Evaluation of the Impact of a Large Corporate Leadership Development Course

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EVALUATION OF THE IMPACT OF A LARGE CORPORATE LEADERSHIP DEVELOPMENT COURSE

by

Anna A. Rice

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
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Department of Psychology
Advisor: John Austin, Ph.D.

Western Michigan University
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The purpose of this study was to evaluate the impact of a leadership development course for the top 100 leaders of a Fortune 500™ company using Kirkpatrick’s four levels of evaluation and the Success Case Method. Participants’ satisfaction with the training was measured through a survey given upon completion of the course and it was determined that participants were satisfied with the training. Knowledge gains as a result of training were also measured and participants’ knowledge significantly increased after training. Participant behavior change due to training was discovered using the Success Case Method. Participants’ top four changes in behavior that resulted from the course were: 1.) identifying development needs to improve bench strength 2.) developing someone on their team for a more responsible leadership position, 3.) developing a better understanding of their team members, and 4.) improving the performance level of their team. Organizational results due to training were discovered using the Success Case Method and included: 1.) profits and 2.) cost savings. Finally, information was gathered about the factors that led to training success, the factors that deterred training success, and how the training could be improved.
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Anna A. Rice
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INTRODUCTION

United States organizations spent an astounding $134.07 billion on employee learning and development in 2008 according to American Society for Training and Development (ASTD) estimates (Paradise & Patel, 2009). To put it in perspective, this amount is greater than the Gross Domestic Product (GDP) of 155 countries in the world (Central Intelligence Agency, 2009). Considering the amount of money companies invest in employee learning and development, it would be assumed that learning and development creates positive organizational impact. However, evaluation of training to prove organizational impact is not as widely utilized as many think it should be (Twitchell, Holton, & Trott, 2000).

Evaluation of Training

Evaluation of training is rarely conducted, despite researchers’ lament that it is essential to effective human resource development (Twitchell, Holton, & Trott, 2000). Estimates from business and industry suggest that only half of training programs are evaluated for objective performance outcomes and less than one-third of training programs are evaluated in a way that measures changes in organizational goals or profitability (Twitchell et al.). In 2005, ASTD reported that of the largest organizations, only 12.9 percent conducted any kind of training impact evaluation (Sugrue & Rivera, 2005).

There are numerous reasons cited as to why so little evaluation occurs. The first is that outcomes of training are often hard to identify and measure (Twitchell,
Holton, & Trott, 2000) and there may be many confounding variables effecting the outcomes of training including the economy and supply chain issues. Another reason evaluation does not occur is because of a lack of resources including the time required to engage in evaluation activities (Wang & Wilcox, 2006). Training professionals may have too many other things to do that are more important or more highly preferred (Kirkpatrick, 2000).

Yet another reason evaluation does not occur is because there may be a lack of expertise or training in evaluation techniques (Twitchell, Holton, & Trott, 2000; Wang & Wilcox, 2006). Evaluation techniques can be complicated. For example, rigorous evaluation studies that can make causal claims about training use randomized, double-blind treatment and control group methods. Even quasi-experimental designs require complex methods and statistical manipulations that are difficult to understand. It is possible that the use of these methods is too difficult, time intensive, impractical, and costly for most organizations (Brinkerhoff, 2006).

Many organizations do not require an evaluation of the training (Twitchell, Holton, & Trott, 2000) and there is therefore no pressure from higher management to conduct evaluation (Kirkpatrick, 2000). Training professionals might not believe in the value of evaluation or they may lack confidence in whether their programs add value. Finally, the benefits of training programs are intertwined with other organizational system variables, making it hard to tease out the impact of the training alone (Wang & Wilcox, 2006).

Although there are many obstacles to evaluation, those who do evaluate
training have similar approaches. Most evaluations focus on measuring the effect of training on the participants, the participants’ work, and the organization (Brinkerhoff, 1991) and these evaluation practices have not changed much in the last forty years (Twitchell, Holton, & Trott, 2000). Training evaluation has been largely dominated by Kirkpatrick’s (1998) four level model of evaluation (Twitchell et al., 2000). Despite the popularity of Kirkpatrick’s model, truly comprehensive evaluation rarely occurs because many programs focus only at Level 1 and sometimes Level 2, while only a small percentage of programs receive Levels 3 and 4 evaluation (Twitchell et al., 2000). Ideally, all four levels should be conducted in a sequence to fully evaluate training, but as one progresses through the sequence, the levels become more difficult and time consuming to execute. However, levels 3 and 4 are important because they provide more valuable information than the other levels (Kirkpatrick, 2000).

The first level of evaluation in Kirkpatrick’s model is reaction, which measures the participants’ satisfaction with the program. Level 1 is easy to do effectively and most trainers execute this level by using reaction sheets. Level 2 is called learning. Learning is defined as a participant’s change in attitudes, knowledge, and skill as a result of the program. Training professionals usually execute this level of evaluation through some sort of testing before and after the training. Level 3 involves evaluation of behavior. Behavior is defined as a change in participants’ behavior as a result of training; it is typically measured after the participants return to work after the training. Often this level of evaluation is executed through the use of surveys or interviews with trainees, their supervisors, their subordinates, and others.
who observe their behavior on the job. The final and most challenging level of evaluation in Kirkpatrick's model is level 4, which focuses on results. Results are defined as organizational results that have occurred because participants attended the training. Examples of these organizational results include increased production, improved quality, decreased costs, reduced frequency or severity of injuries, increased sales, reduced turnover, higher profits, and return on investment (Kirkpatrick, 2000).

Windfred, Bennett, Edens, and Bell (2003) classified all of the published training effectiveness literature from 1960 to 2000 based on which level of evaluation each used from Kirkpatrick's model (i.e., reaction, learning, behavioral, and results). A meta-analysis of the studies' effect sizes was conducted to provide a population estimate of the effectiveness of training based on the level of evaluation used. The authors reported that effect sizes varied only slightly across the four levels of evaluation, ranging from .60 (reaction) to .63 (learning).

Despite the proven effectiveness and persuasive logic of Kirkpatrick's (1998) model in evaluating training programs, the model has been heavily criticized. One criticism is that the model is an oversimplification and incomplete method of evaluation. Additionally, there have been no tests that demonstrate a causal relation among the results of the four different levels. For example, there is no solid evidence that high levels of satisfaction are related to increased knowledge, behavior change, and results. Further, not all are convinced that the importance of the information increases as one progress through the levels (Giangreco, Carugati, & Sebastiano,
Another criticism of Kirkpatrick’s model is that getting Level 4 measures of organizational impact and return on investment (ROI) measures is too difficult and too complicated (Wang & Wilcox, 2006). Often, trainers lack the accounting skills to do a cost-benefit analysis (Kirkpatrick, 2000), and even if Level 4 measures can be found, ROI models involve statistical calculations and extrapolations that can raise doubts about the relationship of ROI to training events (Brinkerhoff, 2006). In addition, people criticize Kirkpatrick’s Level 4 evaluation because they view the benefits of training as soft, subjective, and difficult to convert to dollars (Kirkpatrick, 2000). For these and other reasons, less than 5 percent of training programs are evaluated in terms of their financial benefits to the organization. Of the studies that did report such an analysis, examples of the financial benefits include productivity improvement, increased profitability, increased sales or revenue, improved quality, improved quantity, and decreased turnover (Swanson, 2001).

Due to the difficulties of demonstrating the financial benefits of training, Brinkerhoff (2003) proposes a nonfinancial alternative to training evaluation that focuses on a systems approach to organizational impact. Brinkerhoff says that the object of evaluation should not be the training itself, but rather how well the organization uses the training. Evaluation then should investigate the performance management system of an organization because it is the performance management system that determines whether training affects performance. Therefore, organizations that want to achieve more results from training must work on the entire
training-to-performance process and should involve many players including employees, training leaders, line managers of learners, and senior leadership.

Brinkerhoff (2003) proposes a process called the Success Case Method (SCM) for evaluating the business effect of training by investigating the larger performance environment unlike Kirkpatrick’s (1998) model which focuses on the training alone. The SCM seeks out performance management factors that contribute to and hinder training’s effects and provides information about what worked, what did not, what results were achieved, and what can be done to get better results in the future.

The SCM first identifies potential and likely success cases in which trainees have been successful in applying their learning from training. Usually, this is done by utilizing a survey that asks the trainee if he or she has used the training in a way that has made a significant difference to the business. Next, the SCM uses interviews of a sample of the respondents, who said they have applied their training, to identify and document true and verifiable success. Through these interviews, the nature and the business value of their application of learning and the performance context factors (i.e., manager support, measurement, feedback, and incentives) that enabled success are identified. The method also examines nonsuccesses to investigate why some trainees did not successfully apply their learning. The result of the SCM is stories of documented business effects and knowledge of factors that contribute to or hinder the effects of training.

The use of the SCM for evaluation has been published in two studies. Coryn, Schroter, and Hansen (2009) used the SCM in a nonprofit social service context to
evaluate a program aimed at reducing homelessness and unemployment. The study added a time series design element to the SCM by interviewing high and low success samples after participation and then re-interviewing them again 12 and 13 months after participation. This time series design allowed the authors to assess the sustainability, durability, and differential onset of the effects from participation in the program. The results of the SCM provided feedback to the program, which was used to refine service delivery and participant selection practices and procedures in order to improve outcomes for future program participants.

Brinkerhoff (2005) used the SCM at a global manufacturing and service vendor of information technologies. The course taught technicians how to install and initialize a new server and its hardware and equipment. Brinkerhoff documented numerous success stories but also concluded that 40 percent of the trainees were not making use of the training. Through interviews, it was revealed that those who were not using the training were not using it because none of their customers had purchased the server, so there was no opportunity for them to use the training; they attended the training because district managers wanted someone to be ready just in case a customer bought the server. As a result of this discovery, enrollment was reduced to only the technicians who had a true need, and technicians were put on loan to service areas where a customer purchased the server but there were no trained technicians to install and initialize the server.

