Simplest VSM= Bit-Vector + Dot-Product + BOW

$q=(x_1, \ldots x_N)$

$\mathbf{d=(y_1, \ldots y_N)}$

$x_i, y_i \in \{0,1\}$

1: word W_i is **present**

0: word W_i is **absent**

$$Sim(q,d)=q.d= x_1 y_1 + \ldots + x_N y_N = \sum_{i=1}^{N} x_i y_i$$

What does this ranking function intuitively capture?
Is this a good ranking function?