Trends in Spending on Training: An Analysis of the 1982 Through 2008 Training Annual Industry Reports

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This article explores long-term trends in spending using data compiled from the *Training* magazine Annual Industry Survey from 1982 through 2008. It builds on literature that proposes spending on training is an investment that yields benefits—and that offers methods for demonstrating it. After adjusting for inflation, aggregate spending on training rose 1.5% between 1986 and 2008. Inflation-adjusted spending on training staff fell 14%, although inflation-adjusted spending on outside products and services increased 237%. Spending on training fell in all but two job categories. Findings support the belief that spending on training is falling but suggest that this is a sustained and systemic drop rather than a temporary response to an economic crisis. Also, expenditures on internal training resources have fallen, while spending on external resources has risen. A key limitation of this study is that it relies solely on data from the *Training* Annual Industry Survey.

Discussions about spending on training seem to be characterized by two popular beliefs. The first is that employer-sponsored training offers a competitive advantage and organizations should spend as much as possible on it. Some of that belief emerges from beliefs about the emerging knowledge economy, which emphasizes workers with specialized expertise and the leverage of that expertise into commercially successful products and services (Casner-Lotto, Rosenblum, & Wright, 2009). And some of that belief emerges from the assertion that when training is linked with strategic organizational goals, it provides a strong return on investment (ASTD, 2009a; Kravetz, 2004).

Despite the popular belief in the competitive advantage of training, the other popular belief regarding spending on training is that training is the first function to get cut in a downturn and that those cuts usually are deeper than those experienced by other groups in their organizations. For example, consultant Chris Young (2009) claims, "In any slowdown or recession redundancies and budget cuts become the norm and the training department is often the first to be cut as it is seen as an expendable cost."

Since the early 1990s, some of the industry press has tried to reassure trainers that training is not the first to be cut in a downturn. For example, during the downturn of 1991, *Training* magazine editor Jack Gordon (1991) observed, "Conventional wisdom has long maintained that training…is 'the first thing cut' when times get tough. The good news is that…it's a rare organization that has responded to the current economic slump by swinging the budget ax first and hardest at its training function. Training may not be

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the last thing cut, but it certainly isn't the first" (p. 37). Gordon supported his claim with data from *Training* magazine's Annual Industry Survey, which began tracking spending on employer-sponsored workplace training in 1982 and, by 1991, had tracked the effects of the downturns in the early 1980s, the 1987 stock market crash, and the 1990–1991 recession. The American Society for Training and Development (ASTD), which has tracked spending on employer-sponsored training since 1997, offered similar reassurance during the recessions of 2001 and 2008 to 2009. In 2001, for example, ASTD reported, "Training expenditures for many organizations did not decline with the economic downturn; in fact, companies expected spending on training to grow a healthy 10 percent between 2000 and 2001" (ASTD, 2002, p. 1).

So which is it? Is training a valuable asset or a likely target for budget cuts during a downturn?

But the perception that training takes more than its share of cuts in a downturn has persisted into the U.S. recession beginning in December 2007 (NBER Makes It Official, 2008). Although ASTD president Tony Bingham (2009) tried to reassure trainers that "a forthcoming study…shows that 38 percent of companies surveyed are placing more emphasis on learning during this economic downturn to a high or very high degree" (p. 10), other industry leaders wrote contrarian opinions. Wickman (2008) noted, "Typically, training is one of the first items to be cut, but [Society for Human Resource Management chief knowledge officer Deb] Cohen believes organizations should avoid that route."

So which is it? Is training a valuable asset or a likely target for budget cuts during a downturn? With data from yet another down cycle now available, we wanted to make a new assessment rooted in the data. Nearly a quarter-century of data on spending on formal training exists—data that track not only aggregate spending but also spending on outsourcing and on training particular categories of workers.

This article presents our findings. First, it provides a brief review of the research literature about spending on training, including its lack of a longitudinal analysis of spending patterns on training. Then it describes how we acquired data to make such an analysis and the methodology we followed to analyze those data. Next, we report what we found, summarizing spending on training in the aggregate over a 22-year period, as well as spending on particular job categories and on outsourcing. Finally, we interpret the data and suggest what the findings indicate about past trends on spending on training and how this might affect professionals in workplace learning and performance.

Literature Review

Like the popular literature cited earlier, the peer-reviewed and research literature on spending on training is characterized by two similar conversations: one that explores the benefit of spending on training and another that

tracks actual spending. The next two sections individually explore each of these conversations.

Benefits of Spending on Training

Researchers of workplace learning and performance believe that training offers positive benefits to the organizations that invest in it. For example, Tajeddini (2009) claims that "businesses throughout the world are focusing on learning as a competence that can distinguish them from their competitors" (p. 21), and Aguinis and Kraiger (2009) note that training can provide "a clear contribution to the enhancement of human well-being and performance in organizational and work settings as well as in society in general" (p. 451). Such beliefs are rooted in the theory of human capital, which states that "individuals and society derive economic benefits from investments in people. The investment feature of this suggestion significantly differentiates human capital expenditures from consumptive expenditures—those providing few benefits beyond immediate gratification" (Sweetland, 1996, p. 341). This belief in the tangible benefit of training is also rooted in the definition of human performance technology, which stresses that the resulting improvement in human performance should be worthy in addition to measurable (Pershing, 2006; Stolovitch & Keeps, 1999).

The challenge is articulating those benefits concretely and, when feasible, in financial terms. The reason is that many benefits of learning are assumed to be qualitative and ephemeral, and the improved performance resulting from learning arises only in the long term. Researchers of the economics of education have attempted to articulate such benefits. They have explored the relationship of education to benefits, such as the impact of an elementary school education on overall health, of college education on later earnings, and of education levels and societal productivity (Sweetland, 1996; Zula & Chermack, 2007). Sweetland (1996) notes, however, that issues considered and methods used vary among the different branches of education. For example, the economic benefits considered and methods used to assess early childhood and higher education vary from those used for informal and adult education.

Although the fourth of Kirkpatrick's (1994) widely adopted levels of evaluation, impact, suggests that training should offer financial benefits to the organization that invests in it, the issue began receiving ongoing attention in the 1980s, in conjunction with broader attention to the financial performance of investments. As part of this process, alternatives to the Kirkpatrick model were offered. Swanson and Holton (1999), for example, propose specific ways of calculating the benefits of training. Phillips (2003) explains how to calculate the return on investments in training. Kravetz (2004) suggests, among others, how to calculate the financial value of competency. And Bassi and McMurrer (2007) identify training-related measurements that correlate with the financial performance of organizations. In contrast to these efforts to demonstrate the value of past programs, McLinden, Phillips, Hamlin, and Helbig (2010) propose methods to evaluate the future economic impact of training. These methodologies primarily focus on the benefits of

training to the individual organizations that invest in it; van Leeuwen and van Praag (2002) consider the economic impact to a country of several proposed government policies on workplace learning.

