

People Skills: Building Analytics Decision Models That Managers Use—A Change Management Perspective

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This is another in a series of articles about some of the most effective models, methods, and processes of organization development (OD), also known as change management, a discipline that offers much to professionals intent on solving real-world problems. Because it is based on a systemic view of organizations, OD includes the whole universe of fuzzy people issues that increasingly determine the success or failure of efforts to implement otherwise flawless technical solutions. This article examines the increasingly important issue of how to develop prescriptive analytical models, particularly decision support models, that managers will use; suggests that classic operations research and management science model-building principles developed by John Little in the 1960s and 1970s are still applicable today; and examines why they work, based on fundamental principles of OD/change management developed by Kurt Lewin.

Keywords: analytics; decision scientist; decision support model; engagement; implementation; model building; OD/change management; OR/MS models; prescriptive model; project success.

Two-thirds of information technology-driven projects fail (Rubinstein 2007). This high failure rate does not bode well for decision scientists using analytics methods to solve real-world business problems, particularly when those problems require the development and implementation of a decision model. As the relatively new field of analytics matures and gravitates from a primary focus on the statistical and econometric models of descriptive and predictive analytics to prescriptive analytics, with its focus on operations research and management science (OR/MS) optimization models and decision support system (DSS) models, the issue of management acceptance of the models plays an even greater role in the success or failure of an initiative. The reason is that most projects fail because of managerial and (or) people issues (e.g., lack of senior management support, failure to gain user acceptance, failure to gather requirements properly, inability of the project manager to lead the team), not technical ones (Levasseur 2010). So, how do decision scientists gain management acceptance for prescriptive analytical solutions, such as DSS models, to increase the odds of project success? Some ideas from two giants in their respective fields,

John D. C. Little (OR) and Kurt Lewin (organization development—OD), may suggest an answer to this important question.

A Solution

This is not a new issue for OR/MS professionals. In his classic article (Little 1970), John Little, originator of Little's Law of queuing theory and a founder of marketing science, discussed the challenges faced by model builders and presented a set of criteria for building models that managers would use. These were that the model must be (1) simple, (2) robust, (3) easy to control, (4) adaptive, (5) complete on important issues, and (6) easy to communicate (i.e., interface) with (Little 1970, 2004, pp. 1843–1844). However, do these same principles apply today? According to Little and others who have used these principles to build decision models, they still do. Little (2004) cites comments made by Marshall Fisher, who has built DSS models for logistics and scheduling applications over the past 20 years, regarding Little's criteria for DSS model building, "Everything in your [Little's] comments resonates with my own experiences...."

I have found that simplicity and transparency beats complex optimization every time because it enables a better coupling with the heavily involved manager” (Little 2004, p. 1857). Little summarized his views on the current viability of his approach to DSS model building as follows, “Guidelines like simplicity, robustness, completeness, and ease of use, as perceived by the user, should not be surrendered easily” (Little 2004, p. 1858).

Why It Works

Why do Little’s principles of model building work? Viewing them from an OD and change management perspective provides some insights into why they lead to successful implementation. First, the models developed based on Little’s decision calculus are good models (Little 2004). I know from personal experience that they are because in my first job after business school I was responsible for working with the brand manager of Oreo cookies at Nabisco to help him use one of Little’s BRANDAID models to make marketing-mix decisions. The brand manager’s reaction to, and interaction with, this exceptional DSS was exactly as described in Little (2004). Second, the way in which Little suggests that decision scientists develop the models involves textbook OD and change management principles.

Little’s approach to model building promotes active interaction between the model builders and the managers who will use the models in both the development and application of the model (Little 2004, p. 1843). Kurt Lewin, one of the founders of OD, developed a classic three-stage change model—unfreeze, move, refreeze (Lewin 1958, Levasseur 2001). Examining Little’s criteria for building effective DSS models in light of Lewin’s change model suggests why engaging users in the model-building process in the manner prescribed by Little works so well. One of Lewin’s fundamental beliefs was that engaging stakeholders in the change process would help to reduce resistance to change; thus, it would enhance the likelihood that the stakeholders would accept and implement the change. The active and ongoing interaction

between manager and model builder emphasized by Little in the development and application of a DSS model is an excellent way of engaging the major stakeholder (the user) in the process of changing from the current state (no model used) to the desired future state (model used actively). Little’s inherent, intuitive, and flawless application of the fundamental change management principles espoused by Lewin and many other past and current change management practitioners is why analytics practitioners who want to build prescriptive models (i.e., DSS models) that managers will use should consider adopting Little’s principles of model building.

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