Studies suggest that the SCM and Kirkpatrick’s model are useful tools that can be used to evaluate different types of training and organizational programs. One
very popular program in organizations today that should be met with evaluation is leadership development. Leadership development programs should be evaluated, as should all programs that require significant time and resources, because they have become integral to organizations’ strategies and their efforts to prepare for the future.

**Leadership Development**

Leadership development has become increasingly important to organizations because evidence suggests that organizations which have a strategic plan for implementing leadership programs to develop the right people will be better prepared for the future. Organizations are advised to implement leadership development programs for many reasons, including: to prepare for turnover, to respond to the increased number of jobs requiring leadership, to respond to the competition-driven necessary changes in leadership style, to respond to changes in organizational structures, to respond to changing demographics, and to prepare for tragedies that result in loss of leadership (Leskiw & Singh, 2007).

Although the importance of leadership development is clear, the optimal content for leadership development programs remains unclear. In general, leadership development is an attempt to increase a leader’s performance, knowledge, and expertise (Collins & Holton, 2004); however, leadership development practices vary widely across organizations. Because leadership development practices are so variable, Leskiw and Singh (2007) conducted a systematic literature review designed to reveal best practices for developing leaders in organizations. Six factors were found to be critical for effective leadership development including a thorough needs
assessment, the selection of a suitable audience, the design of an appropriate infrastructure to support the initiative, the design and implementation of an entire learning system, an evaluation system, and corresponding actions to reward success and improve on deficiencies.

Leadership development programs are most commonly evaluated using at least one level of Kirkpatrick’s evaluation model, even if they do not name their evaluation efforts using Kirkpatrick’s terms. Self-assessment at the end of the leadership development program is the most common method used to evaluate leadership training (Hunt & Baruch, 2003). For example, Galanou and Priporas (2009) used a 46 item self-report survey of middle managers based on a 5-point Likert scale (“not at all” to “a very great extent”) that covered all six levels of their evaluation. Thach (2002) also used self-report to measure participants’ behavior change (Level 3). A survey was sent to participants after they had completed the training asking them to self-report their increase in leadership effectiveness. Wasylyshyn (2003) evaluated executive coaching programs by sending a survey to participants of coaching programs in which they self-reported sustained behavior change (Level 3), increased self-awareness and understanding (Level 2), and increased leadership effectiveness (Level 3). Although self-report is a common technique, other techniques of measuring impact exist and differ across the levels of evaluation.

Level 1 (reaction) is most commonly assessed using surveys. For example, Olivero, Bane, and Kopelman (1997) assessed participants’ reactions to an executive
coaching program using a 5-point Likert scale across five dimensions: usefulness of materials, instructor’s knowledge, instructor’s facilitation, overall instructor rating, and overall workshop rating.

In addition to self-reports, objective measures are often used to evaluate Level 2 (learning) of leadership development programs. Pre-tests before the leadership development program and post-tests after the program are commonly used to assess learning (e.g., McElrath et al., 2005; Olivero et al., 1997).

Surveys of participants’ direct reports, peers, and direct managers are frequently used to measure perceptions of change in participants’ behavior (Level 3). For example, Hunt and Baruch (2003) sent a survey to participants’ subordinates to measure the impact of interpersonal skills training on executives. The survey was sent six weeks before the participants began the program and six months after training was completed in order assess subordinates’ level of satisfaction based on a 5-point scale with their manager’s interpersonal competencies and skills (Level 3). Thach (2002) conducted a survey with participants’ direct reports, peers, and managers to assess if they perceived an increase in the participant’s leadership effectiveness and the frequency of follow-up the participant conducted with them on improvement efforts (Level 3).

Level 4 (results) can be assessed using objective measures of the impact of leadership development efforts. For example, Olivero et al. (1997) measured the number of completed patient evaluation forms before and after the coaching of executives. McElrath et al. (2005) measured Level 4 in a number of ways including
employee survey scores on questions related to supervision/management, responses on exit surveys, and employee turnover before and after the training and coaching of supervisors. Return on investment was calculated based on the savings the company incurred due to lower turnover rates.

Some studies that evaluate leadership programs expand on or subdivide Kirkpatrick’s model. McElrath et. al (2005) added a Level 5 to Kirkpatrick’s model called ROI. However, this can be considered another measure of Level 4 (results). Galanou and Priporas (2009) added a Level 5 to Kirkpatrick’s model called organizational team, which evaluated the morale, adaptiveness, and stability of the team. Galanou and Priporas also added a level 6 called society, which evaluated participants’ self-actualization and safety (i.e., security). Collins and Holton (2004) divided Kirkpatrick’s Level 2 (knowledge or learning), Level 3 (behavior), and Level 4 (system results) into subjective and objective categories creating six categories that can be used to evaluate leadership training.

Interviews are also a common method used to evaluate leadership programs. Gegner (1997) conducted interviews to determine gains from coaching, obstacles to coaching, and the most valuable learning experiences during coaching. Hall, Otazo, and Hollenbeck (1999) used interviews of executives that participated in a coaching program to gather examples of good coaching and to rate the overall effectiveness of the coaching on a 5-point Likert scale. Laske (1999) interviewed executives to find out what had significantly changed as a result of coaching.

To determine the overall results of the various leadership development
evaluations, Avolio, Reichard, Hannah, Walumbwa, and Chan (2009) conducted a meta-analytic review of 200 published and unpublished lab and field studies in which the researcher overtly manipulated leadership as the independent variable through training, assignment, scenarios or other means. The authors compared the impact of leadership interventions across intervention types, leadership theories, and four common dependent variables that align with Kirkpatrick’s model (i.e., affective outcomes, cognitive outcomes, behavioral outcomes, and organization-level outcomes).

Leadership interventions overall had a 66 percent probability of achieving a positive outcome. The comparison of intervention types showed stronger effects for intervention types that were not training/developmental, for example assignment or scenarios (e.g., vignettes of specific leadership styles). The comparison across the common dependent variables of affective outcomes, cognitive outcomes, behavioral outcomes, and organization-level outcomes showed that studies that measured organizational performance outcomes had the largest effect size, although only two studies measured organization-level outcomes. Studies that measured behavioral and cognitive outcomes had larger effects than studies using affective outcome measures. The comparison across leadership theories revealed that both newer and traditional leadership theories had moderately positive impact effects.

**Leadership Theories**

The early leadership theories began in the 1930’s and have been termed the traditional leadership models. They have focused on the description of leader
behavior in terms of leader-follower exchange relationships and transactions of things of value to the follower such as providing direction and support, and reinforcement. In the 1980’s disillusionment with leadership theory arose and as a result, alternative approaches to leadership were proposed. The alternative approaches to the traditional leadership theories are referred to as the new leadership models. They emphasize symbolic leader behavior, vision, inspirational messages, emotional feelings, ideological and moral values, individualized attention, and intellectual stimulation. Of the new theories of leadership, charismatic and transformational leadership theories have been the most researched theories over the last 15 years. Charismatic and transformational leadership theories suggest that leaders raise followers’ aspirations and activate their higher-order values. Followers then identify with the leader and his or her vision, perform beyond expectations, and feel better about their work (Avolio et al., 2009).

Operant theories of leadership within the field of Organizational Behavior Management represent a small percentage of the extant studies in leadership. Some operant theories align with the traditional transactional leadership models. For example, Komaki, Zlotnick, and Jensen (1986) developed a supervisory taxonomy based on leader-follower transactions such as supervisors providing performance consequences by indicating knowledge of performance, supervisors conducting performance monitoring by collecting information about performance, and supervisors providing performance antecedents or instructions.

Other operant leadership theories align with transformational leadership
theories. In many ways, the Daniels and Daniels (2007) theory of leadership amounts to a behavioral interpretation of transformational leadership theory. Daniels and Daniels define leadership as followers’ discretionary effort in support of the leader’s vision, mission, and goals. Discretionary effort can be observed when followers make sacrifices for the leader’s cause, when followers reinforce or correct others so they will conform to the leader’s teachings, and when followers set guidelines for their own personal behavior based on what they believe the leader would approve or disapprove of.

The current study utilized a behavioral approach in that it sought to identify objective and independently verifiable outcomes of a training and development program and objective factors in the participants’ environment that contribute to the success and failure of the program. Subjective measures were only used when it was not possible to obtain objective measures.

Summary

Although training evaluation is often difficult to conduct, it is important to evaluate training to determine its organizational impact, to determine if the training is accomplishing stated goals, and to determine if training can be improved. Two evaluation methods, the Success Case Method and Kirkpatrick’s four level model have been proven to successfully evaluate various organizational programs. One popular organizational program is leadership development. Leadership development programs should be evaluated because of their potential to impact an organization’s success.
Kirkpatrick’s model is frequently used to evaluate leadership programs. Avolio, Reichard, Hannah, Walumbwa, and Chan (2009) found 200 published and unpublished lab and field studies that used at least one of Kirkpatrick’s evaluation levels to evaluate leadership interventions. However, very few studies used the Level 4 evaluation of organizational outcomes and even more rare is the use of all four levels of evaluation.