While some have proposed ways to calculate the financial benefit of investments in training, others have tried to find an empirical link between investments and tangible financial benefits. Some of these studies explore these benefits in the context of government and nonprofit organizations. For example, Hawley, Sommers, and Meléndez (2005) empirically demonstrated that partnerships between government programs and employers can have a positive effect on the earnings of adults who finish the programs.

But most studies explore the relationship in a corporate context. Tharenou, Saks, and Moore (2007) note that "the investment made in training requires an analysis of the evidence to examine if, indeed, training pays off in organizational effectiveness" (p. 252). For example, Ellinger, Ellinger, Yang, and Howton (2002) found a link between adopting the learning organization concept to an organization's economic performance. Tharenou et al. (2007) conducted a meta-analysis of 67 studies exploring the relationships between training and broad organizational outcomes, including 18 that specifically explored the relationship between training investments and organizational profit, and profitability. But they found "that training is positively related to human resource outcomes and organizational performance but is only very weakly related to financial outcomes" (p. 251).

As part of their analysis, Tharenou et al. (2007) noted that empirical studies are characterized by two broad perspectives on the benefits of training. The universalist perspective supposes that human resource (HR) practices, such as training, should provide benefits to all organizations that invest in them. The contrasting contingency perspective supposes that the effectiveness of HR practices like training depends on key contextual factors, such as the strategy of an organization, so the tangible impact of HR practices would vary widely among organizations.

Actual Spending on Training

In contrast to the conversation about the benefits that organizations might receive from their investments in training and efforts to empirically demonstrate those benefits, a smaller body of literature tracks actual expenditures on training. This research is conducted only within the context of an individual country, and in each country, the organization conducting the research varies. For example, in the Netherlands, the government has compiled information about the use of training (van Leeuwen & van Praag, 2002), while in Canada, the nonprofit Conference Board of Canada conducts a biannual report on spending on training (Immen, 2010).

In the United States, spending on training has been tracked by three annual reports: *Training* magazine's Annual Industry Survey, the ASTD's annual State of the Industry report, and *CLO* magazine's Business Intelligence Industry Survey. The three seek different types of information and, as a result, use different methods to collect and analyze data and generate conclusions. *CLO*, the newest of the three, began its survey in 2005. It

compiles data from a series of brief Web-based surveys to its Business Intelligence Board (a select group of subscribers) and tracks trends in spending (up, down, or unchanged), size of learning and development staff, satisfaction with various business arrangements, and responses to predictive statements about the coming year (Chief Learning Officer, 2010). ASTD's State of the Industry report primarily tracks the productivity of training efforts, and reports most of its data per employee. Examples of data collected and reported include average expenditure per employee on training, average number of employees per training employee, and average cost per learning hour. ASTD also tracks the training expenditure as a percentage of total payroll expenditures. In contrast, the *Training* magazine Annual Industry Survey, the oldest of the three surveys, primarily tracks spending, including the total industry-wide spending on training by employers and the amounts spent on outside suppliers, off-the-shelf training, and custom training.

All three surveys compare expenditures in the current year with those in the previous year. ASTD's (2009b) report also provides summary charts showing results back to 2001.

Surprisingly, neither *CLO*, ASTD, nor *Training* provides a longer-term analysis of trends in spending, and no such analysis been published elsewhere. This study addresses that gap.

Methodology

To answer the general question—How do economic downturns affect spending on training?—and the related question—How are different components of that spending affected by downturns?—we turned to the three ongoing surveys of spending on training: *Training* magazine's Annual Industry Survey, the ASTD's State of the Industry report, and *CLO* magazine's Business Intelligence Industry Survey.

Our first task involved determining from which survey to compile our data. We immediately rejected the *CLO* survey because it is so recent; it does not even include cover the 2001 downturn. The remaining two track similar types of information. For example, both track the types of training content provided. ASTD reports this in terms of the percentage of total training provided (e.g., the amount of sales training provided as a percentage of total training), while *Training* reports the money spent (e.g., the total amount of funds spent on sales training). Similarly, both surveys track the use of technology. ASTD and *Training* both track the percentage of training provided in a given medium (e.g., the percentage of instructor-led training). Before 1997, however, the *Training* Annual Industry Survey tracked whether an organization used a particular medium for training.

These two surveys arrive at their conclusions through different methodologies, which might make combining their data difficult. ASTD collects its data from three sources: (1) a benchmarking survey, which represented a cross-section of organizations in terms of size, industry, and "should be interpreted as the U.S. norm" (Sugrue & Rivera, 2005); (2) a Benchmarking

Forum, a members-only group of large organizations that agree to share information about the operations of their training organization; and, since 2003, (3) winners of the ASTD BEST competition (an award of excellence for organizations that "can demonstrate a clear link between learning and performance"). In contrast to the benchmarking survey, data from the Benchmarking Forum and BEST winners include organizations outside the United States. In its report, ASTD presents the three sources of data separately. The reports are provided free to ASTD members in the year that they are published; all others can receive copies for a fee (the fee for the 2008 report was $695).

In contrast, the *Training* Annual Industry Survey is conducted from a "sampling of *Training* subscribers" (*Training*, 2006, p. 22) who are mailed an invitation to participate. In the past, the invitation was sent by surface mail, but since 2006, the invitations have been sent by e-mail and the survey conducted online. For a time, the survey was conducted at three levels:

- A public survey, reported each year in *Training* magazine (from 1986 until 2004, the October issue; between 2005 and 2009, the January issue)
- A report of all of the publicly available information, as well as responses to additional questions. Organizations paid a fee to receive that report
- In addition to the results of the second level, an opportunity for organizations to ask their own questions and exclusively receive the response, for an additional fee

Because the two surveys report different types of data from different sources, they, not surprisingly, report different results. In 2008, for example, ASTD (2009a, b) concluded that $134.39 billion was spent on U.S. training, while *Training* concluded that the expenditure was $56.2 ("Consumer Price Index (CPI) Conversion Factors to Convert to 2008 Dollars," 2008).

Because this is an exploratory project, we decided to limit the scope of the study to the results of one survey. We chose the *Training* survey for several reasons. First, all of its results are in the public domain, so other researchers can easily verify our analysis. Second, the survey covers a larger number of years (24 versus 12 for ASTD).

Our first task after selecting the survey to track was to compile the results of the annual surveys. We looked as far back as 1982, when *Training* conducted its first survey. But that first survey—and one conducted for the next three years—tracked spending only on outside training services. They did not address internal spending and thus did not represent total spending on training. Thus, aggregate results date back only to 1986.

After collecting all of the *Training* annual surveys, we created a series of charts, each focused on a different aspect of spending: total expenditures on training, staff salaries, spending on training products and services, spending on seminars and conferences (tracked only until 2005), spending on custom materials (tracked only until 2005), spending on off-the-shelf materials

(tracked only until 2005), and other expenditures (tracked only until 2005). We also created charts for the amount of training given to different categories of jobs.

