

# Electronic Performance Support, E-Learning, and Knowledge Management

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## INTRODUCTION

The key outcome of the current transition from the “old economy” to the “new economy” is the dramatic shift from investments in physical capital to investments in intellectual capital. Today, approximately 70% of a country’s wealth is in human capital as opposed to physical capital, as estimated by Gary S. Becker, Nobel laureate and professor of economics and sociology at the University of Chicago (Ruttenbur, Spickler, & Lurie, 2000). In the knowledge-based economy, organizations as well as individuals need to focus on protecting and enhancing their biggest asset: their knowledge capital. The increasing economic importance of knowledge is blurring the boundary lines for work arrangements and the links between education, work, and learning.

Today, business needs workers who can perform, but to perform well they need timely, relevant, and task-specific knowledge, learning opportunities, and guidance. Traditional means of knowledge support ranging from conventional classroom training to computer-based training are becoming severely limited. At the same time, managers are voicing dissatisfaction with the IT investments in the workplaces because of unrealized productivity gains. Most often it is because of the fact that IT is adopted but not exploited properly.

## SUPPORTING THE KNOWLEDGE WORKER

Within modern organizations, much of the job tasks that the workers have to perform involve information processing in which change is the only certainty. Therefore, there is a need for new ways to equip the employees with knowledge and skills that will enable them to perform effectively in a flexible work environment.

As a result, managers are seeking innovative ways to decrease the time required to reach competency as well as new ways for improving performance without disrupting the workflow. This gave rise to a concept called electronic performance support systems (EPSS).

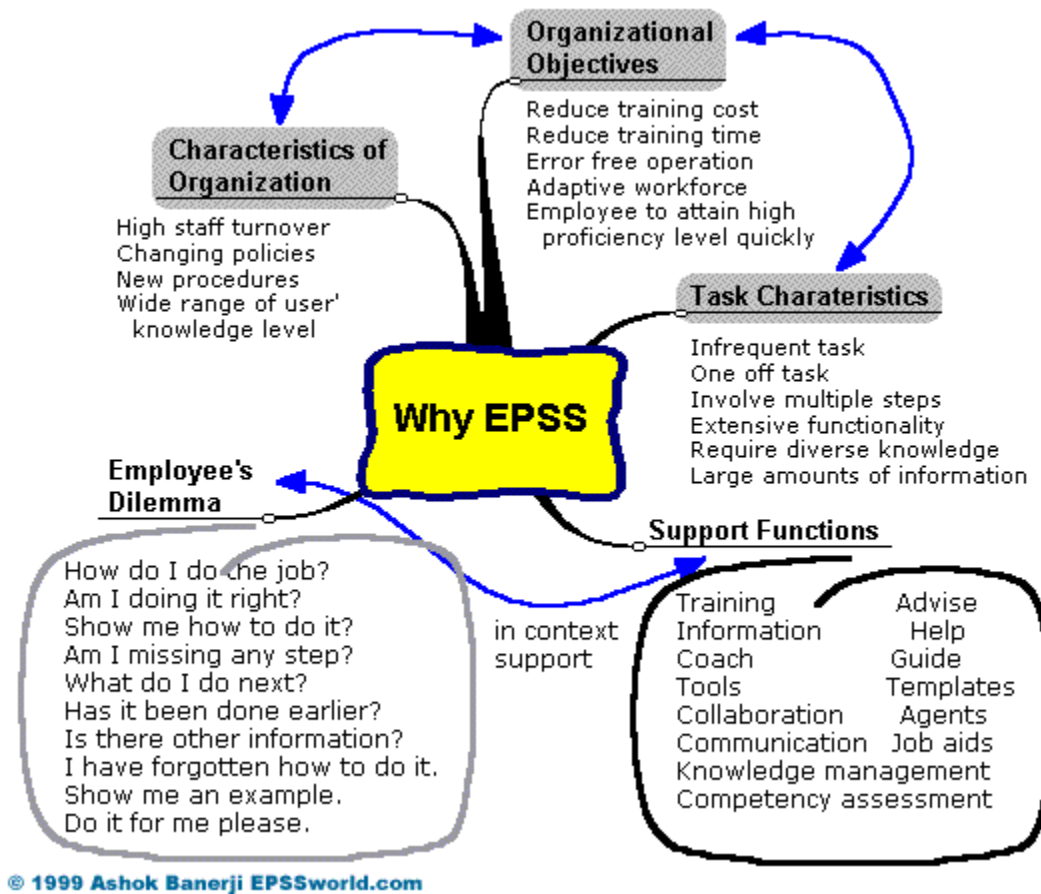
The main purpose for an EPSS is to help businesses perform better by helping the employee work “smarter,” and, as a result, perform consistently well. One goal of electronic performance support intervention is to decrease the time an employee needs for learning and reduce the time spent in acquiring information required for job performance. Figure 1 describes the context and drivers for incorporating electronic performance support interventions.

This model suggests the broad role of EPSS. It is an intervention that provides several types of solutions for the employees’ performance dilemmas in the modern workplace. A wide range of tools are included in an EPSS environment to create learning opportunities and knowledge support. Amongst these, e-learning and knowledge management constitute the two critical components for developing an electronic performance support environment.

## EPSS ELABORATED

Gloria Gery first coined the term electronic performance support system when working on a strategy for delivering electronic training to AT&T (Gery, 1991). The concept grew out of a comparison that was made between conventional training and a new strategy that she was attempting to apply initially called knowledge-support systems. The software she and her team supplied to AT&T could be accessed from any workstation, and on demand it coached employees upon the process of testing complex material. It was difficult to teach via

Figure 1. Model: Context and drivers for performance support



more traditional methods. At this early venture EPSS referred to intersecting technology that offered “just in time” learning tools to a person with a task or job to do.

## Architecture

An EPSS encompasses a broad range of functionality by incorporating training, coaching facilities, job-performance aids, and knowledge repositories into its makeup. In this sense, EPSSs have been appropriately described as human-activity systems (Banerji & Scales, 2004) that provide a holistic approach to supporting performance within the workplace.

To understand this idea, it is helpful to view jobs as a system of smaller, goal-oriented tasks. The successful completion of any job by a human operative requires a selection of resources, that is, information, knowledge, and skills, which are directed at solving the problems posed by any one task. An EPSS can be implemented in order to provide for one or more of these resources via the utilization of one or more of its component parts.

The EPSS components mentioned above are frequently adopted for use as performance support, either independent from one another or within varying degrees of integration into systems.

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