Training Convergence Analysis by Phase

Mean Loss

- σ = 0.237 (Early Phase)
- σ = 0.151 (Middle Phase)
- σ = 0.174 (Late Phase)

- μ = 1.317, med = 1.285 — Early Phase (Steps 1-25)
- μ = 1.165, med = 1.171 — Middle Phase (Steps 26-51)
- μ = 1.157, med = 1.129 — Late Phase (Steps 52-77)
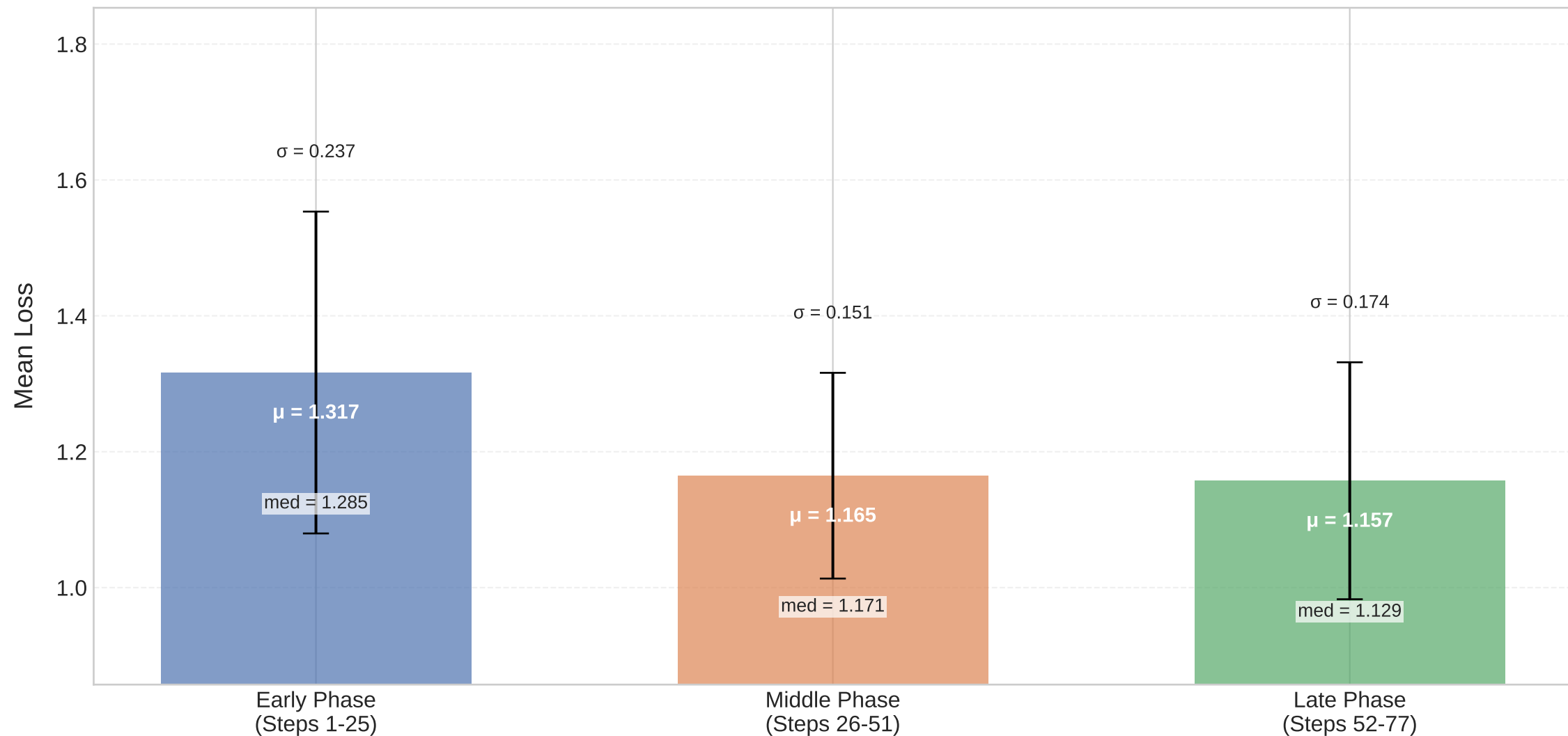
Variance Reduction: 26.4% | Loss Stability Improvement: 26.4% | Mean Loss Improvement: 12.1%