Second Edition

# Proving the Value of HR

## How and Why to Measure ROI


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CHAPTER 8

# Measuring ROI in Interactive Selling Skills

## Retail Merchandise Company

*The case study represents a classic application of the return-on-investment (ROI) process. An interactive selling skills program drives sales increases at a pilot group of retail stores. A control group arrangement isolates the effects of the program. The organization uses the results to make critical decisions.*

### Background Information

Retail Merchandise Company (RMC) is a large national chain of 420 stores, located in most major U.S. markets. RMC sells small household items, gifts of all types, electronics, and jewelry as well as personal accessories. It does not sell clothes or major appliances. The executives at RMC were concerned about the slow sales growth and were experimenting with several programs to boost sales. One of their concerns focused on the interaction with customers. Sales associates were not actively involved in the sales process, usually waiting for a customer to make a purchasing decision and then proceeding with processing the sale. Several store managers had analyzed the situation to determine if more communication with the customer would boost sales. The analysis revealed that very simple techniques to probe and guide the customer to a purchase should boost sales in each store.

The senior executives asked the training and development staff to experiment with a simple customer interactive skills program for a small group of sales associates. The training staff would prefer a

*This case was prepared to serve as a basis for discussion rather than to illustrate either effective or ineffective administrative and management practices. All names, dates, places, and organizations have been disguised at the request of the author or organization.*

program produced by an external supplier to avoid the cost of development, particularly if the program is not effective. The specific charge from the management team was to implement the program in three stores, monitor the results, and make recommendations.

The sales associates are typical of the retail store employee profile. They are usually not college graduates, and most have a few months, or even years, of retail store experience. Turnover was usually quite high, and formal training has not been a major part of previous sales development efforts.

## The Solution

The training and development staff conducted a brief initial needs assessment and identified five simple skills that the program should cover. From the staff's analysis, it appeared that the sales associates did not have these skills or were very uncomfortable with the use of these skills. The training and development staff selected the Interactive Selling Skills program, which makes significant use of skill practices. The program, an existing product from an external training supplier, includes two days of training in which participants have an opportunity to practice each of the skills with a classmate followed by three weeks of on-the-job application. Then, in a final day of training, there is discussion of problems, issues, barriers, and concerns about using the skills. Additional practice and fine-tuning of skills take place in that final one-day session. At RMC, this program was tried in the electronics area of three stores, with 16 people trained in each store. The staff of the training supplier facilitated the program for a predetermined facilitation fee.

## The Measurement Challenge

The direction from senior management was very clear: These executives wanted to boost sales and at the same time determine if this program represented a financial payoff, realizing that many of the strategies could be implemented to boost sales. Business impact and ROI were the measurement mandates from the senior team.

In seeking a process to show ROI, the training and development staff turned to a process that Jack Phillips developed. The ROI process generates six types of measures:

- Reaction and Planned Action
- Learning
- Application and Implementation
- Business Impact

- ROI
- Intangible measures

It also includes a technique to isolate the effects of the program or solution.

This process involves extensive data collection and analysis. As figure 1 shows, the process includes steps to develop the ROI, beginning with evaluation planning. Four types of data are collected, representing the four levels of evaluation. The analysis develops a fifth level of data as well as the intangible benefits. The process includes a method to isolate the effects of the program and a method to convert data to monetary value. The fully loaded costs are used to develop the actual ROI. This process was already in place at RMC, and training and development selected it as the method to measure the success of this program.

## Planning for the ROI

An important part of the success of the ROI evaluation is to properly plan for the impact study early in the training and development cycle. Appropriate up-front attention saves time later when data are actually collected and analyzed, thus improving the accuracy and reducing the cost of the evaluation. This approach also avoids any confusion surrounding what will be accomplished, by whom, and at what time. Two planning documents are key to the up-front planning, and the training staff completed them before the program was implemented.

Following are descriptions of each document.

## Data Collection Plan

Figure 2 shows the completed data collection plan for this program. The document provides a space for major elements and issues regarding collecting data for the different levels of evaluation. Broad program objectives are appropriate for planning, as the figure shows.