One study has used all four of Kirkpatrick’s levels to evaluate a training and coaching program aimed at increasing the effectiveness of first-line supervisors (as opposed to the current proposed study, which will evaluate a program for high-level executives). McElrath, Godat, Musson, Libow, and Graves (2005) measured Level 1 by gathering the reaction of the participants to the interventions. Level 2 was measured with an objective test administered before, directly after, and four months after training had been completed. Level 3 was measured using a 360-degree evaluation completed by the participant, the participant’s manager, peers, and subordinates. Level 4 was measured in a number of ways, including employee survey scores on questions related to supervision/management, which became more favorable. Additionally, responses on exit surveys that indicated employees left due to management decreased. Finally, the rate of employee turnover decreased. Additionally, the return on investment was calculated based on the savings the company incurred due to lower turnover rates.

There is a need for more studies to evaluate leadership development programs at all four of Kirkpatrick’s levels. However, obtaining Level 4 outcome measures can
be difficult to obtain for leadership programs. This study evaluated a leadership development program at all four levels and used the Success Case Method to obtain outcome measures.

This study contributes to the literature because there were no published studies evaluating leadership programs using the Success Case Method. Additionally, no previous published studies have attempted to combine Kirkpatrick’s four levels of evaluation with the Success Case Method to create a more robust evaluation, and no previous studies have used all four levels of Kirkpatrick’s model to evaluate a program aimed at high-level executives.

The purpose of this study was to evaluate the impact of a leadership development course for the top 100 leaders of a Fortune 500™ company using Kirkpatrick’s four levels of evaluation and the Success Case Method. Through this combined approach, not only were measures collected at each of Kirkpatrick’s four levels, but information was obtained about what environmental factors led to training success, what environmental factors deterred training success, and how training could be improved. Additionally, documented success cases with objective organizational outcome measures were obtained.
METHOD

Participants

Participants in this study were 83 individuals who attended a leadership training course for the top 100 leaders of a Fortune 500 company with headquarters located in the Midwest. To be included in the study, the learners must have attended the course at some point since the course’s inception (May 5th, 2009). The company provided the investigators with a list that identified the individuals who completed the training course.

Participant recruitment. All participants who had completed the course at the time of the study were recruited from the organization using the web-based survey tool Zoomerang. The survey asked the participants who had completed the training course at the time of the study several questions about the training and their use of what they have learned (see Appendix A for a copy of the web-based survey). It was necessary to track who completed the survey and who did not, therefore individuals’ survey responses were tied to their email address. Additionally, it was necessary to tie individuals’ responses to their email address in order to know who reported successfully applying the course material and who reported not successfully applying the course material because a sample of those who reported success and those who did not were contacted to participate in an interview. After the interviews were conducted, individuals’ responses to the web-based survey were combined across participants so that it was impossible to identify a single individual’s responses.
To ensure that an adequate sample was obtained, it was necessary to contact a sample of the individuals who attended the training but did not respond to the web-based survey. Because individuals’ responses to the web-based survey were tied to their email address, it was possible to identify who had and who had not completed the web-based survey. A random sample of 20 individuals who did not complete the web-based survey were sent a paper-based version of the web-based survey through inter-office mail. Eight returned the paper-based survey while 6 completed the web-based survey by finding the link to the survey in a previous email. Individuals’ responses to the paper-based survey were combined with individuals’ responses to the web-based survey after the interviews were conducted so that it was impossible to identify a single individual’s responses.

Based on the web-based and paper-based survey data, two groups were identified: those who reported successfully applying the course content to create a measurable result and those who did not have success applying the course content. Sixteen of the 20 individuals who reported high success were randomly selected to participate in the high success interviews. Two individuals chose not to or could not participate (due to no longer being with the company) in the high success interviews; therefore, 14 high success interviews were actually conducted. The three of the individuals who reported they were not able to implement their learnings were selected to participate in the low success interviews. Additionally, a random sample of 6 of the 16 people who reported that they started to implement some learning, but could not report any interim progress results yet were chosen to participate in the low
success interviews. One individual chose not to participate in the low success interview; therefore 8 low success interviews were actually conducted. The individuals selected for the high success and low success interviews were contacted by email (see Appendix B for a copy of the recruitment script) to ask for their participation in the interview. Then the experimenter scheduled a 30-minute phone call with each individual. The participants were informed that their participation was voluntary and their answers and identities would be kept confidential (see Appendix C for the questions for success interviews and low or no success interviews).

Individuals’ responses to the interviews were combined across participants so that it was impossible to identify a single individual’s responses. Additionally, no names were associated with the interview data.

Thirty-four participants who were enrolled in the training during the time of the study (i.e., those who will complete the training during the study as opposed to those who have already completed the training 3-14 months before the study began) were given a knowledge test before the training began and then again upon completion of training (see Appendix D for the knowledge test). Pre-test and post-test scores of an individual participant were compared to assess if knowledge increased after the course. The recruitment for participation in the knowledge test was done face to face at the start of the training. The participants were informed that their participation was voluntary and their answers and identities would be kept confidential. None of the participants’ names were associated with their scores. Individuals’ scores were kept anonymous by having the participant pick a code
number of their choosing to put on the pre and post-test so that scores could be compared. The investigators were unaware whose code number was whose.

Thirty-four participants who were enrolled in the training during the time of the study (i.e., those who complete the training during the study as opposed to those who had already completed the training 3-14 months before the study began) were also given a satisfaction survey upon completion of the training course (see Appendix E for the satisfaction survey). The recruitment for participation in the satisfaction survey was done face to face at the end of the training. The participants were told that their participation was voluntary and their answers and identities would be kept confidential.

**Human subjects protection.** This study has been approved by the Human Subjects Institutional Review Board (HSIRB) (see Appendix F for a copy of the approval letter). The company has approved the use of its data for research purposes (see Appendix G for a copy of the letter of approval for use of data). Informed consent was obtained from the participants by allowing them to agree or decline their consent that the information they provided through the surveys, tests, and interviews could be used for research purposes to be published in a dissertation (see Appendices A, C, D, and E for the consent verbiage). A debriefing of organization officials occurred where the investigators shared their findings from the study.

**Duration**

The web-based survey, the paper-based survey, and the satisfaction survey required 5 minutes each to complete. The knowledge test required 10 minutes each
to complete. The interview required up to 30 minutes to complete. The overall length of the evaluation study was approximately one year. If an individual participated in all evaluation measures (either the web or paper base survey, the knowledge tests, the satisfaction survey, and the interview), his or her total participation duration was approximately 60 minutes.

**Setting**

The current study took place at the organization’s leadership training institute and at participants’ work locations, which were scattered around the world.

**Instrumentation**

The web-based survey tool Zoomerang was used to collect data on participants’ use and application of the course materials. The measures were selections from the multiple-choice questions. A paper based survey was also used to deliver the same survey questions to individuals who did not submit a web-based survey. The measures were selections from the same multiple-choice questions used in the web-based survey. A telephone was used to conduct the interviews. The measures obtained were participants’ responses to the questions asked. A paper and pencil test was used to conduct the pre- and post- knowledge test. The measures obtained were selections from the multiple-choice questions. A percentage correct was obtained for each test given and averaged across participants. A paper and pencil test was used to conduct the satisfaction survey. The measures obtained were selections from the multiple-choice questions.
Dependent Variables

The dependent variables in this study were answers to the surveys (see Appendices A, and E for the questions and multiple-choice answers used in the web-based and satisfaction surveys). Participants’ answers to the questions were compiled to obtain a percentage of participants who selected each answer choice. A secondary dependent variable was the survey response rates to the web-based, paper based, and satisfaction surveys.

The web-based and paper based survey asked all of the individuals who completed the training at the time of the study several questions about the training and their use of what they have learned. The survey was used to discover how many participants used the training to create results and to gain an understanding as to what factors in the participants’ environment supported successful applications of the training content. The web-based survey was used to identify the individuals who were the most and least successful at applying the course content to create results. Once these two groups of participants were identified, random samples of them were contacted to conduct an interview to gather more information on their successes and what hindered application of the training material.

The first question on the web-based and paper based surveys was used to create two groups of participants. The participants who answered that they had “implemented something they learned and achieved a valuable business result” were put into the high success group. The participants who answered that they “started to implement some learning but could not report any interim progress results yet”, “that
they had some plans to apply their learning but had not been able to implement them yet”, or “for one reason or another is was unlikely that would be able to apply any of their learning” were put into the low success group. A Pearson’s Chi-square analysis was conducted as a test of independence. Measures of association were obtained between the high success and low success groups and the dependent variables of the answers to all other questions in the survey to determine if there were statistically significant differences between the groups and the answers they provided for the remaining survey questions.

The participants who used the training, but did not achieve results, were not included as successes because the high success group was defined as those who achieved a valuable business result. The Success Case Method works by learning from the participants who have been the most successful in applying their learning. Those who used the training, but did not get results, were not the most successful participants and thus were not included in the success group.

The satisfaction survey was used to obtain a measure of participant satisfaction with the training. The knowledge test (see Appendix D for the questions and multiple choice answers used in the knowledge test) was used to determine if participants’ knowledge of the course content increased after they had attended the course. The measure used for the knowledge test was percentage correct. Individuals’ pretest scores were compared to their posttest scores to determine if scores increased significantly upon completion of the course. Additionally, the average scores across participants’ pre- and post- knowledge test were measured to
determine if, on average, training resulted in a knowledge increase.

Participants’ answers to the questions in the interview (see Appendix C for the questions to be used in the interviews) were measured. These were compiled to obtain a descriptive and quantitative analysis of the answers given.

**Data Collection**

Participants answered the web-based, paper based, and satisfaction surveys and the knowledge test by selecting multiple choice answers electronically or by pencil and paper. Participants answered the open-ended interview questions verbally. Data were compiled across all participants. Response rates to the surveys were also obtained by tracking the number of surveys sent out versus the number of surveys completed.

