

Method	CIFAR100		ImageNet100		ImageNet-R		CUB200		VTAB	
	Avg ↑	Last ↑	Avg ↑	Last ↑	Avg ↑	Last ↑	Avg ↑	Last ↑	Avg ↑	Last ↑
DualPrompt [5]	82.11	74.31	-	-	82.73	76.41	82.37	76.29	-	-
CODA-P [2]	85.19	76.4	85.93	79.02	82.06	79.5	84.77	80.39	87.5	81.2
Ours	86.13	78.21	87.76	79.16	85.77	79.98	86.93	81.64	91.37	89.67
AttriCLIP + Ours	78.06	67.59	87.37	79.3	86.35	80.6	83.71	79.01	74.84	71.12

Table 1: **Performance comparison with CODA-Prompt** (avg. over 3 runs): Similar to L2P and DualPrompt, we re-implement CODA-P using the pre-trained OpenAI CLIP’s ViT-B/16 backbone and run it with memory replay (see Table 2 for results without memory replay). Best results are in **bold**.

Method	CIFAR100		ImageNet100		ImageNet-R		CUB200		VTAB	
	Avg ↑	Last ↑	Avg ↑	Last ↑	Avg ↑	Last ↑	Avg ↑	Last ↑	Avg ↑	Last ↑
CODA-P	74.66	63.7	79.8	72.66	76.44	72.19	74.32	70.15	70.59	66.12
AttriCLIP [4]	71.35	61.4	80.55	73.08	79.57	76.1	73.89	72.36	71.25	66.02
CoOp + Ours	74.19	63.45	81.07	72.0	81.22	75.8	82.59	74.98	82.11	80.11
AttriCLIP + Ours	76.94	69.39	84.1	75.83	85.2	78.57	77.2	73.58	72.98	68.5
AttriCLIP + Ours (w/o adapter init)	71.87	60.35	75.9	69.41	77.1	70.53	69.82	65.95	65.48	61.35
AttriCLIP + Ours (w/o distribution reg.)	64.2	53.01	64.03	52.55	62.81	53.19	58.52	51.0	58.22	56.14

Table 2: **Performance comparison without memory replay** (avg. over 3 runs). For a thorough analysis, the last two rows ablate our proposed pretrained CLIP’s language-aware anti-forgetting components (Sec. 3.3, main paper): distribution regularization and adapter weight initialization. Best results are in **bold**.

Method	ImageNet100	CIFAR100 + ImageNet100
DualPrompt [5]	81.9	67.1
Continual-CLIP [3]	75.4	54.9
AttriCLIP [4]	83.3	78.3
PROOF []	81.26	82.59
Ours	83.51	83.83
CoOp + Ours	82	82.63
MaPLe + Ours	82.97	83.6
AttriCLIP + Ours	84.14	84.56

Table 3: **Performance comparison with PROOF on the Cross-Datasets Continual Learning (CDCL) setting [4]**.

Method	CIFAR100		ImageNet100	
	Avg ↑	Last ↑	Avg ↑	Last ↑
CODA-P	52.13	49.5	52.99	48.03
AttriCLIP [4]	58.61	52.1	60.54	57.4
PROOF	55.29	50.3	56.8	54.37
AttriCLIP + Ours	61.7	55.89	62.91	60.2
AttriCLIP + Ours (w/o init.)	61.33	54.95	62.14	59.86
AttriCLIP + Ours (w/o reg.)	58.95	52.6	60.04	57.93

Table 4: **Results for computationally budgeted CL setup [1]:** we follow the "Normal" budget setup from [1] where each incremental task is allocated training iterations equivalent of 1 epoch on the first task of each dataset. Scores reported are averages over three runs. Best results are in **bold**.

References

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- [3] V. G. Thengane, S. A. Khan, M. Hayat, and F. S. Khan. Clip model is an efficient continual learner. *ArXiv*, abs/2210.03114, 2022.
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