The objective at Level 1 for this program was a positive reaction to the potential use of the skills on the job. The gauge for this level was a reaction questionnaire that participants completed at the end of the program and facilitators collected. The goal was to achieve four out of five on a composite rating. Also, the questionnaire asked participants to indicate how often and in which situations they would actually use the skills.

The measurement of learning focused on learning how to use five simple skills. The measure of success was a pass or fail on the skill practice that the facilitator observed and for which the observer collected data on the second day of the program.

**Figure 1. The ROI process model.**

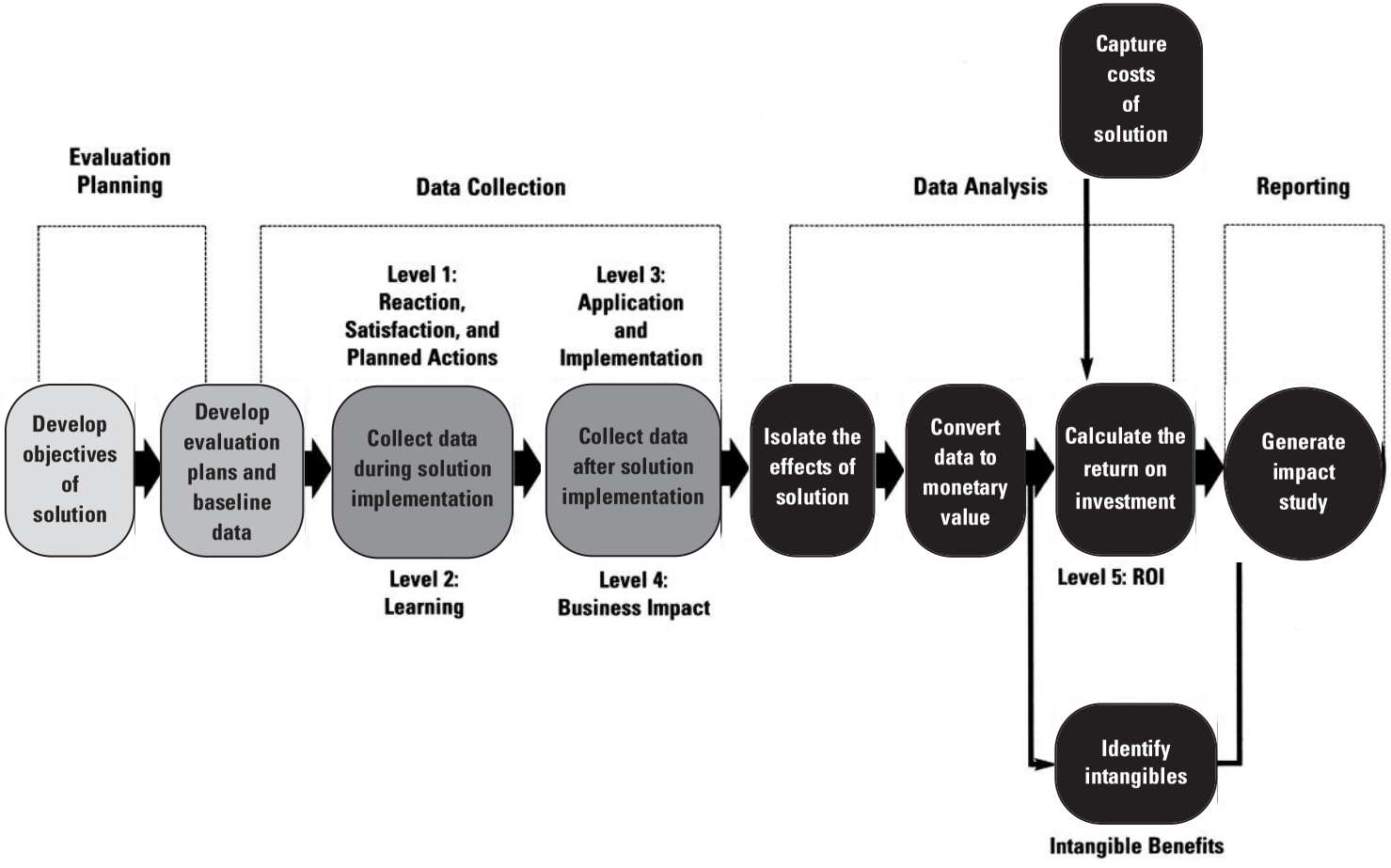

**Figure 2. Data collection plan.**

**Program:** _____ **Responsibility:** _____ **Date:** _____

| Level | Broad Program Objectives | Measures | Data Collection Method and Instruments | Data Sources | Timing | Responsibilities |
|---|---|---|---|---|---|---|
| 1 | **Reaction and Satisfaction and Planned Actions**<br>• Positive reaction—four out of five<br>• Action items | • Rating on a composite of five measures<br>• Yes or No | • Questionnaire | • Participant | • End of program (Third day) | • Facilitator |
| 2 | **Learning**<br>• Learn to use five simple skills | • Pass or Fail on skill practice | • Observation of skill practice by facilitator | • Facilitator | • Second day of program | • Facilitator |
| 3 | **Application and Implementation**<br>• Initial use of five simple skills<br>• At least 50% of participants use all skills with every customer | • Verbal feedback<br>• 5th item checked on a 1 to 5 scale | • Follow-up session<br>• Follow-up questionnaire | • Participant<br>• Participant | • Three weeks after second day<br>• Three months after program | • Facilitator<br>• Store training coordinator |
| 4 | **Business Impact**<br>• Increase in sales | • Weekly average sales per sales associate | • Business performance monitoring | • Company records | • Three months after program | • Store training coordinator |
| 5 | **ROI**<br>• 50% | **Comments:** _____ | | | | |

For application and implementation evaluation, the objectives focused on two major areas. The first was the initial use of the five simple skills. Success was determined from verbal feedback that the facilitator obtained directly from participants in a follow-up session on the third day of training. The second major objective was for at least 50 percent of the participants to be using all of the skills with every customer. This information was obtained on the follow-up questionnaire, scheduled three months after completion of the program, at which the participants rated the frequency of utilization of the skills.

