In this talk, we consider how the learning rate affects the performance of a relaxed randomized Kaczmarz algorithm for solving $Ax=b+\varepsilon$, where $Ax=b$ is a consistent linear system and $\varepsilon$ has independent mean zero random entries. We derive a learning rate schedule which optimizes a bound on the expected error that is sharp in certain cases; in contrast to the exponential convergence of the standard randomized Kaczmarz algorithm, our optimized bound involves the reciprocal of the Lambert-W function of an exponential (This talk is based on joint work with Oscar Mickelin).