Next, we identified where significant changes in the survey methodology created a discontinuity in the data. One such discontinuity was in the amount of training for different categories of jobs. Between 1984 and 1998, the survey tracked spending by discrete job categories, such as administrative employees, customer service people, production workers, and office/clerical. Starting in 2000, the survey lumped these together into the broad category of nonexempt workers. Similar combinations were made with other groups of workers.

Next, to address the effects of inflation and ensure that comparisons among years were in monetary units that had the same actual value, we converted all spending to 2008 dollars. Note that because the *Training* survey reports on the training industry in the United States and uses U.S. dollars, the data compiled and reported represent spending only in the United States, and all reported in U.S. dollars.

Last, we looked for trends in the data, where exceptional increases and decreases in spending occurred. Although we reviewed all changes among years, we paid special attention to changes during recessions in the U.S. economy: the 1987 stock market crash and the recessions of 1991, 2001, and 2008–2009.

We separately generated our conclusions, then met to resolve any significant differences. The conclusions reported here represent our consensus.

Results

This section presents the results of the analysis of spending on training between 1982 and 2008. After reporting on challenges in compiling the data, this section reports aggregate spending on training and then spending in key areas—including training staff and outside products and services. This section last reports who received training.

Challenges in Compiling the Report

We encountered several challenges in compiling the results. The most significant was that few data were tracked and reported consistently throughout the years. Some data were not reported each year. For example, the first survey conducted in 1982 reported only outside expenditures. *Training* did not track internal or total training expenditures until 1986. In 2006, *Training* stopped conducting the study with its own in-house research group and contracted with consultant Josh Bersin to conduct the study. In the transition, the survey stopped tracking outside expenditures.

Although the survey has always indicated how much training was provided to individual categories of workers (such as managers and nonexempt workers), the types of data tracked and groupings of workers changed

four times during these years. Specific changes, and how this study addresses them, are described in the section on who receives training.

Trends in Total Expenditures on Training

Training first reported total expenditures in 1986 and continued reporting them through 2008. Total expenditure on training represents the sum of payroll expenditures and expenditures on outside services. Table 1 compiles the results, before adjustment for inflation.

Major drops in spending occurred between 1990 and 1991 (a year before the recession of 1991–1992), 1999 and 2000 (a year before the recession of 2001–2002), and 2007 and 2008 (a year before the recession beginning in

TABLE 1 TOTAL TRAINING EXPENDITURES (IN $US BILLIONS)

YEAR	TOTAL TRAINING EXPENDITURES REPORTED (IN $US BILLIONS, NOT ADJUSTED FOR INFLATION)
1986	$29.0
1987	$32.0
1988	$39.6
1989	$44.4
1990	$45.5
1991	$43.2
1992	$45.0
1993	$48.2
1994	$50.6
1995	$52.2
1996	$59.8
1997	$58.6
1998	$60.7
1999	$62.5
2000	$54.0
2001	$56.8
2002	$54.2
2003	$51.3
2004	$51.4
2005	$51.1
2006	$55.8
2007	$58.5
2008	$56.2

2008). Small drops also occurred occasionally throughout the years, such as between 1996 and 1997.

Based on these data alone, one might assume that total spending has nearly doubled since 1986. But trends in spending look different after adjusting for inflation. Table 2 shows spending adjusted for 2008 dollars. In 2008 dollars, spending in 1986 and 2008 differ only by $.85 billion (1.5%). Adjusting for inflation also catches other drops in spending not caught in current-year dollars. For example, inflation-adjusted spending dropped well beyond recessions: throughout the downturn of 1990 to 1992 and between

TABLE 2 TOTAL TRAINING EXPENDITURES (IN $US BILLIONS)

YEAR	TOTAL TRAINING EXPENDITURES REPORTED (IN $US BILLIONS, NOT ADJUSTED FOR INFLATION)	TOTAL TRAINING EXPENDITURES CONVERTED TO 2008 DOLLARS[a]
1986	$29.0	$55.34
1987	$32.0	$59.93
1988	$39.6	$69.23
1989	$44.4	$74.50
1990	$45.5	$72.68
1991	$43.2	$66.56
1992	$45.0	$67.67
1993	$48.2	$70.67
1994	$50.6	$72.70
1995	$52.2	$73.21
1996	$59.8	$81.69
1997	$58.6	$78.34
1998	$60.7	$80.08
1999	$62.5	$80.75
2000	$54.0	$67.50
2001	$56.8	$69.10
2002	$54.2	$64.83
2003	$51.3	$60.07
2004	$51.4	$58.61
2005	$51.1	$56.34
2006	$55.8	$59.62
2007	$58.5	$60.75
2008	$56.2	$56.20

[a]We used the Consumer Price Index reported by Oregon State University, retrieved October 19, 2009, from http://oregonstate.edu/cla/polisci/faculty-research/sahr/cv2007rsx1.pdf (visited October 19, 2009) as the basis for conversion.

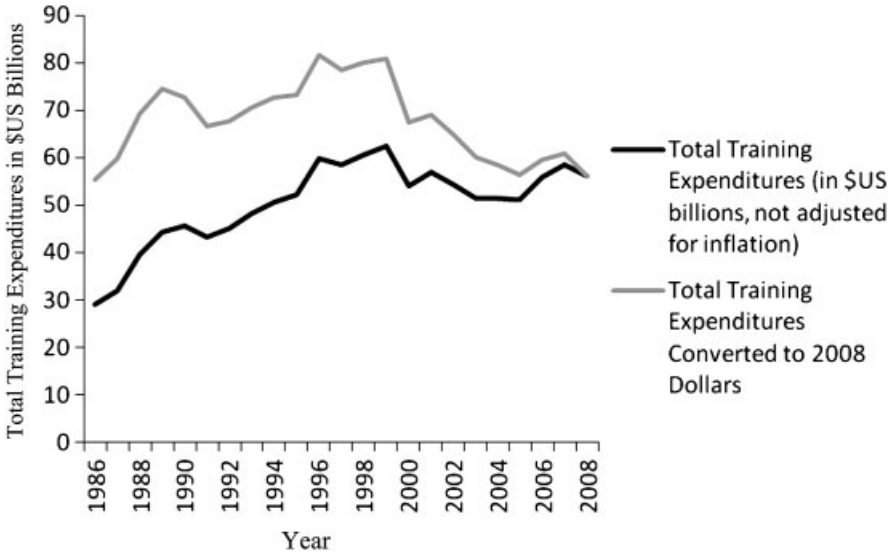

FIGURE 1. COMPARISON OF TOTAL SPENDING ON TRAINING IN REAL AND INFLATION-ADJUSTED DOLLARS

2000 and 2004 (except 2001). Reports in current dollars would not catch these trends. Figure 1 represents the trends in spending both before and after adjusting for inflation.

Spending in Key Areas

The previous section reported spending on training; this one reports how those funds were spent. Specifically it reports spending on training staff, training products and services, seminars and conferences, custom materials, off-the-shelf materials, and other expenditures. Although the evidence suggests that overall spending has dropped, those drops have affected individual areas of spending differently.