Business impact focused just on increase in sales. The average weekly sales per sales associate was monitored from company records in a three-month follow-up. Finally, a 50 percent ROI target was set, which was much higher than the standard for many other ROI evaluations. Senior executives wanted a significant improvement over the cost of the program to make a decision to move forward with a wide-scale implementation.

The data collection plan was an important part of the evaluation strategy. It provided clear direction on the type of data that would be collected, how it would be collected, when it would be collected, and who would collect it.

## Isolating the Effects of the Program

One of the most important parts of this evaluation is isolating the effects of the training program. This is a critical issue in the planning stage. The key question is, "When sales data is collected three months after the program is implemented, how much of the increase in sales, if any, is directly related to the program?" While the improvement in sales may be linked to the training program, other nontraining factors contribute to improvement. The cause-and-effect relationship between training and performance improvement can be very confusing and difficult to prove, but it can be accomplished with an acceptable degree of accuracy. In the planning process the challenge is to develop one or more specific strategies to isolate the effects of training and include it on the ROI analysis plan.

In this case study, the issue was relatively easy to address. Senior executives gave the training and development staff the freedom to select any stores for implementation of the pilot program. The performance of the three stores selected for the program was compared with the performance of three other stores that are identical in every way possible. This approach, control group analysis, represents the most accurate way to isolate the effects of a program. Fortunately, other strategies from the list of 10 approaches in the ROI process,

such as trend-line analysis and estimation, would also be feasible. Control group analysis, the best method, was selected given that the situation was appropriate.

