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Zachary Kudlak* (zachary.kudlak@msmc.edu), Mount Saint Mary College, 333 Powell Avenue, Newburgh, NY 12550, and **Luboř Thoma**. *On a (p, q) -edge coloring of K_n .*

For integers $p \leq n$ and $q \leq \binom{p}{2}$ an edge coloring of K_n is said to be a (p, q) -edge coloring if for every induced subgraph on p vertices there are at least q colors used on its edges. Let $f(n, p, q)$ be the minimum number of colors needed in such an edge coloring. We will show that if $p \geq 6$ and $q = 2\lceil \log_2 p \rceil - 4 + \lceil \frac{4p}{2^{\lceil \log_2 p \rceil}} \rceil$, then $f(n, p, q) \leq e^{O(\sqrt{\log n})}$. In particular the case for $p = 7$ yields $f(n, 7, 6) \leq e^{O(\sqrt{\log n})}$. (Received September 21, 2010)