

**TITLE** Public Sector Innovation: An Exploration of the Relationship Between the Essential Components of Leadership and Invention Within a Department of Defense Laboratory

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**OBJECTIVE** The purpose of this study was to investigate the leadership behaviors of individuals with science, technical, engineering, and math (STEM) education and training who have patents that have been filed, allowed, or issued with those that do not.

### **METHODOLOGY**

The organization under study was a federal Department of Defense Naval laboratory, with over 3,100 civilian employees. The total sample size was 125, all of whom held at least a college degree, and were approximately 44 years of age. Of these participants, 52 had filed or pending patents (called inventors), and the remaining 73 were called noninventors. In the former group there were 44 men and in the latter group there were 69 men. All respondents had participated in the organization's leadership development over the past nine years and their LPI scores (Self) were analyzed, along with the LPI-Observer responses from their managers. Internal reliability for the LPI Self were .79 Model, .88 Inspire, .82 Challenge, .82 Enable, and .87 Encourage and the internal reliability for the LPI-Observer were .82 Model, .93 Inspire, .81 Challenge, .86 Enable, and .91 Encourage.

### **KEY FINDINGS**

The results from the overall MANOVA showed no significant differences on any of the five leadership practices between inventors and noninventors. The results from individual ANOVAs were not significant different between self-report and manager (observer)-reports between inventor and noninventor groups for any of the leadership practices.

The author notes:

Often in highly technical organizations, employees are promoted for their technical success. One example of this could be an invention or patent. However, with the current results of this research, it does not appear that technical success is especially relevant in leading others. Perhaps inventors and highly technically skilled individuals thrive best in nonmanagerial roles; thus, the need to develop the leadership skills as measured by the LPI is not seen as relevant in this particular organization. Regardless, it appears that technical success may not be the best predictor of managerial success (pp. 69-70).