start_valid_epoch=300, L_e+0.1*L_r		
		7.279	15.274	19.57	33.532	382.352	0.116	start_valid_epoch=500, L_e+0.1*L_r		
		7.995	16.289	20.346	33.29	364.833,	0.126	hidden=.... start_valid=500, L_e+0.1*L_r		
	ITransE - iteratively_alignment + relation_prediction + label CN-overlapped edges for SWOW	12.291	21.181	25.119	38.663	367.361	0.169	start_valid=200, L_e+ 1.0*L_r		

Statistics for ConceNet and SWOW overlapped nodes and triples

	#Triples	#Nodes	#Relations	#Overlap _Triples	#Overlap _Nodes	#Relations_in overlap_triples	
CN-100K-Train-Valid-Test	102400	78334	34	9455	8382	33	REL: HasPainIntensity is not in the Relations_in overlap_triples
SWOW	413,481	34829	1				
CN-100K-Train	100,000	78088	33	8523	8359	33	
SWOW	413,481	34829	1				
CN-100K-Valid-Test	2400	2400	26	1266	1227	22	
SWOW	413,481	34829	1