**Experimental Design**

A number of experimental designs were used in this study. Level 1 was evaluated using a post-test design to measure participant satisfaction. Level 2 was evaluated using a pre-test post-test design to measure knowledge gains. Level 3 was evaluated using a post-test design to find behavior change using the web-based survey. Level 3 and 4 were evaluated using the Success Case Method, which was an analysis of extreme groups using case study techniques.

**Procedure**

Impact map. The intended impact and results of the training course were determined by the company (see Appendix H for the impact map). The impact map
describes the knowledge and skills that were taught in the course, the critical applications of the knowledge and skills, the intended results of the training, and the business goals to which the training relates.

**Training delivery.** The leadership training course was delivered in small group format (8-16 members in a small group), with 100 leaders attending the course over 24 months. The course lasted two and one-half workdays for a total of 22 hours. The training modules included leading, listening, asking questions, delegating, giving and receiving feedback, leader development, talent, and leadership transitions. The content was delivered in lecture style with small group activities. As part of the training course, 360-degree interviews are conducted for each participant before the training began. Additionally, a coach was assigned to each participant and development plans were created based on the results of the 360-degree interviews.

**Pre and post knowledge test.** The leadership knowledge test was given before the training began (see Appendix D for a copy of the test). The test was based on the material covered in the training course. After the training was complete, the same test was given again. The average score of the pre-tests were compared to the post-tests to determine if the training resulted in a gain of knowledge. This test was an evaluation at Kirkpatrick’s Level 2.

**Participant satisfaction survey.** A satisfaction survey was given at the conclusion of the training to obtain a measure of participant satisfaction with the training (see Appendix E for a copy of the satisfaction survey). This survey was an evaluation at Kirkpatrick’s Level 1.
**Success case method.** The Success Case Method was used to evaluate the course, find success stories, find environmental factors that contributed to success and nonsuccess, and to find measurable results from the training.

**Web-based survey.** A web-based survey was sent out to all participants 3 to 14 months after they had completed the course (see Appendix A for a copy of the web-based survey). The survey asked all of the individuals who completed the training at the time of the study several questions about the training and their use of what they have learned. The survey was used to discover how many participants used the training to create results and to gain an understanding of the factors in the participants’ environments that supported successful applications of the training content. The web-based survey was used to find the individuals who reported being successful at applying the course content to create results. It was also be used to find the individuals who reported being unsuccessful at applying the course content to create results. Once these two groups of participants were identified, a random sample of them was contacted to conduct an interview to gather more information on their successes and what hindered application of the training material. This survey was an evaluation at Kirkpatrick’s Level 3 and Level 4.

**Paper-based survey.** A random sample of the individuals who did not respond to the web-based survey was given a paper-based version of the web-based survey through inter-office mail. The paper-based survey contained the same questions as the web-based survey.

**Success interview.** A random sample of the individuals who responded to the
survey saying that they had measurable results from applying the training material were contacted to participate in an interview to gather more information about their use of the training (see Appendix C for a copy of the success interview). These interviews were used to gain measures for Kirkpatrick’s Levels 3 and 4 of evaluation.

**Low or no-success interview.** The individuals who reported they were not able to implement their learnings were selected to participate in the low success interviews. Additionally, a random sample of the individuals who reported that they started to implement some learning, but could not report any interim progress results yet were selected to participate in an interview to gather more information about what hindered their success (see Appendix C for a copy of the low or no-success interview).

**RESULTS**

**Response Rates**

Responses rates to the satisfaction survey and the knowledge test were 100 percent (34 of 34 participants responded). Ninety-seven individuals were given the link to the web-based survey, of which 60 initially responded (62.5%). A random sample of 20 of the 37 individuals who did not complete the web-based survey were sent a paper-based version of the web-based survey through inter-office mail. Eight returned the paper-based survey while 6 completed the web-based survey by finding the link to the survey in a previous email. The overall response rate of the web-based and paper-based surveys combined was 76 percent (74 of 97 participants responded).
Eighty percent, or 16 of the 20 individuals, who reported high success in the web-based and paper-based surveys were randomly selected to participate in the high success interviews. Two individuals chose not to or could not participate (they were no longer with the company). Fourteen high success interviews were conducted resulting in a sample of 70 percent of the individuals who reported high success on the web-based and paper-based surveys.

The three of the individuals who reported they were not able to implement their learnings were selected to participate in the low success interviews. All three (100%) participated in the low success interviews. Additionally, a random sample of 6 of the 16 (37.5%) people who reported that they started to implement some learning, but could not report any interim progress results yet, were selected to participate in the low success interviews. One of these individuals chose not to participate in the low success interview. Therefore, 31 percent of people who reported that they started to implement some learning, but could not report any interim progress results yet, were interviewed. A total of 8 low success interviews were conducted.

**Satisfaction Survey**

The satisfaction survey given upon completion of the course indicated that participants were satisfied with the relevance of the course content, location of the course, communication regarding the course, facilitators' knowledge and delivery, and the course materials.

Figure 1 reflects that the majority of participants were very satisfied with the
relevance of the course content to their needs.

How satisfied are you with the relevance of the course content to your needs?

![Bar chart showing participant satisfaction with the relevance of the course content.]

Figure 1. Participant satisfaction with the relevance of the course content.

Figure 2 reflects that the majority of participants were very satisfied with the location and quality of the facility the course took place in.
Figure 2. Participant satisfaction with the facility.

Figure 3 reflects that the majority of participants were very satisfied or satisfied with the communication they received regarding the course.
Figure 3. Participant satisfaction with the communication regarding the course.

Figure 4 reflects that the majority of participants were satisfied with the learning and development courses overall.
With Learning and Development courses overall?

Figure 4. Participant satisfaction with learning and development courses.

Figure 5 reflects that the majority of participants strongly agreed that the facilitator demonstrated thorough knowledge of the course content and an understanding of the company.
Facilitator demonstrated thorough knowledge of the course content and an understanding of the company

Figure 5. Participant satisfaction with the facilitator’s knowledge.

Figure 6 reflects that the majority of participants strongly agreed that the facilitator delivered content in an appropriate, organized, and well-paced manner.
Figure 6. Participant satisfaction with the way the facilitator delivered the course.

Figure 7 reflects that the majority of participants strongly agreed that the facilitator responded effectively to questions and issues.
Facilitator responded effectively to questions and issues

Figure 7. Participant satisfaction with the facilitator’s responses to questions and issues.

Figure 8 reflects that the majority of participants strongly agreed that the course outcomes were clearly identified and accomplished.
Course outcomes were clearly identified and accomplished

Figure 8. Participant agreement that the course outcomes were identified and accomplished.

Figure 9 reflects that the majority of participants strongly agreed that the information presented was relevant to their role.
Figure 9. Participant agreement that the information presented was relevant.

Figure 9 reflects that the majority of participants strongly agreed that the course materials and resources were high quality.
Course materials and resources were quality

Figure 10. Participant agreement that the course materials and resources were high quality.

Figure 11 reflects that the majority of participants strongly agreed that the course met their expectations.
Figure 11. Participant agreement that the course met their expectations.

Figure 12 reflects that the majority of participants strongly agreed that the course would help them be more effective in their jobs.
The course will help me be more effective in my job

Figure 12. Participant agreement that the course would help them be more effective in their jobs.

Knowledge Test

Each pre and post knowledge test was graded to obtain a percent correct. The test scores were averaged across pre-tests and then across post-tests. On average, knowledge increased 28 percentage points after the training. Figure 13 depicts the average pre-test score (55%) and the average post-test score (83%).
Additionally, a dependent samples t-test indicated that the differences between the pre-test scores and the post-test scores were statistically significant $t(66)=-8.75$, $p<.0001$. The effect size was $d=2.12$. Effect sizes over .80 are considered large (Cohen, 1992).

An error analysis was conducted to determine if the percentage of people who answered each question wrong dropped from the pre-test to the post-test (see Appendix I). This occurred for all questions on the knowledge test except for question number 9. Question number nine was a true/false question that read “Feedback should always be delivered immediately.” The correct answer was false because according to the course, material feedback should be delivered immediately except in some situations where it should be delivered privately. Future sessions of this course should further clarify when feedback should be delivered privately instead of immediately.
Web-based and Paper-based Survey

The web-based survey and paper-based surveys determined the percentages of participants who did and did not successfully apply their learnings. In addition, it determined how many participants created an executive development plan, what parts of the course the participants were using, the outcomes of the course, the possible success factors, and the barriers to success. The paper-based survey results did not significantly differ from the web-based survey results, therefore their results were combined (see Appendix J for the paper-based survey results alone).

Figure 14 reflects that 30 percent of the web-based and paper-based participants implemented something they learned and had achieved a valuable business result, while 42 percent of participants implemented something they learned and achieved some key milestones, but it was too early to report any business result yet. Twenty-four percent of participants started to implement some learning, but could not report any interim progress results at that time. Three percent of participants had some plans to apply their learning, but were not able to implement them at that time and one percent of participants for one reason or another stated that it was unlikely that they would be able to apply any of their learning.
Which statement below best represents any action you have taken since you participation in the course?

Figure 14. Participants' action taken since the course.