Spending on Training Staff. Training first reported the expenditures on training staff in 1986 and continued to do so until 2008. Table 3 reports spending on training staff, both before and after adjusting for inflation.

During these 22 years, spending, as reported in dollars, increased by 61%. After adjusting for inflation, however, the story changes: spending on training staff decreased by 14%. Spending on training staff peaked in 1996 at an inflation-adjusted $57.65 million and has dropped nearly 42% since then, with a sharp decline in 2000 and drops in every year since 2003. In the past decade, the only time that overall spending on training staff did not fall was during the 2001 recession.

Total Spending on Training Products and Services. Total spending on training products and services—which includes spending on custom-developed courses, off-the-shelf courses, and similar outside services

TABLE 3 SPENDING ON SALARIES FOR TRAINING STAFF (IN BILLIONS OF DOLLARS)

YEAR	SPENDING ON TRAINING STAFF BEFORE ADJUSTING FOR INFLATION (IN $US BILLIONS)	SPENDING ON TRAINING STAFF CONVERTED TO 2008 DOLLARS[a]
1986	$20.9	$39.14
1987	$22.4	$40.58
1988	$27.0	$47.20
1989	$31.2	$52.35
1990	$32.6	$52.08
1991	$30.9	$47.61
1992	$32.1	$48.27
1993	$34.9	$51.17
1994	$36.5	$52.44
1995	$37.6	$52.73
1996	$39.1	$53.42
1997	$40.7	$54.41
1998	$42.0	$55.41
1999	$43.0	$55.56
2000	$34.7	$43.38
2001	$37.5	$45.62
2002	$39.1	$46.77
2003	$37.4	$43.79
2004	$38.1	$43.44
2005	$37.5	$41.35
2006	$36.3	$38.78
2007	$37.5	$38.94
2008	$33.7	$33.70

[a]We used the Consumer Price Index reported by Oregon State University, retrieved October 19, 2009, from http://oregonstate.edu/cla/polisci/faculty-research/sahr/cv2007rsx1.pdf as the basis for conversion.

(though it does not explicitly name technology)—offers a brighter picture. Table 4 summarizes total spending data on training products and services. Reports on spending in the individual areas follow.

Overall spending on training products and services has grown several times since it was first tracked in 1983. Before adjusting for inflation, expenditures have grown 497%; after adjustment, they have grown 232%.

Despite the rise, inflation-adjusted spending in 2008 is off approximately 36% from its peak in 2000, when it was $24.13 billion. The actual trends in

TABLE 4 SPENDING ON TRAINING PRODUCTS AND SERVICES (IN BILLIONS OF DOLLARS)

YEAR	SPENDING ON TRAINING PRODUCTS AND SERVICES (IN $US BILLIONS)	SPENDING ON TRAINING PRODUCTS AND SERVICES CONVERTED TO 2008 DOLLARS[a]
1982	$3.0	$6.42
1983	$3.1	$6.37
1984	$4.2	$8.28
1985	$4.4	$8.40
1986	$6.2	$11.61
1987	$6.9	$12.50
1988	$9.0	$15.73
1989	$9.4	$15.77
1990	$9.2	$14.70
1991	$8.7	$13.41
1992	$8.8	$13.23
1993	$9.4	$13.78
1994	$9.9	$14.22
1995	$10.3	$14.45
1996	$13.0	$17.76
1997	$13.6	$18.18
1998	$14.3	$18.87
1999	$15.0	$19.38
2000	$19.3	$24.13
2001	$19.3	$23.48
2002	$15.1	$18.06
2003	$13.8	$16.16
2004	$13.3	$15.17
2005	$13.5	$14.88
2006	$15.8	$16.88
2007	$16.3	$16.93
2008	$15.4	$15.40

[a]We used the Consumer Price Index reported by Oregon State University, retrieved October 19, 2009, from http://oregonstate.edu/cla/polisci/faculty-research/sahr/cv2007rsx1.pdf as the basis for conversion.

spending on outside services have varied each decade. Between the start of the survey and the recession of 1991, spending grew approximately $1 billion to $2 billion annually (in terms of percentages, between 15% and 25%). Spending dropped in 1990 and 1991 (the year of the recession) and remained

flat for 3 years, before a sharp rise in 1996 and a near 25% rise in 2000. That was followed by a slight drop in the recession of 2001 and a sharp drop of 23% in 2002. The slide has continued through most of the subsequent recovery, except in 2005 and 2006.

Spending on Seminars and Conferences. Spending on seminars and conferences increased 215% between 1984 and 2005, the last year that *Training* tracked this expense. Following a sharp rise in 1988, spending slowly fell through 1991, when it fell dramatically. Spending slowly rose afterward, with sharp rises in 1999 and 2000, despite an overall drop in

TABLE 5 SPENDING ON SEMINARS AND CONFERENCES (IN BILLIONS OF DOLLARS)

YEAR	SPENDING ON SEMINARS AND CONFERENCES (IN $US BILLIONS)	SPENDING ON TRAINING PRODUCTS AND SERVICES CONVERTED TO 2008 DOLLARS[a]
1984	$1.35	$2.77
1985	$1.45	$2.86
1986	$1.96	$3.67
1987	$2.19	$3.97
1988	$2.76	$4.83
1989	$2.83	$4.75
1990	$2.87	$4.58
1991	$2.53	$3.90
1992	$2.63	$3.95
1993	$2.79	$4.09
1994	$2.94	$4.22
1995	$3.03	$4.25
1996	$3.68	$5.03
1997	$3.69	$4.93
1998	$3.95	$5.21
1999	$4.38	$5.66
2000	$7.00	$8.75
2001	$7.00	$8.52
2002	$6.00	$7.18
2003	$5.50	$6.44
2004	$5.40	$6.16
2005	$5.40	$5.95
2006	No longer tracked	

[a]We used the Consumer Price Index reported by Oregon State University, retrieved October 19, 2009, from http://oregonstate.edu/cla/polisci/faculty-research/sahr/cv2007rsx1.pdf as the basis for conversion.

spending on training in 2000. Since 2000, spending has fallen in nearly every year, with sharp drops in 2002 and 2003, the early years of the recovery from the recession of 2001. Table 5 reports spending on seminars and conferences between 1984 and 2005, before and after adjusting for inflation.

Note that these expenditures on outside conferences represent only those tracked by the training department. Conferences that are paid from budgets other than training (such as those paid through marketing and operations budgets) are not included.

