

Q-Learning vs Param Policy - Detailed Comparison Table

Metric	Q-Learning	Param Policy	Improvement	Winner
OVERALL PERFORMANCE				
Average Reward	264.26 (±27.33)	59.95 (±12.38)	+340.8%	☐
Average Midterm Score (/10)	7.14 (±0.82)	5.82 (±0.48)	+22.5%	☐
Average LO Mastery	0.707 (±0.085)	0.621 (±0.056)	+13.9%	☐
Average Weak LO Count	1.48	3.02	-51.0%	☐
CLUSTER medium				
Reward (n=55)	247.76	64.57	+283.7%	☐
Midterm Score (/10)	7.03	5.82	+20.7%	☐
LO Mastery	0.695	0.621	+12.0%	☐
CLUSTER strong				
Reward (n=28)	264.68	68.42	+286.8%	☐
Midterm Score (/10)	8.18	6.53	+25.3%	☐
LO Mastery	0.817	0.704	+16.1%	☐
CLUSTER weak				
Reward (n=17)	316.93	34.62	+815.4%	☐
Midterm Score (/10)	5.76	5.05	+14.1%	☐
LO Mastery	0.567	0.530	+7.0%	☐
STATISTICAL TEST				
T-statistic	67.744			
P-value	0.000000		Significant	