Supplementary for Transductive Few-Shot Classification on the Oblique Manifold

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Method	Туре	$mini$ -ImageNet \rightarrow CUB
ODC	Induc.	70.76 ± 0.49
ODC + RSSPP	Induc.	72.47 ± 0.44
ODC	Trans.	72.98 ± 0.43
ODC + RSSPP	Trans.	74.11 ± 0.41

Table 1: Ablation study. The accuracy of 5-way 5-shot FSL on Resnet18 in *mini*-ImageNet.

Query	10	15	30	45	60
Acc.	87.29	87.11	86.93	86.81	86.75
	± 0.45	± 0.42	± 0.38	± 0.37	± 0.36

Table 2: The accuracy w.r.t. the number of query images with 5-way 5-shot FSL on Resnet18 in *mini*-ImageNet.

The effects of RSSPP. RSSPP aims to improve generalization. We also test it with *cross-domain* FSL, *i.e.*, 5-way 5-shot for *mini*-ImageNet \rightarrow CUB. Table 1 shows the results.

The effects of method under many unlabeled data for an episode. Table 2 shows that 5-way 5-shot experiments over the number of query images with transductive settings in Resnet-18.

Results on FC100 and 1-shot for *mini***-ImageNet** \rightarrow **CUB.** Table 3 shows results on FC100 with 5-way and WRN backbone and result of 1-shot for *mini*-ImageNet \rightarrow CUB with transductive setting and Resnet18 is 57.53 \pm 0.36.

Visualization of the points. Fig. 1 shows the visualization of one anchor/weights/data from novel class. Left shows data in Euclidean space. Right shows data in OM, where data is more separated than left.

		FC100		
Method	Backbone	1-shot	5-shot	
MetaOpt [3]	Resnet12	41.1 ± 0.6	55.5 ± 0.6	
SIB [2]	WRN	45.2	55.9	
E ³ BM [4]	WRN	46.0 ± 0.6	57.1 ± 0.4	
Trans. FT [1]	WRN	43.16 ± 0.59	57.57 ± 0.55	
Ours (Trans.)	WRN	47.18 ± 0.30	59.21 ± 0.56	

Table 3: Results of 5-way on CIFAR derived dataset: FC100.



Figure 1: UMAP plot for examples from novel classes.

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