TABLE 6 SPENDING ON CUSTOM MATERIALS (IN BILLIONS OF DOLLARS)

YEAR	SPENDING ON CUSTOM MATERIALS (IN $US BILLIONS)	SPENDING ON CUSTOM MATERIALS CONVERTED TO 2008 DOLLARS[a]
1982	$0.54	$1.16
1983	$0.58	$1.19
1984	$0.63	$1.24
1985	$0.62	$1.18
1986	$0.95	$1.78
1987	$1.04	$1.88
1988	$1.71	$2.99
1989	$1.40	$2.35
1990	$1.33	$2.12
1991	$1.32	$2.03
1992	$1.25	$1.88
1993	$1.36	$1.99
1994	$1.44	$2.07
1995	$1.51	$2.12
1996	$1.80	$2.46
1997	$2.04	$2.73
1998	$2.18	$2.88
1999	$2.08	$2.69
2000	$7.20	$9.00
2001	$6.10	$7.42
2002	$3.30	$3.95
2003	$3.60	$4.22
2004	$2.90	$3.31
2005	$2.80	$3.09
2006	No longer tracked	

[a]We used the Consumer Price Index reported by Oregon State University, retrieved October 19, 2009, from http://oregonstate.edu/cla/polisci/faculty-research/sahr/cv2007rsx1.pdf as the basis for conversion.

Spending on Custom Materials. Spending on custom training materials grew 249% in inflation-adjusted dollars between 1984 and 2005 (the last year that *Training* tracked this expenditure). Table 6 reports spending on these materials between 1984 and 2005, before and after adjusting for inflation.

The $3.09 billion spent in 2005 was nearly two-thirds lower than the inflation-adjusted $9 billion spent just 5 years earlier, in 2000. Perhaps that level of spending, reached only once, was impossible to sustain. Through most of this 20-year period, inflation-adjusted spending hovered between $1.24 and $3.31 billion.

Spending on Off-the-Shelf Materials. Spending on off-the-shelf training materials grew 217% in inflation-adjusted dollars between 1984 and 2005, the last year that *Training* tracked this expenditure.

As with most other custom training, spending in 2005 was off 26% from an inflation-adjusted peak of $4.5 billion in 2000. Spending in 2000 represented a 55% increase from 1999, one of the few sharp rises in spending during the 20-year period. Table 7 reports spending on off-the-shelf materials between 1984 and 2005 (the last year that *Training* tracked this expenditure), before and after adjusting for inflation.

Other External Expenditures. "Other external expenditures" refers to all other external expenditures not covered by outside conferences and seminars, or custom or off-the-shelf materials, for example, consulting services, equipment, supplies, and similar expenditures. In the 1983 (the first year it was tracked), it included conferences and seminars, though this expenditure was separately tracked in later years. Table 8 reports spending on other external expenditures between 1984 and 2005, before and after adjusting for inflation.

The spending patterns in this category differ from the patterns with seminars and conferences, custom materials, and off-the-shelf materials. First, expenditures grew only 20% between 1983 and 2005. Second, the inflation-adjusted peak occurred later, in 2001, while spending in other areas experienced large drops.

Who Received the Training

This section reports who received the training, by job category. Through the years, *Training* changed the way it tracked and reported these data, making comparisons somewhat challenging. At first, *Training* reported the percentages of training time for a given job category and then changed to reporting the average hours of training provided. In 1993, *Training* also began reporting the expenditures by job categories, which it continued to report until 2008. In 1999, *Training* stopped tracking the average number of hours provided in each job category. Concerned that extrapolating data and providing estimates might introduce serious misrepresentations, we compile the results here and report the data that are available. We did, however, provide similar groupings, so that some level of comparison is possible.

TABLE 7 SPENDING ON OFF-THE-SHELF MATERIALS (IN BILLIONS OF DOLLARS)

YEAR	SPENDING ON OFF-THE-SHELF MATERIALS (IN $US BILLIONS)	SPENDING ON OFF-THE-SHELF MATERIALS CONVERTED TO 2008 DOLLARS[a]
1982	$0.68	$1.46
1983	$0.71	$1.46
1984	$0.74	$1.46
1985	$0.76	$1.45
1986	$0.92	$1.72
1987	$1.04	$1.88
1988	$1.23	$2.15
1989	$1.40	$2.35
1990	$1.24	$1.98
1991	$1.25	$1.93
1992	$1.46	$2.20
1993	$1.68	$2.46
1994	$1.75	$2.51
1995	$1.87	$2.62
1996	$2.23	$2.84
1997	$2.18	$2.91
1998	$2.23	$2.94
1999	$2.25	$2.91
2000	$3.60	$4.50
2001	$3.50	$4.26
2002	$4.10	$4.90
2003	$3.40	$3.98
2004	$2.90	$3.31
2005	$2.90	$3.20
2006	No longer tracked	

[a]We used the Consumer Price Index reported by Oregon State University, retrieved October 19, 2009, from http://oregonstate.edu/cla/polisci/faculty-research/sahr/cv2007rsx1.pdf as the basis for conversion.

In 1983, *Training* estimated who received training by job category as a percentage of the training provided. First-line supervisors were the category of employee that received the largest percentage of training. In fact, managers as a group received the largest percentage of training, followed by professionals. Table 9 reports these percentages.

In 1984, *Training* began tracking the average number of hours of training provided to each category of employee. Although the average number of hours varied among groups over the years, executives, managers, and

TABLE 8 OTHER EXTERNAL EXPENDITURES (IN BILLIONS OF DOLLARS)

YEAR	OTHER EXPENDITURES (IN $US BILLIONS)	OTHER EXPENDITURES CONVERTED TO 2008 DOLLARS[a]
1982 (outside services including seminars and conferences)	$1.03	$2.21
1983 (outside services including seminars and conferences)	$1.03	$2.11
1984	$0.77	$1.58
1985	$0.81	$1.55
1986	$1.08	$2.02
1987	$1.20	$2.17
1988	$1.41	$2.47
1989	$1.58	$2.65
1990	$1.52	$2.43
1991	$1.42	$2.19
1992	$1.37	$2.06
1993	$1.44	$2.11
1994	$1.54	$2.21
1995	$1.50	$2.10
1996	$1.72	$2.27
1997	$1.98	$2.65
1998	$2.08	$2.74
1999	$2.20	$2.84
2000	$1.50	$1.88
2001	$2.70	$3.28
2002	$1.70	$2.03
2003	$1.30	$1.52
2004	$2.10	$2.39
2005	$2.40	$2.65
2006	No longer tracked	

[a]We used the Consumer Price Index reported by Oregon State University, retrieved October 19, 2009, from http://oregonstate.edu/cla/polisci/faculty-research/sahr/cv2007rsx1.pdf as the basis for conversion.

professionals typically received between one and a half to two times the average number of hours of training received by nonexempt employees, for example, administrative and clerical workers, customer service people, and production workers. One other surprising trend was a large increase in the average number of hours of training reported between 1984 and 1986.

TABLE 9 PERCENTAGE OF TOTAL TRAINING EFFORT PROVIDED TO EACH CATEGORY OF EMPLOYEE

CATEGORY OF EMPLOYEE		PERCENTAGE OF TRAINING BY CATEGORY	PERCENTAGE OF TRAINING BY GROUP
Executives	Executives	6.7%	13.6%
	Senior managers	6.9%	
Managers	Middle managers	14.1%	30.9%
	First-line supervisors	16.8%	
Professionals	Professionals	14.8%	23.5%
	Sales representatives	8.7%	
Non-exempt employees	Administrative employees	5.8%	32.2%
	Customer service employees	9.2%	
	Office/secretarial	5.8%	
	Production workers	8.4%	
	Other employees	3.0%	

Table 10 reports the average number of hours of training provided to each category of employee.

