

Benefits of Training and Development for Individuals, Teams and Organizations

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Abstract

This article provides a review of the training and development literature since the year 2000. We review the literature focusing on the benefits of training and development for individuals and teams, organizations, and society. We adopt a multidisciplinary, multilevel, and global perspective to demonstrate that training and development activities in work organizations can produce important benefits for each of these stakeholders. We also review the literature on needs assessment and pertaining states, training design and delivery, training evaluation, and transfer of training to identify the conditions under which the benefits of training and development are maximized. Finally, we identify research gaps and offer directions for future research.

The present review is organized as follows. In the first section, we describe benefits of training activities. First, we focus on benefits for individuals and teams, separating these benefits into job performance and factors related to job performance (e.g., tacit skills, innovation, communication), and other benefits (e.g., empowerment, self-efficacy). Second, we describe benefits for organizations. We also separate these benefits into organizational performance, factors related to organizational performance (e.g., effectiveness, profitability, sales), and other benefits (e.g., employee and customer satisfaction, improved organizational reputation). Third, we describe benefits for society. Overall, a review of this body of literature leads to the conclusion that training activities provide benefits for individuals, teams, and organizations that improve a nation's human capital, which in turn contributes to a nation's economic growth. The second section reviews research addressing how to maximize the benefits of training activities at the individual and team, organizational, and societal levels. First, we focus on the activities that take place before training is implemented—needs assessment and pretraining states. Then, we focus on training design and delivery, followed by a discussion of training evaluation. We review research regarding transfer of skills and knowledge acquired in training to work settings. In the third and final section, we address conclusions, including implications for practice, and suggestions for future research.

Keywords : training benefits, training design, training delivery, training evaluation

1. Introduction

As organizations strive to compete in the global economy, differentiation on the basis of the skills, knowledge, and motivation of their workforce takes on increasing importance. According to a recent industry report by the American Society for Training and Development (ASTD), U.S. organizations alone spend more than \$126 billion annually on employee training and development (Paradise 2007). "Training" refers to a systematic approach to learning and development to improve individual, team, and organizational effectiveness (Goldstein & Ford 2002). Alternatively, development refers to activities leading to the acquisition of new knowledge or skills for purposes of personal growth. However, it is often difficult to ascertain whether a specific research study addresses training, development, or both. In the remainder of this review, we use the term "training" to refer to both training and development efforts. [1]

The importance of and scholarly interest in training in work organizations is reflected by the regular publication of training reviews in the *Annual Review of Psychology* since 1971 (Campbell 1971, Goldstein 1980, Wexley 1984, Latham 1988, Tannenbaum & Yukl 1992, Salas & Cannon-Bowers 2001). The present review covers the training literature since January 2000. We provide a review that is comprehensive though not exhaustive. Also, in contrast to previously published *Annual Review of Psychology* articles, we readily acknowledge at the outset that we take a point of view that training in work organizations produces clear benefits for individuals and teams, organizations, and society. We believe that training in work organizations is an area of applied psychological research that is particularly well suited for making a clear contribution to the enhancement of human well-being and performance in organizational and work settings as well as in society in general. Thus, in this review we first describe the benefits of training for various stakeholders and then discuss how training can be designed, delivered, and evaluated so that these benefits are maximized.

2. Benefits of training for individuals and teams

There is documented evidence that training activities have a positive impact on the performance of individuals and teams. Training activities can also be beneficial regarding other outcomes at both the individual and team level (e.g., attitudes, motivation, and empowerment). We first review performance-related benefits.

2.1. Benefits Related to Job Performance

Training-related changes should result in improved job performance and other positive changes (e.g., acquisition of new skills; Hill & Lent 2006, Satterfield & Hughes 2007) that serve as antecedents of job performance (Kraiger 2002). Reassuringly, Arthur et al. [2]

(2003) conducted a meta-analysis of 1152 effect sizes from 165 sources and ascertained that in comparison with no-training or pretraining states, training had an overall positive effect on job-related behaviors or performance (mean effect size or $d = 0.62$). However, although differences in terms of effect sizes were not large, the effectiveness of training varied depending on the training delivery method and the skill or task being trained. For example, the most effective training programs were those including both cognitive and interpersonal skills, followed by those including psychomotor skills or tasks. Next, we describe studies to exemplify, as well as go beyond, the general findings reported by Arthur et al. (2003). We emphasize that results from meta-analytic reviews should generally be given more weight than individual (i.e., primary-level) studies because they are more reliable (Aguinis et al.

