

## **Machine Learning for Rational Decision-Making: Introducing Creativity to Teachers within a School System**

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**Abstract :** Creativity is suddenly and fortunately a new educational focus in the United Arab Emirates and around the world. Yet still today many leaders of creativity are not sure how to introduce it to their teachers. It is impossible to simultaneously introduce every aspect of creativity into a work climate and reach any degree of organizational coherence. The number of alternatives to explore is so great; the information teachers need to learn is so vast, that even an approximation to including every concept and theory of creativity into the school organization is hard to conceive. Effective leaders of creativity need evidence-based and practical guidance for introducing and stimulating creativity in others. Machine learning models reveal new findings from KEYS Survey® data about teacher perceptions of stimulants and barriers to their individual and collective creativity. Findings from predictive and causal models provide leaders with a rational for decision-making when introducing creativity into their organization. Leaders should focus on management practices first. Analyses reveal that creative outcomes are more likely to occur when teachers perceive supportive management practices: providing teachers with challenging work that calls for their best efforts; allowing freedom and autonomy in their practice of work; allowing teachers to form creative work-groups; and, recognizing them for their efforts. Once management practices are in place, leaders should focus their efforts on modeling risk-taking, providing optimal amounts of preparation time, and evaluating teachers fairly.

**Keywords :** creativity, leadership, KEYS survey, teaching, work climate

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