Two groups were created using participants’ answers to the survey question in figure 14. The participants who answered that they had “implemented something they learned and achieved a valuable business result” were assigned to the high success group. The participants who answered that they “started to implement some learning but could not report any interim progress results yet”, “that they had some plans to apply their learning but had not been able to implement them yet”, or “for one reason or another is was unlikely that would be able to apply any of their learning” were assigned to the low success group. A Pearson’s Chi-square analysis was conducted as a test of independence. Measures of association were obtained between the high success and low success groups and the dependent variables of the answers to all other questions in the survey (see Table 1 for the Chi-square analysis p-values).
Table 1
Chi-Square Analysis Between Participants Who Reported High Success and Low or No Success Across Survey Questions

<table>
<thead>
<tr>
<th>Select the statement that best represents your current situation.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have created a development plan and fully executed it.</td>
<td>0.69</td>
</tr>
<tr>
<td>I created a development plan and partially executed it.</td>
<td>0.24</td>
</tr>
<tr>
<td>I created a development plan and but have not yet executed any of it.</td>
<td>0.81</td>
</tr>
<tr>
<td>I did not create a development plan, but I intend to.</td>
<td>0.03</td>
</tr>
<tr>
<td>I did not create a development plan and have no plans to do so.</td>
<td>N/A</td>
</tr>
</tbody>
</table>

I Tried This and it Produced a Positive Result.

| Provided better coaching to help improve performance                                                     | 0.03    |
| Used actions and opportunities to better develop the competence and commitment of others                  | 0.02    |
| Used coaching and individual work sessions to put greater focus on development needs and agenda of the other person | 0.14    |
| Provided better feedback to improve performance                                                          | 0.42    |
| Spent more time coaching my team members                                                                  | 0.03    |
| Effectively delegated work to develop others                                                              | 0.42    |
| Inspired and motivated individuals and my team                                                            | 0.15    |
| Practiced active listening skills                                                                        | 0.13    |
| Practiced asking questions versus telling with people I coach                                             | 0.15    |

Select the Statements That Best Represent Any Outcome You Believe Your Learning Application May Have Helped Produce.

| Identified development needs to improve my bench strength                                                 | 0.64    |
| Developed someone for a more responsible, challenging leadership position                                | 0.02    |
| Developed a better understanding of my team members                                                     | 0.43    |
| Improved the performance level of my team                                                               | 0.13    |
| Helped a marginal performing team member improve performance                                            | 0.09    |
| Retained a high potential team member                                                                  | 0.04    |
| I cannot say that the course and coaching produced any valuable outcomes                                | 0.30    |
| None of the above but something else very important. Please describe.                                    | 0.30    |
Table 1-continued

What Factors Helped You Use the Content Presented?

<table>
<thead>
<tr>
<th>What Helped You Use the Content Presented</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coaching sessions to develop my executive development plan</td>
<td>0.46</td>
</tr>
<tr>
<td>Discussions with my coach during coaching sessions</td>
<td>0.15</td>
</tr>
<tr>
<td>My belief that the course will improve my results</td>
<td>0.40</td>
</tr>
<tr>
<td>Best practice sharing and networking with other leaders</td>
<td>0.70</td>
</tr>
<tr>
<td>Executive leader interaction</td>
<td>0.05</td>
</tr>
<tr>
<td>Knowledge sharing with other participants in the course</td>
<td>0.46</td>
</tr>
<tr>
<td>My solid understanding of the skills learned in the course</td>
<td>0.45</td>
</tr>
<tr>
<td>Planned time and resources to implement my learnings</td>
<td>0.17</td>
</tr>
<tr>
<td>Work environment in which learning and knowledge sharing is valued</td>
<td>0.10</td>
</tr>
<tr>
<td>Availability of support from the facilitators</td>
<td>0.03</td>
</tr>
<tr>
<td>Discussion with my manager about how the course would help me and help our business to be successful</td>
<td>0.31</td>
</tr>
<tr>
<td>Follow-up discussion with my manager</td>
<td>0.77</td>
</tr>
<tr>
<td>Other. Please specify.</td>
<td>N/A</td>
</tr>
</tbody>
</table>

What Factors Hindered Your Ability to Implement the Content Presented Effectively?

<table>
<thead>
<tr>
<th>What Hindered Your Ability to Implement the Content Presented Effectively</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of planned time and/or resources</td>
<td>0.49</td>
</tr>
<tr>
<td>Other. Please specify</td>
<td>0.49</td>
</tr>
<tr>
<td>Lack of clear management support for the course</td>
<td>0.79</td>
</tr>
<tr>
<td>Work environment that discourages learning and knowledge sharing</td>
<td>0.33</td>
</tr>
<tr>
<td>Lack of support from the facilitators</td>
<td>0.33</td>
</tr>
<tr>
<td>My feeling that the course will not improve my results</td>
<td>0.50</td>
</tr>
</tbody>
</table>

Figure 15 reflects that the majority of participants created a development plan and partially executed it as an outcome of the course. The Chi-square analysis revealed that the low success group was significantly more likely to answer "I did not create a development plan, but I intend to" than the high success group $\chi^2(1)=7.26$, $p=0.03$ (see Table 1 for the other answers’ non-significant p-values).
As part of the course an outcome was an executive development plan.

![Bar chart showing participants' creation of an executive development plan.]

Figure 15. Participants’ creation of an executive development plan.

Figure 16 reflects that the majority of participants tried various tactics taught in the course and it produced positive results while very few tried tactics from the course and they did not work. The Chi-square analysis revealed that the high success group was significantly more likely to answer “I tried this and it has produced a positive result for”: “provided better coaching to help improve performance” $\chi^2(1)=4.51, p=0.03$, “used actions and opportunities to better develop the competence and commitment of others” $\chi^2(1)=5.87, p=0.02$, and “spent more time coaching my team members” $\chi^2(1)=4.51, p=0.03$ than the low success group (see Table 1 for the other answers’ non-significant p-values).
Please select 1 of the 4 options for the following topics covered in the course.

Figure 16. Participants' use of the topics covered in the course.

Figure 17 reflects that the most common outcomes of the course were identifying development needs to improve bench strength, developing other people for a more responsible role, developing a better understanding of their team, and improving the performance level of their team. The Chi-square analysis revealed that the high success group was significantly more likely to answer “retained a high potential team member” $\chi^2(1)=4.23$, $p=0.04$ and “developed someone for a more responsible, challenging leadership position $\chi^2(1)=5.77$, $p=0.02$ than the low success group (see Table 1 for the other answers' non-significant p-values).
From the list below, select the statements that best represent any outcomes you believe your learning applications may have helped produce.

Figure 17. Participants’ outcomes from applying the course content.

Figure 18 reflects that the most common factors that helped participants use the content from the course included coaching sessions to develop their executive development plan, discussions with their coach, their belief that the course would improve their results, and best practice sharing and networking with other leaders.

The Chi-square analysis revealed that the high success group was significantly more likely to answer “availability of support from the facilitators” $\chi^2(1)=4.60$, $p=0.03$ than the low success group (see Table 1 for the other answers’ non-significant $p$-values).
Figure 18. Factors that helped participants use the content from the course.

Figure 19 reflects that the most common factors that hindered participants’ ability to implement the content effectively were lack of planned time and/or resources and “other” in which participants responded by filling in the free response “moving to a new role”. The Chi-square analysis revealed that the high success group was not significantly more or less likely to report certain factors hindered their ability to implement the content than the low success group (see Table 1 for the non-significant p-values).
What factors (if any) hindered your ability to implement the content presented effectively?

![Chart showing factors that hindered implementation]

Figure 19. Factors that hindered participants’ ability to implement the content presented in the course.

**High Success Interviews**

The high success interviews were used to determine the number participants who successfully applied their learnings to create a measurable business result, gather measurable business results, and determine critical success factors. The interviews were descriptively and quantitatively analyzed based on notes taken during the interview. The interviews revealed the environmental factors that contributed to successful applications of the training material. Additionally, the most successful applications of the training material that resulted in measurable outcomes were documented.
Descriptive analysis. The high success interviews were descriptively analyzed to determine reasons for success, suggestions to improve the course, what participants liked about the course, comments about the coaches with whom they were paired, what got in the ways of them applying their learnings, and comments about leadership at the company.

Reasons for success:

- Discussions with coach
  - Coach accountability/commitment
  - Coach’s outside perspective
- 360 degree feedback
- Timing
  - Came at a time when what was learned could be used right away
    - Ex: A process needed improving, a relationship getting worse
- Coaching model
- Delegation module
- Asking questions module
- Exercise of finding where your passion is
- Delivering feedback module
- Sweet spot discussion about finding the areas where your priorities, competence, and passion overlap.
- Developing Individual Development Plans
- Conversations with manager
• 6Bs exercise where the participants rated how well we utilized each of the six ways to build talent.

• Identify, assess, develop, measure module

Suggestions to improve:

• 6 month follow-up to reconnect and share what we learned since course

• A way to stay connected and do collective sharing (website or forum for alumni to network and share)

• Follow-ups with the facilitator

• Refresher course to go over principles again

• Add information on transformational leadership

• Three way role playing

• More examples of success stories as a result of leadership academy

• Smaller workshops on leadership during other meetings

• Scale down the course to lower levels

Liked about the course:

• The CFO opening the course and being honest and laid back

• Ability to interact with others outside of the course and hearing their different points of view

• The smallness of the group

• Coaches

• 360 degree feedback

Coach comments:
• The coaches were stellar and had really good questions, challenges, and ideas
  o Had good insights that were practical
• The coach being from the outside brought a different perspective and expertise
• Helped me set up specific actions to accomplish
• Helped me with my personal style
• Helped me develop my IDP
• Helped me understand my feedback
• The RBL consultant rushed through content and did not give all attention to us
• We need a better structure and expectations for the coaching relationship
• The coach had all the answers and I felt I was not listened to

What got in the way of applying your learnings?
• No time

Leadership comments:
• It is so important for the company to invest in its leaders
• We do not take the time to develop people

**Quantitative analysis.** The high success interviews were quantitatively analyzed by counting the number of participants who answered certain ways on the interview. Figure 20 reflects that the top reported reasons for success were discussions with their coach, the coaching model taught in the course, the 360 degree feedback that was delivered, and the individual development plans they created.
Figure 20. Participants’ reported reasons for success.