2008).

Training effects on performance may be subtle (though measurable). In a qualitative study involving mechanics in Northern India, Barber (2004) found that on-the-job training led to greater innovation and tacit skills. Tacit skills are behaviors acquired through informal learning that are useful for effective performance. Regarding innovation, trained mechanics learned to build two Jeep bodies using only a homemade hammer, chisel, and oxyacetylene welder. Regarding tacit skills, Barber noted that the job of a mechanic requires “feel” to be successful. Specifically, trained mechanics developed an intuitive feel when removing dents—a complex process particularly when the fender is badly crumpled. As a result of informal training, one of the mechanics had a “good feeling of how to hit the metal at the exact spot so the work progresses in a systematic fashion” (Barber 2004, p. 134). This type of tacit skill was particularly useful in the Indian context because, although most shops in developed nations would not even attempt to repair a fender that was damaged so badly, this type of repair is common practice in the developing world (Barber 2004).

3. Benefits of training for organizations

Fewer than 5% of all training programs are assessed in terms of their financial benefits to the organization (Swanson 2001). The picture changes among companies recognized for their commitment to training. Specifically, the majority of organizations recognized by ASTD for innovative training programs measure training impact at some level of organizational effectiveness (Paradise 2007, Rivera & Paradise 2006). Typical organizational performance measures in this latter sample include productivity improvement, sales or revenue, and overall profitability. Overall, research regarding organizational-level benefits is not nearly as abundant as the literature on individual- and team-level benefits. Not only have there been relatively few empirical studies showing organizational-level impact, but those studies that have been done typically use self-report data and unclear causal link back to training activities (Tharenou et al. 2007). Nevertheless, we review this literature organized into two areas: benefits related to organizational performance and other benefits.

3.1. Benefits Related to Organizational Performance

Several studies conducted in European countries have documented the impact of training on organizational performance. Aragtin-Sanchez et al. (2003) investigated the relationship between training and organizational performance by distributing a survey to 457 small and medium-size businesses in the United Kingdom, the Netherlands, Portugal, Finland, and Spain. Organizational performance was operationalized as (a) effectiveness (i.e., employee involvement, human resource indicators, and quality), and (b) profitability (i.e., sales volume, benefits before interest and taxes, and a ratio of benefit before taxes/sales). Results indicated that some types of training activities, including on-the-job training and training inside the organization using in-house trainers, were positively related to most dimensions of effectiveness and profitability. Ubeda Garcia (2005) conducted a study including 78 Spanish firms with more than 100 employees. This study related organizations' training policies (e.g., functions assumed by the training unit, goals of the training unit, nature of training, and how training is evaluated) with four types of organizational-level benefits: employee satisfaction, customer satisfaction, owner/shareholder satisfaction, and workforce productivity (i.e., sales per employee). Results suggested that training programs oriented toward human capital development were directly related to employee, customer, and owner/shareholder satisfaction as well as an objective measure of business performance (i.e., sales per employee). Guerrero & Barraud- Didier (2004) administered a questionnaire to 1530 human resource directors working in large companies in France and collected financial information from the companies' financial directors or through databases approximately one year later. Five questions in the survey addressed the extent to which the company implemented

training practices. The survey also included questions about social and organizational performance including work climate, employee attendance, quality of products and services, and employee productivity. Results showed that 4.6% of the variance in financial performance was explained by training (via the mediating role of social and organizational performance). Finally, Mabey & Ramirez (2005) conducted a study including 179 firms in the United Kingdom, Denmark, France, Germany, Norway, and Spain. Human resource managers or equivalent and line managers completed a survey on training practices. Financial data were gathered from the Amadeus database; a two-factor measure of financial performance was computed based on (a) operating revenue per employee and (b) cost of employees as a percentage of operating revenues. Results indicated that the manner in which management development was implemented accounted for substantive variance in the financial performance measure. Specifically, firms with line managers reporting that management development programs are valued were more likely to have a positive relationship between management development and financial performance. [3]

