**Empirical Scaling Law for Quantum Semantic Learning
(IBM ibm_fez, 156 qubits)**

Hardware-Validated Results:
• 12 pairs → r = 0.08
• 40 pairs → r = 0.34 (4.25×)
• Projected parity: ~96 pairs

Projected Parity
~96 pairs

V3 (40 pairs)
r = 0.34
4.25× improvement

V3 (12 pairs)
r = 0.08

Quantum
Advantage
Zone

Classical Cosine Baseline (r = 0.86)
Linear Projection

Generalization Correlation (r)

Training Pairs