Figure 21 reflects that 33 percent of the success interviews participants’ managers set expectations with them about applying the course content while 67 percent of participants’ managers did not set expectations with them about applying the course content. For the interviewees who reported their managers set expectations with them, it was not independently verified whether that actually occurred.
Success-Manager Expectations for Applying Course Content

Figure 21. Percent of success interview participants whose manager did and did not set expectations.

Figure 22 reflects that 100 percent of the success interviews participants developed an executive development plan.
Success—Did you Develop an Executive Development Plan?

Figure 22. Percent of success interview participants who created an executive development plan.

Figure 23 reflects that the most common factors in success interview participants’ environments that supported success were a difficult relationship that needed to be addressed and coach accountability and commitment to take action to the coach.
Figure 23. Factors in success interview participants’ environment that supported success.

Figure 24 reflects 100 percent of success interview participants used their coach.
Figure 24. Percent of success interview participants that used their coach.

Examples of high success interview results with measurable outcomes.

High success interviews were designed to understand what knowledge the participant used from the course, what behaviors changed as a result of the course, what results were achieved, what value or impact the result had on the business, and what factors in their environments supported success. Table 2 provides examples from the success interviews that were high successes with measurable business value or impact.
<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Behavior</th>
<th>Results</th>
<th>Value/Impact</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>How, when, and what to delegate.</td>
<td>Delegated CAR requests to his team members.</td>
<td>They now get done faster (still with great quality), with lower level people doing them, so it is cheaper for the business than him doing them himself.</td>
<td>Because lower level people doing the requests, it saves 20-40 thousand dollars per year. Also, delegating results in the development of his team members capabilities.</td>
<td>60-70 million in revenue from this innovation. He would have done it without what he learned in the course, but it would have taken much longer and he would have waited for capital.</td>
</tr>
<tr>
<td>Asking questions.</td>
<td>Asked questions across functions and listened to others. Acted on his passion in this project and built a strong story and sold it to the organization based on what the future would look like. Moved forward with approved capital before LAM.</td>
<td>This innovation moved forward much faster than it would have otherwise because he did not wait and moved forward with approved capital before LAM.</td>
<td>Long-term value of 100-200 million dollars.</td>
<td></td>
</tr>
<tr>
<td>How to ask the right type of questions. How to raise issues by asking questions. Exercise and discussion of finding where your passion is. Applied this to this project.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>How to give difficult/hard feedback in a way that gives people energy. Delegation discussion on</td>
<td>Gave team hard feedback that they could be doing better/more that did not make them feel bad.</td>
<td>Team worked to improve the innovation process. Created more rigorous process with a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDP process and actual creation of IDP.</td>
<td>Developed an IDP. Executed against it. First, by educating himself in LEAN by reading McKenzie's materials. He also changed his behavior and showed more passion around implementing LEAN. He pushed and pushed for funds to implement LEAN and he got them.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge of what he is passionate about as a result of the exercise in the course.</td>
<td>Implemented LEAN in the plants and in indirect procurement and now expanding it to supply chain.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge that he is passionate about transformation.</td>
<td>Plants delivered an increase in production of 13 billion kilos through using LEAN to eliminate waste and wasted time. Through LEAN we delivered $10 million dollars in cost savings last year. In indirect procurement through implementing LEAN we over delivered on budget by $2.5 million dollars.</td>
<td></td>
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</tbody>
</table>

| Coaching LEAD (learn, explore, action, and drive accountability) model. | Used with a very difficult conversation with a marginally performing difficult employee who need to improve or move on. |
| | The performer improved their quality, engagement, meeting deadlines, the |
| | Maintained an employee. To hire someone new it would cost between $15,008 for an |
| | Coach accountability- making a commitment to the coach for action. Talked with manager around what he wanted to do with LEAN. |
Table 2-continued

Effective listening module. Asking questions module. Delegation by pushing more responsibility down.

- Created expectation that her people would bring her solutions. She delegated and in turn her direct report delegated to her people and now teaching them to delegate. Her direct report

way he had performance discussions with his team, and the way he on boards and develops his people.

Delegated work down and asked questions without providing the answer. She created the expectation that her people would bring her solutions.

- Instead of calling down the business 1.2 million, the solutions her direct report implemented meant they only had to call down the business by 500 thousand. Saving the company 700 thousand dollars.

- The company developed a product that was going to sell 5 million dollars for the customer. Then the company did not make it. Her direct report came up with solutions

- They were still able to deliver the planned 5 million dollars for the year.

- External candidate and $8,676 for an internal candidate.

- She made a to do list after the training.

- She made a to do list after the training.
reached out to that sold this 5
her partners to million in
find solutions. other ways.
Her direct report
brought the
solutions to her
instead asking
for a solution.

**Financial Results.** Financial data on returns from the participants who had success applying the training were obtained through the high success interviews. Reported measurable results due to attending the course include:

- Saving $20-40 thousand dollars per year
- $60-70 million in revenue from an innovation
- Improvement of the innovation process that will result in a long-term value of $100-200 million
- $10 million in cost savings last year
- Over delivered on budget by $2.5 million
- Maintained an employee saving between $8,676 and $15,008
- Saving the company $700 thousand
- Able to deliver the planned $5 million for the year after innovation that was going to result in this revenue never came

**Examples of success interview results without measurable value.** In some high success interviews, participants could provide information on what knowledge they used from the course, what behaviors changed as a result of the course, what factors in the environment supported success, and what measurable business results
Table 3-continued

<table>
<thead>
<tr>
<th>Listening. Asking questions first and seeking understanding.</th>
<th>Team appreciates this more when I listen and ask questions first. Helps to solve the problem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>360 feedback and discussions with his coach. The coach gave ideas and plans for improvement.</td>
<td>Employee engagement, no specific examples.</td>
</tr>
</tbody>
</table>

- Used to help in confrontation/conflict situations. Example: got more information when someone was upset with their business partner.
- Inspiring and Energizing People. Being more personal and rewarding. Used 1 on 1 employee recognition meetings, gift cards, ask his leaders to remind him to be rewarding.
- Awareness of blind spots due to 360 and the discussions with the coach around ideas for improvement and action. Coach created check-in (accountability) for follow through. Manager set expectations about applying what he learned and imbed it into the IDP. 360 degree feedback made aware of weaknesses. Goal setting.
were achieved, but they could not describe what value or impact the result had on the business. Table 3 provides examples of these successes without measurable business value or impact.

Table 3

*Examples of Success Without Measurable Value*

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Behavior</th>
<th>Results</th>
<th>Value/Impact</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coaching LEAD model. Seeking understanding first by asking questions.</td>
<td>Used to coach and improve a direct reports performance.</td>
<td>Person’s performance improved.</td>
<td></td>
<td>Difficult relationship at the time of the course that he needed to address.</td>
</tr>
<tr>
<td>Delegation and conversation that we need to delegate more. Asking questions first. The role of a leader is to develop their people (this course made him aware of this)</td>
<td>Delegated projects I would not have.</td>
<td>Built team experiences and skills</td>
<td>Built the bench.</td>
<td></td>
</tr>
<tr>
<td>360 feedback and coach helped him understand the feedback. Helped him understand he needed to be more knowledgeable and involved in the business.</td>
<td>Acted on feedback. Sought understanding of business. Then made that a priority for his team.</td>
<td>Took a role in business decisions and used knowledge of business performance to make decisions for his team. Example: sending extra overhead on recruiting. More and better candidates.</td>
<td></td>
<td>Feedback from 360.</td>
</tr>
</tbody>
</table>
Table 3-continued

<table>
<thead>
<tr>
<th>Approach to leading model: identify, assess, develop, and measure. Not necessarily all new material, but brought it to top of mind and reminder before this program began. Started this new program right after academy.</th>
<th>Used model to improve the innovation process and metrics.</th>
<th>Developed a metric related to top line growth. Can now measure value of innovation process.</th>
<th>Timing right before began working to improve the process.</th>
</tr>
</thead>
<tbody>
<tr>
<td>360 feedback that he was good at creating direction and organizing to win. He decided to further utilize these strengths when designing these two roles. Delegation conversation on we need to delegate more. Sweet spot conversation.</td>
<td>Created direction and organized to win to create two new global roles.</td>
<td>Significant impact on global programs (fiber, salt, sugar)</td>
<td>Opportunity to use strengths on this project. Feedback from 360 on what strengths were. The coach and her IDP made her aware of what she needed to work on.</td>
</tr>
<tr>
<td>Delegated projects I would not have. More conversations about development ideas.</td>
<td>Built team experiences and skills.</td>
<td>Built the bench</td>
<td></td>
</tr>
</tbody>
</table>

Success interviews were only conducted with a sample of people who attended the course. In order to determine the population percentage that actually had a high success, the percentage of people who reported high success on the survey (30%) was multiplied by the percentage of people in the success interviews that
actually had a measurable high success (36%) (Brinkerhoff, 2003). The resulting adjusted population percentage of high measurable success was 11 percent. Therefore, it is estimated that 11 percent of all course participants had actual measurable high success. Table 4 depicts the number of people who reported high success on the web-based and paper-based survey, the percentage of people who reported high success on the surveys, the total number of people interviewed in the success category, the total number of people interviewed that actually had a measurable high success, the percentage of people who an actual measurable high success, and the adjusted population percentage of measurable high success.