4. Benefits of training for society

Most of the research on the relationship between training activities and their benefits for society has been conducted by economists; the focal dependent variable is national economic performance. Overall, this body of literature leads to the conclusion that training efforts produce improvements in the quality of the labor force, which in turn is one of the most important contributors to national economic growth (e.g., Becker 1962, 1964). Economists coined the terms “human capital” and “capital formation in people” in referring mainly to schooling and on-the-job training (Wang et al. 2002).

An illustration of this type of analysis is a study by van Leeuwen & van Praag (2002), who calculated the costs associated with on-the-job training and the impact of such training on country-level macroeconomic variables. These researchers concluded that if employers receive a tax credit of €115 per employee trained, the total expense for the country would be €11 million, but €114 million would be generated in increased revenue resulting from the new skills acquired.

5. How to maximize the benefits of training

In the next section, we summarize recent theory and research oriented toward improving the effectiveness and impact of training. Roughly following the instructional design model (Goldstein & Ford 2002), we organize this review around stages of needs assessment and pretraining states, training design and delivery, training evaluation, and transfer of training.

5.1. Needs Assessment and Pretraining States

Conducting a thorough needs assessment before training is designed and delivered helps set appropriate goals for training and ensure that trainees are ready to participate (Blanchard & Thacker 2007). However, there continues to be little theoretical or empirical work on needs assessment (Kraiger 2003). One exception is a study by Baranzini et al. (2001), who developed and validated a needs assessment tool for the aviation maintenance industry. A second example of a theory-based approach to conducting a needs assessment is a study by Fowlkes et al. (2000), who evaluated an event-based knowledge-elicitation technique in which subject matter experts (SMEs) are asked about team situational awareness factors in response to a military helicopter operation. Results showed that more experienced experts identified a richer database of cues and were more likely to identify response strategies, supporting the conclusion that using SMEs during a needs assessment maximizes the benefits of training. The finding that expertise affects the quality of needs assessment data is consistent with the conclusions of Morgeson & Campion (1997), who reported that the

accuracy of job analysis data may be compromised by up to 16 different systematic sources of error. These include social influence and self-presentation influences and limitations in information processing (cf. Ford & Kraiger 1995). More empirical research is necessary to understand how the quality of training design and delivery is affected by systematic and random influences on the quality of needs assessment data. [4]

Consideration of the pretraining states or individual characteristics of trainees also enhances the benefits of training. Tracey et al. (2001) collected data from 420 hotel managers who attended a two-and-a-half-day managerial knowledge and skills training program. Results showed that managers' job involvement, organizational commitment, and perceptions of the work environment (i.e., perceived support and recognition) were predictive of pretraining self-efficacy, which in turn was related to pretraining motivation. Pretraining motivation was related to posttraining measures of utility reactions, affective reactions, declarative knowledge scores, and procedural knowledge scores. Pretraining motivation has also been shown to be related to trainee personality (Rowold 2007), trainee self-efficacy and training reputation (Switzer et al. 2005), as well as reactions to prior training courses (Sitzmann et al. 2007). In a field study of learners in a traditional classroom or blended learning course, Klein et al. (2006) found that learners had a higher motivation to learn when they had a high learning goal orientation (rather than a lower learning goal orientation) and when they perceived environmental conditions (e.g., time, Internet access) as learning enablers (rather than as barriers). Motivation to learn, in turn, was related to learner satisfaction, metacognition, and course grade. Kozlowski et al. (2001) showed that trait and manipulated learning orientation had independent effects on participants' self-efficacy and structural knowledge. [5]

More generally, Colquitt et al. (2000) summarized 20 years of research on factors affecting trainee motivation. Their meta-analysis showed that training motivation was significantly predicted by individual characteristics (e.g., locus of control, conscientiousness, anxiety, age, cognitive ability, self-efficacy, valence of training, and job involvement) as well as by situational characteristics (e.g., organizational climate).

