Chapter 123
Organizational Needs Analysis and Knowledge Management

Ian Douglas
Florida State University, USA

Category: Organizational Aspects of Knowledge Management

INTRODUCTION

Knowledge management is one of several human-oriented interventions (such as training, human factors design, automation, and human resources management) that are targeted at improving the performance of people and organizations. The analysis stage preceding the development of a human-oriented intervention is often misunderstood and neglected by both practitioners and potential customers of the analysis. Very often there is a rush to find a "silver bullet" solution that impedes careful analysis of the problem and evaluation of all the possible solutions and how they might be blended together.

The key to any good analysis is an approach that will be referred to throughout this article as organizational needs analysis (ONA), (the idea behind it has often been linked with a variety of other terms such as performance analysis, human performance technology, performance improvement, and front-end analysis). The basis of ONA is that before undertaking any significant change to an organization, it is first necessary to study and understand the organizational system, the goals of the organization, potential causes for lack of effectiveness or efficiency in achieving those goals, and building a research foundation for the selection of appropriate solutions from a full knowledge of all the possible interventions (and their variants).

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ONA precedes requirements analysis for a specific intervention (such as building a knowledge management system) and should be carried out by someone who does not have a vested interest in applying a particular solution type.

The development of the ideas and methods around ONA can be traced to a number of thinkers, most notably Thomas Gilbert (1978) and Joe Harless (1969). Gilbert, at a time when most people were focused on training as the primary means of improving performance in organizations, noted that there are six variables in improving human performance: information, resources, incentives, knowledge, capacity and motives. Training targets only one of these resources and not always in an efficient manor. He saw the need to understand and alter the total environment under which work took place in organizations. Harless (1969) used the term front-end analysis for the activity of creating a rigorous diagnostic framework prior to introducing new interventions into an organization. He argued that solutions are often adopted without sufficient understanding of what the real problems are. In particular, training was often adopted when non-training solutions could prove more effective.

An example from the author's experience illustrates this dilemma. In a major military organization, it was identified that new radio operators were having trouble operating their radios in secure frequency hopping mode, despite passing all their tests after a period of training. Training analysts were called in and recommended the construction of a $4 million dollar radio simulator to provide more practice. The actual problem was caused by new operators forgetting a sequence of up to ten operations (e.g. button presses and dial turns). They remembered the sequence just after training at the test, but in the intervening weeks or months between the radio training and joining an active unit, they forgot. An organizational needs analyst as opposed to a training analyst would have looked at all the possible solutions, and considered altering the environment, e.g. by laminating a reminder of the steps on the actual radio, a more cost effective solution to this problem. They would also consider that the human factors engineering on a lot of technology design is often neglected by manufacturers, and would consult with the manufacturer on making future designs more intuitive.

The problem is that there are relatively few solution neutral analysts trained in organizational needs analysis. There are however lots of people trained in requirements analysis for training, information technology and knowledge management, who although well intentioned, will have a bias towards advocating the intervention they know best. To be effective, ONA must be carried out using systems thinking and with no pre-conceived notion of a problem's solution.

Systems thinking was prominently highlighted in an organizational context by the work of Peter Senge (1990). Systems thinking applies in both understanding the root of the problem and in developing a solution to it. Often a perceived cause of a problem will vary depending on a particular perspective within the organization. The actual cause of a problem may not be apparent without a complete and objective view of how the whole organizational system operates. Interventions such as knowledge management are themselves systems, which become sub-systems of the organizations; as such they need to be considered in relation to other interventions active in an organization, such as training and IT systems. A good organizational needs analyst understands when a solution does not fit a problem and when a blend of interventions (e.g., training plus knowledge management) is more appropriate than a single approach.

The concepts, methods and theories relating to ONA derive from a variety of sources and disciplines (including organizational psychology, instructional design and operations research). They are generally promoted by the interdisciplinary association known as the International Society for Performance Improvement (ISPI – www.ispi.org).