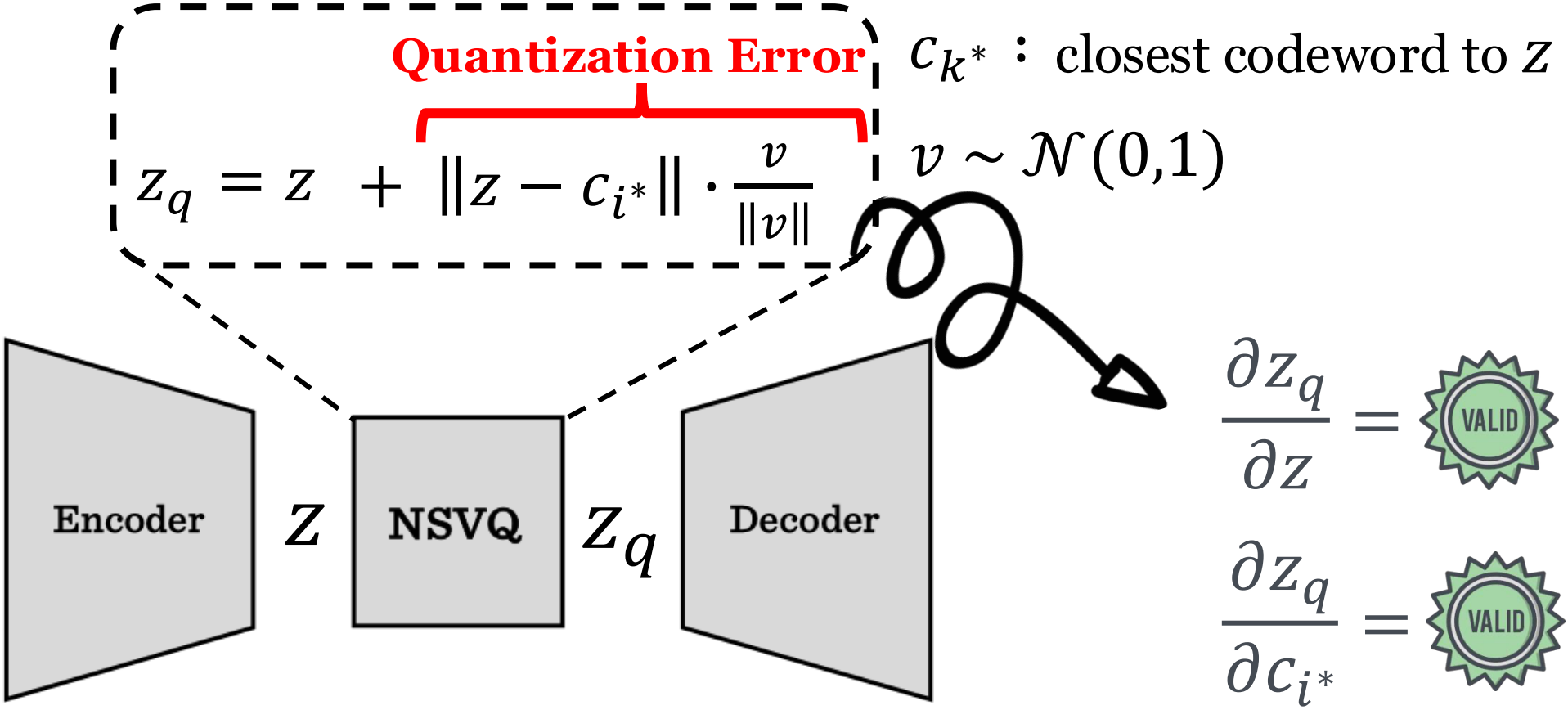
Quantization Error
c_{k^*} : closest codeword to z
$z_q = z + \|z - c_{i^*}\| \cdot \frac{v}{\|v\|}$
$v \sim \mathcal{N}(0,1)$
Encoder
z
NSVQ
z_q
Decoder
$\frac{\partial z_q}{\partial z} =$
VALID
$\frac{\partial z_q}{\partial c_{i^*}} =$
VALID