Table 4

<table>
<thead>
<tr>
<th>Success Numbers and Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total people who reported high success on the web-based survey</td>
</tr>
<tr>
<td>Percentage of people who reported high success on the survey</td>
</tr>
<tr>
<td>Total number of people interviewed in the high success category</td>
</tr>
<tr>
<td>Total number of people with an actual measurable high success</td>
</tr>
<tr>
<td>Percentage of people interviewed with an actual measurable high success</td>
</tr>
<tr>
<td>30% of people reported high success on the survey multiplied by 36% of people interviewed with actual high success equals adjusted percentage of people who had actual high success</td>
</tr>
</tbody>
</table>

Low/No Success Interviews

Low success interviews were used to determine barriers to success and to gather suggestions for improving the course. The interviews were descriptively and quantitatively analyzed based on notes taken during the interview. Also, the environmental factors that hindered success were revealed and suggestions to improve the training were documented.
Descriptive analysis. The low success interviews were descriptively analyzed to determine reasons for no or low success, suggestions to improve the course, what participants liked about the course, comments about the coaches they received, what got in the way of them applying their learnings, and comments about leadership at the company.

Reasons for no or low success:

- Not enough time
  - These things in the course are secondary considerations, not top priorities
    - Not what keeps you your job
    - I do what my boss expects and sets as my priorities and these things in the course are not on my priorities. Managing the business is.
    - If development is not aligned with the PMP, it won’t get done
    - Never have time to work on much outside PMP
- No follow-up
  - Course
  - Coach
- Bad timing
  - During crisis
- No follow-up from my manager
- Transitioned to a new role
Where I do not manage people

Transitioned to another role still managing people
  - Not enough time when learning a new role to apply what you learned in the course

Course was aimed below my level, not top level material

Suggestions to improve:

- Course could be shortened
  - Should focus on fewer things

- Get the team and get back together, seems like a one time class. Ongoing group could leverage the learning
  - Roundtable/panel discussions at a later time
  - Make the course ongoing every 30 days, quarterly, or yearly
  - Pass along article and books, ideas from the course
  - Ideas from the recent sessions

- Implement self development groups
  - Get back together and do a follow-up 6 months later and share/refresh

- Have the global leadership team teach the course
  - Or at least one whole day, not just kick off

- Tools to help support manager for follow up
  - Questions the manager can ask after they return from training

- Have coaching follow-up calls prescheduled
- Participants should try to follow-up with coaches when they get cancelled

- Group people together with similar skills, experiences, and maybe by levels and roles

- The external presenter was boring and not good

- When in the course we should focus on real world issues and action plans to address issues

- In the session we should do more talking with peers about development areas. We only spent a half hour in the course doing that.

- Add a component on managing across different generations and different people

Liked about the course:

- Good common language to use outside of the course

- Size of the team that went through was good

- 360 interviews delivered good feedback

- Tools that were covered in the course I had not seen before

- VOICE tool and exercise about how to inspire passion in your employees

- Forming relationships with others
  - Good interaction with individuals from the course that I would not otherwise have had

- The section on asking questions
  - Types of questions and how to ask certain questions
• Like the tie in with the values and history

• Good videos

• Good visuals

• Role plays were helpful

• LEAD (learn, explore, action, and drive accountability) model is good

• Facilitators did a good job of presenting

Coach comments:

• Helped interpret the 360

• Helped develop the individual development plans
  
  o The coach helped with executive development plan ideas

• Coach was disconnected from the course and seemed like a whole separate thing
  
  o Coaching not integrated with the course

• No follow-up after 360 degree feedback

• Coach couldn’t help me because the problems I had were with politics and they didn’t know the business very well
  
  o Internal coaches would be better

• An internal mentor rather than an external coach that can hold you accountable would be better
  
  o No accountability with the external coach

• The coaching seemed boiler plate

• Determine if people have a coach outside of the course coaches
• After some period of time, ask people if they would like to begin coaching again if they have stopped

• The follow-up meetings with the coach have not been that helpful because my coach acted as a sounding board, asked questions, and agreed with me instead of providing practical solutions.

Leadership comments:

• Lack of commitment of executives for leadership development

• Too many different brands of leadership at different levels in the organization
  o We need one consistent brand aimed all levels

• Europe seems to get leadership right
  o We need to copy what they are doing

• We need to stick with one approach to leadership and keep with it for 5-10 years instead of changing all the time

• It could be confusing some people because the company has several different approaches to coaching or leading

• Deliver this course to a more junior level of high potential performers
  o Give them extra training and rotate them through jobs quickly
    • To build loyalty

• Need to only add small amounts of really important stuff to senior leadership’s plate at one time
  o Too much coming to senior leaders at once
  o Need to be more selective of what additional stuff you give them
We tailor to the lowest common denominator and lowest level, but we should focus on bringing people to a higher level and stretching people’s thinking.

**Quantitative analysis.** The low-no success interviews were quantitatively analyzed by counting the number of participants that answered questions in certain ways during the interview. Figure 25 reflects that the top reported reasons for low or no success in the no-low success interviews were not enough time, no follow-up with their coach, and no follow-up with the course and content taught.

![Top Reported Reasons for No/Low Success](chart.png)

Figure 25. No-low interview participants’ top reported reasons for no/low success.

Figure 26 reflects that 100 percent of the low-no success interview participants’ managers did not set expectations with them about applying the course content.
Low/No Success Manager Expectations for Applying Course Content

Figure 26. Percent of low-no interview participants’ manager who did and did not set expectation for applying the course content.

Figure 26 reflects that only 56 percent of low-no interview participants developed an executive development plan.

Low/No Success-Did you Develop an Executive Development Plan?

Figure 27. Percentage of low-no interview participants who developed an executive development plan.
Financial Results

Financial data on returns from the participants who had success applying the training were obtained through the high success interviews. Reported measurable results due to attending the course include:

- Saving $20-40 thousand dollars per year
- $60-70 million in revenue from an innovation
- Improvement of the innovation process that will result in a long-term value of $100-200 million
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DISCUSSION

This study was successful at evaluating a leadership development program at all four levels of Kirkpatrick’s evaluation model. It was determined using a Level 1 evaluation that participants were satisfied with the training. The Level 2 analysis revealed that participants’ knowledge of the training content significantly increased after training.

Level 3, participant behavior change due to training, was discovered using the
Success Case Method. The web-based survey indicated that participants’ top four changes in behavior that resulted from the course were: 1.) identifying development needs to improve bench strength, 2.) developing someone on their team for a more responsible leadership position, 3.) developing a better understanding of their team members, and 4.) improving the performance level of their team. The Chi-square analysis revealed that the success group reported: 1.) retaining a high potential team member, and 2.) developing someone for a more responsible position significantly more than the low success group. Additionally, the Chi-square analysis revealed that the success group reported trying and producing positive results with the following behaviors significantly more than the low success group: 1.) providing better coaching, 2.) developing the competence and commitment of others, and 3.) spending more time coaching. Finally, Level 4 results, or organizational results due to training, were discovered using the Success Case Method and included: 1.) profits and 2.) cost savings.

In addition to being successful at obtaining measures at all four levels of Kirkpatrick’s evaluation, this study was successful at combining Kirkpatrick’s four levels of evaluation with the Success Case Method to create what appears to be a rather robust evaluation. The Success Case Method was effectively used to obtain Level 3 behavior change measures and Level 4 objective organizational outcome measures and, in addition, information about the factors that led to training success, the factors that deterred training success, and how the training could be improved.

The factors that supported the participants’ success at applying the content
from the course were revealed through the Success Case Method. The web-based and paper-based surveys indicated that the top four success factors were: 1.) coaching sessions to develop the executive development plans, 2.) discussions with their coach, 3.) their belief that the course would improve their results, and 4.) best practice sharing and networking with other leaders. The Chi-square analysis revealed that the high success group was significantly more likely to report availability and support from the facilitators as a success factor than the low success group. The success case interviews revealed that the top four reported success factors were: 1.) discussions with their coach, 2.) using the LEAD coaching model, 3.) the 360-degree feedback they received, and 4.) developing an executive development plan.

The Chi-square analysis conducted based on the web-based and paper-based surveys revealed that the low success group was significantly more likely to answer that they did not create a development plan than the high success group. Information gathered during the interviews revealed that 100 percent of success interview participants developed an executive development plan, while only 56 percent of low success interview participants developed an executive development plan indicating that creating an executive development plan was a success factor. Additionally, 33 percent of success interview participants’ managers set expectations with them about applying the course content, while none of low success interview participants’ managers set expectations with them about applying the course content indicating that managers setting expectations about applying the course content is also a success factor.
Success case interview participants also reported environmental factors that triggered their application of the course content. The top two factors in their environment that supported success were: *a difficult relationship that needed to be addressed* and *coach accountability and commitment to take action.*

In addition to determining success factors, the Success Case Method was also used to determine what factors deterred participants’ success at applying the content from the course. The web-based and paper-based surveys indicated that the top two factors that hindered participants’ ability to implement the content from the course were: 1.) lack of planned time and/or resources or 2.) other factors including moving to new roles. The low success interviews revealed that the top three reasons for no or low success were: 1.) not enough time, 2.) no follow-up from their coach, and 3.) no course follow-up. Interestingly, no coach follow-up was reported as a reason for low success by low success interviewees, while coach follow-up was the number one reason for success reported by success case interviewees. The success case interviewees agreed with low success interviewees stating that not enough time was the factor that hindered their success.

Through removing these factors that deterred participants’ success, the leadership development course in this study could be improved. One improvement could be helping participants plan time and resources to implement what they learned. Another could be creating a formal follow-up process between the participants and the coach. Still another could be having follow-up sessions of the course and refreshing participants on the content covered during the course. Although the
opportunity to practice the skills learned in the course was not reported as a barrier to success, to facilitate behavior change, future leadership development programs could use simulations where participants can practice the new behaviors in a safe environment.