The challenge in the control group arrangement is to appropriately select both sets of stores. The control group of three stores does not have the training, whereas the pilot group does. It was important for those stores to be as identical as possible, so the training and development staff developed several criteria that could influence sales. This list became quite extensive and included market data, store level data, management and leadership data, and individual differences. In a conference call with regional managers, this list was pared down to the four most likely influences. The executives selected those influences that would count for at least 80 percent of the differences in weekly store sales per associate. These criteria were as follows:

- *Store size*, with the larger stores commanding a higher performance level
- *Store location*, using a market variable of median household income in the are where customers live
- *Customer traffic levels*, which measures the flow of traffic through the store; this measure, originally developed for security purposes, provides an excellent indication of customer flow through the store
- *Previous store performance*, a good predictor of future performance; the training and development staff collected six months of data for weekly sles per associate to identify the two groups.

These four measures were used to select three stores for the pilot program and match them with three other stores. As a fallback position, in case the control group arrangement did not work, participant estimates were planned. In this approach, the individuals would be provided with their performance data and would be asked to indicate the extent to which the training program influenced their contribution. This data, which is an estimate, would be adjusted for the error of the estimate and used in the analysis.

## ROI Analysis Plan

Table 1 shows the completed ROI analysis plan, which captures information on several key items necessary to develop the actual ROI calculation. The first column lists the business impact measure. This is in connection with the previous planning document, the data collection plan. The ROI analysis builds from the business impact data by addressing several issues involved in processing the data. The first

issue is the method of isolating the effects of the program on that particular business impact measure. The third column focuses on the methods to convert data to monetary value. In this case, sales data would have to be converted to value-added data by adjusting it to the actual profit margin at the store level.

The next column focuses on the key cost categories that would be included in the fully loaded cost profile. Next are the potential intangible benefits, followed by the communication targets. It is important for several groups to receive the information from the impact study. Finally, the last column lists any particular influences or issues that might have an effect on the implementation. The training staff identified three issues, with two being very critical to the evaluation. No communication was planned with the control group so there would not be potential for contamination from the pilot group. Also, because the seasonal fluctuation could affect the control group arrangement, this evaluation was positioned between Father's Day and the winter holiday season, thus taking away huge surges in volume.

The data collection plan together with the ROI analysis plan provided detailed information on calculating the ROI and illustrating how the process will develop and be analyzed. When completed, these two planning documents provide the direction necessary for the ROI evaluation.

## Results

### Reaction and Learning

The first two levels of evaluation, reaction and learning, were simple and straightforward. The training staff collected five measures of reaction to determine if the objectives had been met. The overall objective was to obtain at least four out of five on a composite of these five measures. As table 2 illustrates, the overall objective was met. Of the specific measures, the relevance of the material and the usefulness of the program were considered to be the two most important measures. In addition, 90 percent of the participants had action items indicating when and how often they would use these skills. Collectively, this Level 1 data gave assurance that sales associates had a very favorable reaction to the program.

The measurement of learning was accomplished with simple skill practice sessions observed by the facilitator. Each associate practiced each of the five skills, and the facilitator inserted a check mark on the questionnaire when the associate successfully practiced. While subjective, it was felt that this approach provided enough evidence that the participants had actually learned these basic skills.

**Table 1. ROI analysis plan.**

| Data Items | Methods of Isolating the Effects of the Program | Methods of Converting Data | Cost Categories | Intangible Benefits | Communication Targets | Other Influences and Issues |
|---|---|---|---|---|---|---|
| • Weekly sales per associate | • Control group analysis<br>• Participant estimate | • Direct conversion using profit contribution | • Facilitation fees<br>• Program materials<br>• Meals and refreshments<br>• Facilities<br>• Participant salaries and benefits<br>• Cost of coordination and evaluation | • Customer satisfaction<br>• Employee satisfaction | • Program participants<br>• Electronics Department managers at targeted stores<br>• Store managers at targeted stores<br>• Senior store executives district, region, headquarters<br>• Training staff: instructors, coordinators, designers, and managers | • Must have job coverage during training<br>• No communication with control group<br>• Seasonal fluctuations should be avoided |