Since 1993, *Training* has reported spending on training by job categories. The categories changed in 2000, and the difference is sufficiently significant that it presents problems for joining the data.

Between 1993 and 1999, the categories tracked were professionals, managers, salespeople, and all other employees. In inflation-adjusted dollars, organizations increased spending on all categories of workers during this period. The largest increase was allotted to professionals, for whom spending on training grew 23%. Spending on the training of "other workers" saw the next largest increase, at 13%. Spending on training for managers and salespeople grew by 7% and 4.7%, respectively. Table 11 reports spending as presented in the magazine, and Table 12 reports spending adjusted for inflation, and reported in 2008 dollars (billions).

In 2000, *Training* changed the categories tracked. Executives, whose training does not seem to have been tracked between 1993 and 1999 (or it was tracked in the management category), was separately tracked once again. The other categories included managers, exempt employees (professionals and sales representatives), nonexempt managers (presumably first-line supervisors), and nonexempt employees (customer service people, office and clerical workers, and production workers).

In inflation-adjusted dollars, and in contrast to the trend of the 1990s, spending was down in three of the four new categories and remained flat in the fourth. Spending on training for executives, managers, and nonexempt

TABLE 10 AVERAGE NUMBER OF HOURS OF TRAINING PROVIDED TO EACH CATEGORY OF EMPLOYEE

	EXECUTIVES	MANAGERS			PROFESSIONALS		NON-EXEMPT EMPLOYEES			
YEAR	EXECUTIVES	SENIOR MANAGERS	MIDDLE MANAGERS	FIRST-LINE SUPERVISORS	PROFES-SIONALS	SALES PEOPLE	ADMINISTRATIVE EMPLOYEES	CUSTOMER-SERVICE PEOPLE	OFFICE/ CLERICAL	PRODUCTION WORKERS
1984	28.3	22.7	32.5	32.5	27.2	19.5	11.9	13.4	10.8	12.3
1985	41.4	35.7	36.3	36.4	38.3	37.7	19.2	33.9	18.8	33.4
1986	40.9	38.9	44.2	39.6	42.3	39.9	22	33.3	18.3	34.6
1987	36.3	33.6	36.6	33.3	35.8	42.6	21.8	26.8	No longer tracked	29.1
1988	34.7	33.6	32.5	33	33.2	43.2	17.8	29.8		31.7
1989	34.3	33.6	35.5	36.3	36.4	36.2	18.9	31.2		33.6
1990	32.9	31.2	35.1	35.4	35.5	40.7	19	33		30.7
1991	33	33	33	34	37	39	16.6	29		37
1992	31	31	33	33	34	39	20	36		29
1993	32	33	33	36	36	33	20	29		32
1994	29	30	32	31	35	38	19	30		30
1995	31	31	33	32	36	37	21	32		32
1996	32	31	32	35	37	36	21	32		36
1997	29	29	31	34	33	34	20	30		29
1998	29	30	32	34	37	38	21	30		30

TABLE 11 SPENDING ON TRAINING BY JOB CATEGORY BEFORE ADJUSTING FOR INFLATION (IN BILLIONS OF DOLLARS)

YEAR	SPENDING ON PROFESSIONALS	SPENDING ON MANAGERS	SPENDING ON SALESPEOPLE	SPENDING ON ALL OTHER EMPLOYEES
1993	$12.4	$13.5	$6.4	$15.9
1994	$12.8	$13.4	$7.2	$17.2
1995	$13.9	$13.8	$7.1	$17.3
1996	$16.1[a]	$15.9	$8.1	$19.7[a]
1997	$16.4	$14.5	$7.1	$20.6
1998	$19.0	$14.1	$8.6	$19.0
1999	$17.9	$16.5	$7.6	$20.4

[a]These numbers are estimates; the figures in the original article are unreadable, so the estimate is extrapolated by the two authors from previous data and the size of ''slices'' on the chart.

employees fell by 40%, 16%, and 21%, respectively. Training for professionals increased only 0.5%. Table 13 reports spending as presented in the magazine; Table 14 reports spending adjusted for inflation and reported in 2008 dollars (billions).

TABLE 12 SPENDING ON TRAINING BY JOB CATEGORY AFTER ADJUSTING FOR INFLATION (REPORTED IN 2008 BILLIONS OF DOLLARS)

YEAR	SPENDING ON PROFESSIONALS	SPENDING ON MANAGERS	SPENDING ON SALESPEOPLE	SPENDING ON ALL OTHER EMPLOYEES
1993	$18.18	$19.79	$9.38	$23.31
1994	$18.39	$19.25	$10.34	$24.71
1995	$19.50	$19.35	$9.96	$24.26
1996	$21.99	$21.72	$11.07	$26.91
1997	$21.93	$19.39	$9.49	$27.54
1998	$25.07	$18.60	$11.35	$25.07
1999	$23.13	$21.32	$9.82	$26.36

Note. We used the Consumer Price Index reported by Oregon State University, retrieved October 19, 2009, from http://oregonstate.edu/cla/polisci/faculty-research/sahr/cv2007rsx1.pdf as the basis for conversion.

TABLE 13 SPENDING ON TRAINING BY JOB CATEGORY BEFORE ADJUSTING FOR INFLATION (IN BILLIONS OF DOLLARS)

YEAR	SPENDING ON EXECUTIVES	SPENDING ON MANAGERS	SPENDING ON EXEMPT EMPLOYEES AND NON-EXEMPT MANAGERS	SPENDING ON NON-EXEMPT EMPLOYEES
2000	$7.1	$13.1	$14.4	$19.4
2001	$7.2	$12.8	$14.8	$20.4
2002	$7.0	$12.6	$12.9	$20.9
2003	$7.1	$12.0	$14.2	$18.0
2004	$6.5	$13.3	$12.4	$19.8
2005	$6.9	$14.2	$11.2	$18.8
2006	$6.7	$13.4	$16.2	$19.5
2007	$5.9	$15.2	$15.8	$21.8
2008	$5.3	$13.7	$18.1	$19.1

Note that these expenditures on training for each category of worker represent only those tracked by a *Training* department. Expenditures from other budgets that are not tracked by a *Training* department might not be reflected by these figures.