In summary, two ways to maximize the benefits of training is to conduct a needs assessment using experienced SMEs and to make sure trainees are ready and motivated for training. For example, training readiness can be enhanced by lowering trainees' anxiety about training, demonstrating the value of training before training begins, and making sure employees are highly involved and engaged with their jobs.

Transfer of training:

the extent to which new knowledge and skills learned during training are applied on the job

6. Conclusions

We take the point of view that training leads to important benefits for individuals and teams, organizations, and society. The present review suggests that these benefits range from individual and team performance to the economic prosperity of a nation. To understand these benefits of training, we adopted a multilevel, multidisciplinary, and global perspective. We also included a discussion of how to maximize the benefits of training. These factors include paying attention to needs assessment and pretraining states of trainees (e.g., trainee motivation), training design and delivery (e.g., advantages of using error training), training evaluation (e.g., documenting training success differently depending on the stakeholder in question), and transfer of training (i.e., the importance of interpersonal factors).

The organizations that are able to realize the benefits of training that are documented in this review are able to move away from viewing the training function as an operational function or cost center to one that is value driven. [6]

For example, the consulting company PricewaterhouseCoopers has cut costs in many areas but increased its investment in employee training to about \$120 million per year. Another leading consulting firm, Booz Allen Hamilton, believes in developing workers as a long-term competitive advantage and manages its learning functions as revenue centers (Fox 2003). Managers and other decision makers in these organizations prefer information and data on

business-related results to make decisions about how to allocate resources, including resources for training activities (Mattson 2005). Training for the sake of training, an approach that focuses on developmental ideals and supportive organizational environments, is not aligned with today's business realities, including compressed career progression pathways, budgetary cuts and constraints, highly competitive environments, and market-driven economic philosophies (McGuire et al. 2005). Designing, delivering, evaluating, and clearly documenting the benefits of training using the information included in this review will allow the human resource management function to be a strategic organizational player and to move away from the negative connotations (e.g., "welfare secretaries") associated with this function in the twentieth century (Hammonds 2005, Jacoby 2004, Kraiger et al. 2004).

1. The current review differs from previous *Annual Review of Psychology* articles on the topic of training and development because its approach is fundamentally multidisciplinary, multilevel, and global.
2. There is considerable support for the many benefits of training for individuals and teams. These benefits include performance as well as variables that relate directly (e.g., innovation and tacit skills, adaptive expertise, technical skills, self-management skills, cross-cultural adjustment) or indirectly (e.g., empowerment; communication, planning, and task coordination in teams) to performance.
3. Many studies have gathered support for the benefits of training for organizations as a whole. These benefits include improved organizational performance (e.g., profitability, effectiveness, productivity, operating revenue per employee) as well as other outcomes that relate directly (e.g., reduced costs, improved quality and quantity) or indirectly (e.g., employee turnover, organization's reputation, social capital) to performance.
4. The recognition of the benefits of training activities for society has led many countries around the world to adopt national policies to encourage the design and delivery of training programs at the national level. The goal of these policies is to improve a nation's human capital, which in turn is related to greater economic prosperity.
5. Several interventions are effective at enhancing the benefits of training. Designing, delivering, evaluating, and clearly documenting the benefits of training using the information included in this review will allow the human resource management function to be a strategic organizational player and to move away from the negative connotations (e.g., "welfare secretaries") associated with this function in the twentieth century.
6. Future research is needed in several areas. For example, the benefits of training may have a cascading effect such that individual-level benefits (e.g., individual performance) affect team-level benefits (i.e., team performance), which in turn affect organizational (i.e., profitability) and societal (i.e., human capital) outcomes.
7. Training alone may not be able to realize its benefits if it is disconnected from other human resource management functions or if the organization is dysfunctional in other areas (e.g., interpersonal relationships). Training will have the greatest impact when it is bundled together with other human resource management practices and these practices are also implemented following sound principles and practices based on empirical research.

The authors are not aware of any biases that might be perceived as affecting the objectivity of this review.

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