**Table 2. Level 1 reaction data on selected data.**

| | |
|---|---|
| Success with objectives | 4.3 |
| Relevance of material | 4.4 |
| Usefulness of program | 4.5 |
| Exercises and skill practices | 3.9 |
| Overall instructor rating | 4.1 |
| **Composite** | 4.2 |

### Application and Implementation

To measure application and implementation, the training and development staff administered a follow-up questionnaire three months after the end of the program. The questionnaire was comprehensive, spanning 20 questions on three pages, and was collected anonymously to reduce the potential for bias from participants. The questionnaire covered the following topics:

- Action plan implementation
- Relevance of the program
- Use of skills
- Changes in work routine
- Linkage with department measures
- Other benefits
- Barriers
- Enablers
- Management support
- Suggestions for improvement
- Other comment

While all of the information was helpful, the information on the use of skills was most critical. Table 3 shows the results from two of the 20 questions on the questionnaire. The first one provides some assurance that the participants are using the skills, as 78 percent strongly agree that they utilize the skills of the program. More important, the next question focused directly on one of the goals of the program. Fifty-two percent indicated that they use the skills with each customer, slightly exceeding the goal of 50 percent.

Because these are simple skills, with the opportunity to use them every day, this three-month follow-up provides some assurance that the associates have internalized the skills. The follow-up session three weeks after the first two days of training provided the first, early indication

**Table 3. Level 3 selected application data on two of 20 questions.**

| | Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| I utilize the skills taught in the program. | 78% | 22% | 0% | 0% | 0% |
| | **With Each Customer** | **Every Third Customer** | **Several Times Each Day** | **At Least Once Daily** | **At Least Once Weekly** |
| Frequency of use of skills. | 52% | 26% | 19% | 4% | 0% |

of skill transfer to the job. If the skills are still being used three months after training, it is safe to conclude that the majority of the participants have internalized them.

While many other data collection methods could have been used, it is important to understand the rationale for using the questionnaire. The most accurate, and expensive, method would be observation of the participants on the job by a third party. In that scenario, the "mystery shoppers" must learn the skills and be allowed to rate each of the 48 participants. This approach would provide concrete evidence that the participants had transferred the skills. This approach would be expensive, and it is not necessary under the circumstances. Because the management team is more interested in business impact and ROI, it has less interest in the lower levels of evaluation. Although some data should be collected to have assurance that the skills have transferred, the process does not have to be so comprehensive. This is a resource-saving issue and is consistent with the following guiding principles for the ROI process:

1. When a higher level evaluation is conducted, data must be collected at lower levels.
2. When an evaluation is planned for a higher level, the previous level of evaluation does not hae to be comprehensive.
3. When collecting and analyzing data, use only the most credible sources.
4. When analyzing data, choose the most conservative among alternatives.

5. At least one method must be used to isolate the effects of the project or initiative.
6. If no improvement data are available for a population or from a specific source, it is assumed that little or no improvement has occurred.
7. Estimates of improvement should be adjusted for the potential error of the estimate.
8. Extreme data items and unsupported claims should not be used in ROI calculations.
9. Only the first year of benefits (annual) should be used in the ROI analysis of short-term projects or initiatives.
10. Project or program costs should be fully loaded for ROI analysis.

These are macrolevel principles with a conservative approach for collecting and processing data. Guiding principle number two comes into play with this issue. When an evaluation is under way at a higher level than the previous level of evaluation, the earlier evaluation did not have to be comprehensive. This does not mean that Level 3 data cannot be collected or that it should not be collected. With limited resources, shortcuts must be developed and this principle allows us to use a less expensive approach. If the management team had asked for more evidence of customer interaction or wanted to know the quality and thoroughness of the actual exchange of information, then a more comprehensive Level 3 evaluation would be required and perhaps the evaluation would have even stopped at Level 3.