Discussion, Limitations, and Suggestions for Future Research

This section explores the implications of the results. After discussing the results within the larger context of training and presenting the limitations of

TABLE 14 SPENDING ON TRAINING BY JOB CATEGORY BETWEEN 2000 AND 2008 AFTER ADJUSTING FOR INFLATION (REPORTED IN 2008 BILLIONS OF DOLLARS)

YEAR	SPENDING ON EXECUTIVES	SPENDING ON MANAGERS	SPENDING ON EXEMPT EMPLOYEES AND NON-EXEMPT MANAGERS	SPENDING ON NON-EXEMPT EMPLOYEES
2000	$8.875	$16.38	$18	$24.25
2001	$8.76	$15.57	$18	$24.82
2002	$8.37	$15.07	$15.43	$25
2003	$8.31	$14.05	$16.63	$21.08
2004	$7.41	$15.17	$14.14	$22.58
2005	$7.61	$15.66	$12.35	$20.73
2006	$7.16	$14.32	$17.31	$20.83
2007	$6.13	$15.78	$16.41	$22.64
2008	$5.3	$13.7	$18.1	$19.1

Note. We used the Consumer Price Index reported by Oregon State University, retrieved October 19, 2009, from http://oregonstate.edu/cla/polisci/faculty-research/sahr/cv2007rsx1.pdf as the basis for conversion.

this study, we suggest future research that might build on the results of this study.

Discussion

Two questions guided this study: What are aggregate trends in spending? and How do the ups and downs of the economy affect the ways in which those funds are spent? This section uses the evidence to answer these questions, then situates the responses within the larger conversations on spending on training described earlier in this article.

In terms of aggregate trends in spending on training, we found a certain technical validation in earlier conclusions by ASTD and Jack Gordon that spending on training did not drop significantly during economic downturns. What we also found, however, was that the recessions of 1987 and 1991 on which those conclusions were based differed from the recessions of 2001 and that beginning in 2008. In both of the later recessions, a drop in spending on training occurred the year before recession, and the drop could be sharp (e.g., the drop between 1999 and 2000 was 14%).

More serious is that spending on training continued to drop well into the recovery that started in 2002, and it has never recovered to 1999 levels—not in inflation-adjusted dollars, much less actual dollars. In other words, the drop in spending has been consistent and cannot be cosmetically hidden by reporting it in before-adjusted-for-inflation figures. Perhaps that is the real story with patterns in spending.

In terms of how the ups and downs of the economy affect the ways in which training funds are spent, we reached several conclusions. First, the dot-com bubble of the late 1990s, which included a bubble in spending on

Spending on training continued to drop well into the recovery that started in 2002, and it has never recovered to 1999 levels.

corporate e-learning (Driscoll, 2009), had a pronounced effect on overall spending on training. A large spike in spending on outside training services occurred in 1999, in which some categories of outside spending rose over 20% when aggregate spending rose only 3%. The spike was followed by a corresponding tumble the following year—a tumble that affected aggregate spending by 16%.

We also observed a long-term trend in which spending on training has shifted to outside services, as evidenced by the 232% increase in spending on outside services in inflation-adjusted dollars between 1983 and 2005. Spending on conferences and seminars, and on off-the-shelf materials, was slightly lower than overall outside spending during this period—214% and 217%, respectively—and spending on custom courses grew slightly more than the general rate of spending on outside services, at an inflation-adjusted rate of 249%. Expenditures on other services grew at only an inflation-adjusted 20% between 1983 and 2005.

This shift toward outside services literally hits trainers in their wallets: training salaries have not kept up with inflation over this period. This shift is not immediately apparent; the average individual salary for trainers seems to have risen from $45,000 in 1986 (Gordon, 1986) to $81,000 in 2006 (Kornik, 2006). When adjusted for inflation, however, the 1986 salary of $45,000 becomes $84,270 in 2008 dollars, a 4% reduction in real value over 22 years.

Expenditures on training for most categories of employees have also dropped during this time. The average number of hours of training provided to each category of worker (which *Training* tracked between 1983 and 1998) peaked for most categories of employees in the mid- to late 1980s. In fact, between 1986 and 1998, the average number of hours of training provided to executives, senior managers, middle managers, first-line supervisors, professionals, salespeople, and production workers dropped between approximately 15% and 25%, despite rising expenditures on training during this time.

Although the measures have changed, the trend of lower spending on training for most groups of workers continued into the 2000s. For example, spending on executive training by training departments dropped by an inflation-adjusted 40%. The only group for whom expenditures on training rose in this decade is professionals, but at only an inflation-adjusted 0.5%.

These findings have implications within the context of the two larger conversations on spending in training: one that discusses the benefit of spending on training and the other that considers actual spending patterns.

The data support the popular belief that spending on training is dropping. In contrast to popular belief, the cause does not seem to be the economic downturn itself. The drop in spending continued through the past decade, a pattern that started when the economy headed upward in the previous recession and continued through the years of economic growth that followed. The drop in spending seems to have affected all categories of learners, though professionals seem to have been the least affected. In other words, it is not that training is the first to be cut in economic downturns; the

real issue is that organizations simply are not investing as much money in training.

This drop seems counterintuitive. At the very least, this seems counterintuitive to demographic trends, which show that the number of workers in the United States grew 30.9% between 1986 (when the U.S. workforce numbered 117.8 million workers) and 2008 (when the workforce numbered 154.3 million) (U.S. Bureau of Labor Statistics, 2009). At the most, these trends in actual spending on training seem counter to beliefs about the need for increasingly skilled workers in a knowledge economy and evidence about the value of investments in training.

Some evidence suggests that the drop in spending might reflect greater productivity for trainers. For example, ASTD reported that the average number of learning hours used per employee grew from 25.50 in 2001 to 36.25 in 2008 (Paradise & Patel, 2009). The increase in learning hours might result from increased use of e-learning, which is assumed to have a lower cost per hour than instructor-led training. As a result, workers have access to more training, while the total expenditure might be reduced.

But other explanations exist. One is that overall spending on training might not have actually changed; as Zemke (1982) noted in the overview of the first *Training* Annual Industry Report, this situation might not be reflected in the budgets of the people who were surveyed. In some organizations, training might be spent by line organizations and from budgets with other names and therefore might not be reflected in reports to—or budgets of—the central training departments. Another explanation is that as Tharenou et al. (2007) found in a research context, training is only "weakly related to financial outcomes" (p. 251); individual organizations too have reached the same conclusion and are budgeting accordingly. Although human capital theory and basic beliefs of the field of workplace learning and performance suggest that investments in learning might pay off only over periods of several years (Sweetland, 1996; Zula & Chermack, 2007), organizational balance sheets are often scrutinized quarterly and annually, resulting in a different perception.

For the workplace learning and performance professional on the front lines, these sustained drops in aggregate spending on training, spending on individual groups of learners, and spending on internal training represent longer-term shifts in training that are likely to continue even after the economy recovers. On a personal level, workplace learning and performance professionals face reduced employment opportunities within internal training groups, and those who find them are likely to have lower salaries than in the past. On an organization level, to sustain even current levels of spending on training, workplace learning and performance professionals are likely going to need to educate their internal clients about the long-term benefits of learning, as well as help employers reconcile the contradiction between the requirement for an increasingly skilled and knowledgeable workforce with their pattern of continually reducing outlays for training.

