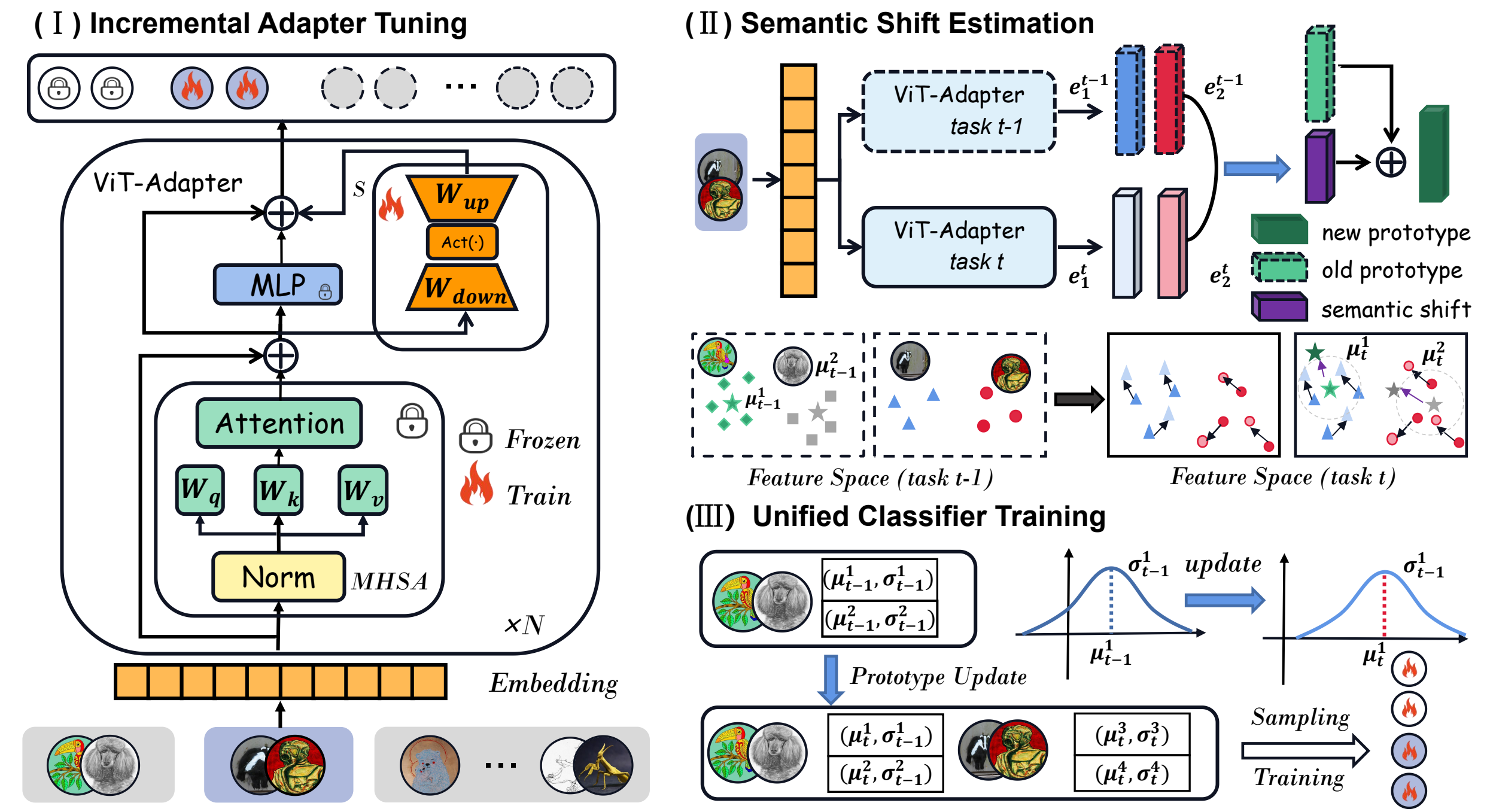
(Ⅰ) Incremental Adapter Tuning
ViT-Adapter
s
W_{up}
Act(·)
W_{down}
MLP
Attention
W_q
W_k
W_v
Norm
MHSA
×N
Frozen
Train
Embedding
(Ⅱ) Semantic Shift Estimation
ViT-Adapter task t-1
ViT-Adapter task t
e_1^{t-1}
e_2^{t-1}
e_1^t
e_2^t
new prototype
old prototype
semantic shift
μ_{t-1}^2
μ_{t-1}^1
μ_t^1
μ_t^2
Feature Space (task t-1)
Feature Space (task t)
(Ⅲ) Unified Classifier Training
$(\mu_{t-1}^1, \sigma_{t-1}^1)$
$(\mu_{t-1}^2, \sigma_{t-1}^2)$
Prototype Update
update
σ_{t-1}^1
μ_{t-1}^1
μ_t^1
$(\mu_t^1, \sigma_{t-1}^1)$
$(\mu_t^2, \sigma_{t-1}^2)$
(μ_t^3, σ_t^3)
(μ_t^4, σ_t^4)
Sampling
Training