## Business Impact

Weekly sales data were collected for three months after the program for both groups. Table 4 shows the data for the first three weeks after training, along with the last three weeks during the evaluation period. An average for the last three weeks is more appropriate than data for a single week because that could have a spike effect that could affect the results. As the data shows, there is a significant difference between the two groups, indicating that the training program is improving sales. The percent increase, directly attributable to the sales training, is approximately 15 percent. If only a business impact evaluation is needed, this data would provide the information needed to show that the program has improved sales. However, if the ROI is needed, two more steps are necessary.

**Table 4. Level 4 data on average weekly sales.**

| Weeks After Training | Trained Groups ($) | Control Groups ($) |
|---|---|---|
| 1 | $ 9,723 | $ 9,698 |
| 2 | 9,978 | 9,720 |
| 3 | 10,424 | 9,812 |
| 13 | 13,690 | 11,572 |
| 14 | 11,491 | 9,683 |
| 15 | 11,044 | 10,092 |
| Average for Weeks 13, 14, 15 | $12,075 | $10,449 |

## Converting Data to a Monetary Value

To convert the business data to a monetary value, the training and development staff had to address several issues. First, it is necessary to convert the actual sales differences to a value-added data—in this case, profits. The store level profit margin of 2 percent is multiplied by the difference or increase in sales. Table 5 shows the calculation, as the weekly sales per associate of $1,626 become a value-added amount of $32.50. Because 46 participants were still on the job in three months, the value-added amount gets multiplied by 46, for a weekly total of $1,495.

Mention of 46 participants brings another guiding principle—number six—into focus. That principle says, "If no improvement data are available for a population or from a specific source, it is assumed that little or no improvement has occurred." This is a conservative approach because the missing data is assumed to have no value. Two

**Table 5. Annualized program benefits for 46 participants.**

| | |
|---|---|
| Average weekly sales per employee trained groups | $12,075 |
| Average weekly sales per employee untrained groups | 10,449 |
| Increase | 1,626 |
| Profit contribution (2% of store sales) | 32.50 |
| Total weekly improvement (× 46) | 1,495 |
| **Total annual benefits (× 48 weeks)** | **$71,760** |

of the participants are no longer on the job and instead of tracking what happened to them, this rule is used to exclude any contribution from that group of two. However, the cost to train them would be included, although their values are not included for contribution.

Finally, annual benefits are used to develop a total benefit for the program. The ROI concept is an annual value, and only the first-year benefits are used for short-term training programs. This is guiding principle number nine. Although this approach may slightly overstate the benefits for the first year, it is considered conservative because it does not capture any improvements or benefits in the second, third, or future years. This operating standard is also conservative and thus is a guiding principle. In summary, the total annualized program benefit of $71,760 is developed in a very conservative way using the guiding principles.

## Program Cost

The program costs, shown in table 6, are fully loaded and represent all the major categories outlined earlier. This is a conservative approach, as described in guiding principle number 10. In this case, the costs for the development are included in the facilitation fee since the external supplier produced the program. The cost of the participants' time away from the job is the largest of the cost items and can be included, or the lost opportunity can be included, but not both. To be consistent, this is usually developed as the total time away from work (three days) is multiplied by the daily compensation rate including a 35 percent benefits factor. Finally, the estimated cost for the evaluation and the coordination of data collection is included. Since the company had an internal evaluation staff certified in the ROI process, the overall cost for this project was quite low and represents direct time involved in developing the impact study. The total fully loaded cost for the program was $32,984.

## ROI Calculation

Two ROI calculations are possible with use of the total monetary benefits and total cost of the program. The first is the benefit-cost ratio (BCR), which is the ratio of the monetary benefits divided by the costs:

$$\text{BCR} = \frac{\$71,760}{\$32,984} = 2.18$$

**Table 6. Cost summary for 48 participants in three courses.**

| Item | Cost ($) |
|---|---|
| Facilitation fees, three courses @ $3,750 | 11,250 |
| Program materials, 48 @ $35 per participant | 1,680 |
| Meals and refreshments, three days @ $28 per participant | 4,032 |
| Facilities, nine days @ $120 | 1,080 |
| Participants' salaries plus benefits (35% factor) | 12,442 |
| Coordination and evaluation | 2,500 |
| **Total Costs** | **32,984** |