This need to reconcile contradictory aims regarding training could pose a challenge to the entire profession of workplace learning and

performance. If the long-term goal is ensuring that the workforce has the knowledge and skills needed to compete in an increasingly knowledge-based economy, professionals in the field also need to confront in the aggregate the long-term drop in spending and address the shifting conditions in the industry.

As part of this reconciliation, workplace learning and performance professionals may also need to make a more concerted effort to track long-term spending trends, not merely the changes from year to year. As Wang and Swanson (2008) observed, the "profession has consistently had high aspirations and visions of its contributions to organizational effectiveness. [But] the reported evidence around those aspirations and visions has been significantly less than those being touted" (p. 359). Indeed, this long-term analysis suggests concerns with our own ability to generate the resources we need to be effective.

Ironically, at the end of February 2010, during the review and revision process for this article, *Training* magazine ceased operations.

Limitations of This Study

The *Training* Annual Industry survey was the exclusive source of data for this study. This presents several limitations. First, it is all second-order data; we did not collect the data ourselves and cannot go back to the original data sets to address any questions that arose when compiling this report. For example, if we had access to the original data sets, we might have been able to more comfortably provide a comprehensive report of who received training.

Second, we had access only to the versions of this report that were published in *Training* magazine. For many years, the publisher of *Training* produced expanded versions of the report with proprietary data. These reports cost between $500 and $5,000 (based on a conversation between one of us and the publisher in 1990), sums that were outside the budget of this project, even if the reports could be made available. Furthermore, had we used the proprietary versions of the report, others could not easily validate our results should they choose to do so.

Third, as its primary source of data, the *Training* Annual Industry Survey relies on a survey mailed to its subscribers. At the least, the data are representative only to the extent to which the population is representative of the population of trainers. At the most, the data are representative only to the extent that participants answered knowledgeably and truthfully.

In addition, the data represent only the view of the person responding to the survey. Because the structure of training varies by organization—some have a large centralized group, and some have dispersed, decentralized training groups or individual trainers working as islands within their organizations—the data provided by participants may or may not have been fully reflective of their organizations.

Furthermore, each organization handles its training budget in a unique way. Some training budgets cover all costs related to training, and the training department pays for participation in outside classes and

contracting with independent consultants. In other organizations, line managers in other functions within an organization not only have the authority to approve training expenditures without involving a training manager but can also cover them out of budgets other than the training budget. As a result, some significant training expenditures might not be known to the people who responded to the survey. In his introduction to the first *Training* Annual Industry Survey, Zemke (1982) outlines all of these challenges.

Anecdotal evidence supports these concerns. For example, a few large training providers have mentioned at conferences that they provide large corporations with a consolidated report on their spending. The corporations, whose divisions and departments separately purchase these courses and services using separate external customer numbers and internal account numbers, are often surprised to learn of the extent of their spending. Similarly, in a discussion of a preliminary report of these results, a training executive commented on the drop in spending on training for executives. He noted that including a $50,000 expenditure for spending on leadership development for a single candidate would look suspicious in a training department budget, where it might be found and questioned by other workers. So the funding comes out of another budget. But other explanations exist. ASTD's (2009b) State of the Industry report indicates that executive development was just 3.7% of training in that year and an average of 4.33% over the past 7 years.

Another training expenditure that might not be included in training reports is e-training that is produced and published by individual units without the active engagement of the training department. In fact, this is the promise of rapid e-learning tools (Jarche, 2007), and the concern about trainers being excluded from these projects is raised by Carliner and Driscoll (2009). This too would not be reflected in the survey. Given that the *Training* Annual Industry Survey does not explicitly track spending on technology, another limitation of this study, it provides little basis for drawing insights on the effects of technology on the operations of training. Before the e-learning boom of the late 1990s, tracking spending on technology might not have been necessary. But given the importance placed on e-learning within the literature and given that ASTD reports that technology-delivered learning accounts for 31.37% of all workplace learning (Paradise & Patel, 2009), tracking and reporting spending on learning technology is a glaring omission of the survey.

The limitations seem to be concerns that go beyond the study. For example, fewer than half of the participants in the CLO Business Intelligence Report indicate that they are satisfied with measures of training (Chief Learning Officer, 2010).

Finally, given these limitations, we cannot draw firm conclusions about the actual trends of spending on training. Although it might have dropped as much as indicated by the *Training* survey, it might not have, because spending on training might have occurred outside the knowledge of an organization's trainers and outside a training budget.

Suggestions for Future Research

Given the rather bleak conclusions of this study, as well as the limitations of the data, validation of this study is appropriate. A review of the study from the original data sets collected by *Training* magazine would be ideal if these data sets were available. But because *Training* changed owners five times in the past 15 years and has now ceased operations, the original data sets might have been discarded and therefore may not be available for reanalysis. Furthermore, because the survey was last conducted by a third party, who conducts other proprietary research about the training industry, it is likely that more current sets might not be made available.

A second possibility is conducting an analysis of ASTD's State of the Industry report. Although ASTD has not published this survey for as many years as *Training,* it makes such an analysis much easier because it provides historical data in a single report. For example, the 2008 State of the Industry report provided comparative data from as early as 2001, although spending is not adjusted for inflation.

In addition to verifying the trends in these data, research comparing the trends on spending on training in the United States with spending in other countries would provide a useful comparison. Is the decline in spending an anomaly to the United States or a broader trend? One source of this data might be the government. But rather than tracking spending on training itself, some government units might track related issues, like hiring levels for trainers, as the U.S. Bureau of Labor Statistics does. Furthermore, laws in some jurisdictions require support for training, which may or may not have an effect on overall spending on training. For example, France and the province of Quebec in Canada both require companies to spend 1% of payroll on training or face penalties, although exceptions exist in both places (Belanger & Robataille, 2008).

Another means of validating the trends of spending on training is tracking spending on technology for training. Data are available from private research services like the Gaertner Group but are not available in the public domain.

Finally, if other studies verify that actual spending on training is declining, then two other sets of studies might be appropriate. One would be policy related, exploring the gap between stated workforce development policies that focus on highly trained workforces with the actual spending behaviors. The other would explore the changing nature of the training industry and how the slow but steady drops in salary, decreases on internal spending, and increased use of outside services are remaking this field.

Conclusion

This study sought to explain what happens to spending on training during a downturn, both in aggregate and in particular areas. But rather than looking just at the downturns, this study analyzed spending patterns over 26 years. Within this context, which covers upturns and downturns in the

economy, the data suggest that rather than merely dropping during a recession, which is the popular belief among workplace learning and performance professionals, aggregate spending on training in the United States has been steadily dropping for the past decade, regardless of the performance of the broader economy. Of that reduced amount, an increasing percentage is spent on outside services.

This research suggests that although workplace learning and performance professionals believe that training is an important investment in human capital, expenditures do not seem to match aspirations.

Note

Data sources for this study will be available at http://education.concordia.ca/~scarliner/datasources.htm. The author ensures that the link should not change for at least 24 months after publication of the article.

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