In essence, this suggest that for every dollar invested, 2.18 dollars are returned. When using the actual ROI formula, this value becomes:

$$\text{ROI (\%)} = \frac{\$71,760 - \$32,984}{\$32,984} \times 100 = 118\%$$

This ROI calculation is interpreted as follows: For every dollar invested, a dollar is returned and another $1.18 is generated. The ROI formula is consistent with ROI for other types of investment. It is essentially earnings divided by investment. In this case, the ROI exceeds the 50 percent target.

## Intangibles

This program generated significant intangible benefits:

- Increased job satisfaction
- Improved teamwork
- Increased confidence
- Improved customer service
- Improved image with customers
- Greater involvement

## Conclusions and Actions

### Communication of Results

It was important to communicate the results of this evaluation to the senior executives who requested a program, to the sales associates who were part of it, and to other personnel who were affected by it. First, the senior executives need the information to make a decision. In a face-to-face meeting, lasting approximately one hour, the training and development staff presented all six types of data

with the recommendation that the program be implemented throughout the store chain. An executive summary and PowerPoint slides were distributed.

The participants received a two-page summary of the data, showing the results of the questionnaire and the business impact and ROI achieved from the process. There was some debate about whether to include the ROI in the summary, but eventually it was included in an attempt to share more information with the participants.

The electronics department managers, the participants' managers, received the executive summary of the information and participated in a conference call with the training and development staff. This group needed to see the benefits of training since they had no alter and rearrange schedules to cover the jobs while the participants were in training.

Finally, the training staff received a detailed impact study (approximately 100 pages), which was used as a learning document to help them understand more about this type of evaluation. This document became the historical record about the data collection instruments and ROI analysis.

## Action

As a result of the communication of the impact study, senior executives decided to implement the program throughout the store chain. For all six types of data, the results were very positive with a very high ROI, significantly exceeding the target. The implementation proceeded with the senior executives' request that the sales data for the three target stores be captured for the remainder of the year to see the actual one-year impact of the program. While the issue of taking one year of data, based on a three-month snapshot, appears to be conservative since the second- and third-year data are not used, this provided some assurance that the data does indeed hold up for the year. At the end of the year, the data actually exceeded the snapshot of performance in three months.

## Lessons Learned

This evaluation provides some important insights into the ROI process. In the past, the store chain evaluated pilot programs primarily on Level 1 data (reactions from both the participants and their managers), coupled with the sales presentation from the vendor.

The ROI approach provides much more data to indicate the success of training. In essence, companies can use Level 4 and 5 data for making a funding decision instead of making a funding decision on the basis of reaction data, Level 1.

From a statistical significance viewpoint, the small sample size does not allow for making an inference about the other stores at a 95 percent confidence. In essence, due to the small sample size it is impossible to say that the other stores would have the same results as the three in question. A sample size of 200 stores would be needed for statistical soundness. However, the economics of the evaluation and the practicality of the pilot implementation drove the sample size in this case, and in most other cases. No group of senior executives would suggest a sample size of 200 stores to see if the program should be implemented in the other 220 stores. It is important to note in the results that statistical inference cannot be made, but it is also important to remember two points:

- The six types of data represent much more data than previously used to evaluate these types of programs.
- Second, most managers do not take other funding decisions based on data that has been collected, analyzed, and reported at a 95 percent confidence level.

Finally, another lesson was learned about this application of the ROI process. This is a very simple case allowing for a control group arrangement. Many other situations are not this simple, and other methods of isolation have to be undertaken. Other studies, while feasible, are more complex and will require more resources.

## Questions for Discussion

1. Are the data and results credible? Explain.
2. How should the results be communicated?
3. With such a small sample, how can the issue of statistical significance be addressed?
4. The use of a control group arrangement is not possible in many situations. How can other potential approaches be utilized? Explain.
5. Would you implement this program in the other 417 stores? Explain.