Another way the leadership development course in this study could be improved is by utilizing the timing of the training, or when training takes place for a participant, to trigger training use. If training can be scheduled for when a participant has an immediate need to use the skills taught in the course, the probability of use of training will increase. In this study, certain environment factors trigger participants using the training. These included a difficult relationship that needed to be addressed and an emergency in the business. Although they may be difficult to predict, training could be scheduled to take place during or around such events so that participants will have an immediate need to use the skills taught in the course. To facilitate scheduling training so that it can be applied immediately after the course, a survey could be sent to potential participants asking if they are experiencing any of the factors that triggered training success in this study including a difficult relationship and an emergency in the business. Those people who respond that they are experiencing these things could be scheduled for the next session of training.

Although the leadership development program could be improved, it seemed successful at accomplishing what it was designed to accomplish according to the impact map (see Appendix H). Through the evaluation conducted in this study, the course was proven to successfully teach participants knowledge and skills related to
leadership. Additionally, many participants applied their learnings in the ways intended and results were achieved. One intended result of the training was improved bench strength of key leadership positions to build a talent powerhouse for executive positions. However, appropriate measurements to prove the training resulted in improved bench strength were not available; therefore, it cannot be stated conclusively that the training met this goal.

The largest success of the leadership development program was the financial results obtained from participants using the training. It should be noted that these financial results were self-reported by the participants, and not independently verified, largely due to the difficulty in verifying the reports. Although significant results were obtained from training, the training, the behaviors, and the performance support factors that led to the results found have costs associated with them. The training cost the company $8,500 per participant, which includes the facilitation, the location, materials, coaching sessions, travel, and food. The time that participants spent at the course, and the time they spent trying the behaviors they learned in the course, has some cost associated with it although it would be very difficult to determine how much time they spent trying the behaviors and how much that would cost the company. Additionally, participants’ manager setting expectations with the participants for applying the course content has some cost associated with it in the form of managers’ time. The time that participants invested in creating and periodically reviewing their executive development plans may also have had some cost to the company.
Because the leadership development program in this study was successful, future leadership development programs should attempt to include the success factors revealed in this evaluation. These include coaching sessions, having participants develop an executive development plan, participant belief that the course would improve their results, best practice sharing, networking with other leaders, executive leader interaction, discussions with coaches, using a coaching model, facilitator support, giving participants 360-degree feedback, and having participants’ managers set expectations with participants about applying the course content. Future leadership development programs should also attempt to limit the factors revealed through this evaluation that hindered participants’ ability to implement the content from the course. These include lack of planned time and/or resources, no follow-up from their coach, no course follow-up, and other factors including moving to new roles.

Although this study revealed how successful the leadership development program was and how this program and future leadership development programs could be improved, the study has limitations. One limitation of this study was that behavior change (Level 3) was not directly observed by the investigators. This was due to the complications of observing the multifaceted leadership behaviors in the participants’ actual work environment. Additionally, due to the private and confidential nature of the no-low success and success interviews, no inter-observer reliability data were taken.

Another limitation of this study was that participants who attended the course
prior to the study did not receive a knowledge test or satisfaction survey. It could be possible that the satisfaction survey and knowledge test results from these earlier participants could differ from the results of the participants who attended the course during the duration of the study.

Due to the necessity of keeping individuals’ knowledge test scores and satisfaction survey results confidential, individuals’ results on their satisfaction survey could not be linked to their knowledge test scores, their web-based survey responses, or their interview responses. It could be useful to determine if these measures are correlated. For example, it would be valuable to know that individuals who are highly satisfied with the course also score high on their post-tests. It would also be interesting to know how the participants who had a true measurable success scored on their knowledge test and satisfaction surveys in comparison to the participants who had no success.

Another limitation of this study was that there was no control group who did not receive the training to control for other factors that occurred during the time of the program that could have led to the results found in this study. Finally, because of the large number of Chi-square analyses run in this study, there is an increased probability of Type-1 errors. The authors are satisfied with the risk of Type-1 error because the research is in an exploratory phase; there are few studies that have investigated success factors for training leaders by comparing groups in the ways used in this study. Follow-up techniques such as coaching discussions, manager follow-up, and action plans do have some support in the literature for improving
training impact (Martin, 2010), however these findings are still preliminary. And, the significant findings (i.e., manager expectation setting, the role of coaching in generating applications from training) in the current study are mostly corroborated by previous research. Replications are needed to determine how powerful coaching discussions, manager follow-up, and development plans are at improving the impact of training.

Future studies should continue to combine the Success Case Method and Kirkpatrick’s evaluation methods to create a more robust evaluation, but attempt to address this study’s limitations. Therefore, future studies should attempt to directly observe behavior change (Level 3). Also, inter-observer reliability data should be taken during the interviews. For example, a scoring system could be developed for the interviews for how successful the participant was at applying the content he or she learned in the course. Then, two observers could independently score each interview and a percent agreement between the two observers could be obtained. Future studies should also attempt to interview larger samples of participants so that a Chi-square analysis could be used to determine significant differences in the answers between the high success and the low success interviewees. Additionally, future studies should attempt to deliver the knowledge test and satisfaction survey to all participants.

Future studies should attempt to include a control group that does not receive training to determine if similar results would have been found without the training. As an alternative to a control group, a repeated measures or AB design could be used where all of the dependent variables are measured before the participant attends the
training and then measured again after the training to determine if there are within-subject changes to the dependent variables as a result of training.

Other measures of financial effects due to participation in a leadership development course could be included in future studies. For example, financials could be tied to decreased attrition rates of leaders in the company, a company’s reputation as a top ranked place for leaders to work, or improved bench strength of the top leadership positions.

Future studies could include conducting the knowledge test after some period of time since course completion to assess if knowledge test scores deteriorate over time. Additionally, interviews could be conducted with the same group of participants again after a period of time passes since their first interview to determine if further successes were achieved. Future studies should also attempt to link individuals’ results on their satisfaction survey with their knowledge test scores, their web-based survey responses, and their interview responses to gain a better understanding of how each level of evaluation is correlated with the outcomes of other evaluation levels.

Finally, future studies should attempt to manipulate the success factors found in this study directly. For example, a between groups design could compare one group that has required coach follow-up to another group that does not have a coach. The same technique could be used to directly study the effects of course follow up, creation of an executive development plan, and managers setting expectations with the participants about applying what they learned.
Behavioral Analysis

A behavioral analysis of the top success factors reported by participants may account for why these factors brought about behavior change that led to successful results. The web-based and paper-based surveys indicated that the top two success factors were: 1.) coaching sessions to develop an executive development plan and 2.) discussions with their coach. Developing an executive development plan and coaching discussions were also top success factors reported in the success case interviews. Other success factors were reported in the success case interviews were 1.) using the LEAD coaching model, and 2.) the 360-degree feedback participants received.

Creation of an executive development plan was clearly a success factor as it was reported as a top reason for success by survey participants and success interview participants. One-hundred percent of success interview participants developed an executive development plan, while only 56 percent of low success interview participants did. The development plans describe actions the leaders were planning on taking over the next year. Development plans may have served as an antecedent for behavior change, similar to task clarification, because they describe the actions the leaders are to take. Additionally, the development plans are a type of public goal setting. Making behavior change goals public (versus private) increases the chance that the goals will be followed through on and that behavior will improve (Lyman, 1984).

Participants’ discussions with their coach could have a number of behavior
change functions. The discussions may have acted as an antecedent that prompted participants to try out the new skills learned in the course, or the coaches may have provided new information about what techniques the participants could try. The coach may have also provided consequences to the participant for taking or not taking the actions they committed to take in previous conversations. Additionally, participants may have taken action to avoid having to report to the coaches they did not take action (i.e., negative reinforcement).

The LEAD coaching model may have acted as an antecedent to behavior change because it provided task clarification in an easily remembered structure on the steps the leaders should take during coaching. Additionally, in the interviews, participants reported that they hung the LEAD coaching model laminate up in their office as a prompt to coach using the model.

The 360 feedback that participants received as a component to the course may have served a number of behavioral functions. Although very delayed, the information in the feedback report may have served as a consequence to the leaders' behaviors. Additionally, the feedback may have served as some sort of antecedent to behavior change. For example, the feedback may have served as a motivating operation increasing the reinforcing effectiveness of the consequences of new or changed leader behavior. Alternatively, the feedback may have served as a discriminative stimulus signaling the availability of reinforcement for new or changed behavior.

Participants' manager's expectations to apply the course content on the job
was another success factor as 33 percent of success interview participants’ managers set expectations with them about applying the course content, while none of low success interview participants’ managers did. A participant’s manager setting expectations with the participant about what they are going to try on the job from the course may serve antecedent and consequent functions similar to those of coach discussions. A manager setting expectations may have acted as an antecedent that prompted participants to try out the new skills learned in the course. Additionally, when a manager sets expectations to apply the training, it becomes a priority, and the manager may help the participant find time to try the training behaviors. The manager may have also provided consequences to the participant for taking or not taking the actions the managers expected them to. Finally, participants may have taken action to avoid having to report to their managers they did not take action (i.e., negative reinforcement).

Success case interview participants also reported environmental factors that triggered their application of the course content. The top two factors in the participants’ environment that supported success were a difficult relationship that needed to be addressed and coach accountability and commitment to take action. A difficult relationship in the participants’ environment may have acted as an antecedent that provided an opportunity to try out the new skills learned the course. Additionally, if the strategies worked to improve the relationship, then reinforcement (in the form of an improved relationship) probably occurred. Coach accountability and commitment to their coach to take action may have resulted in behavior change
because the coach may have provided consequences to the participant for taking or not taking the actions they committed to take. Also, participants may have taken action to avoid having to report to the coach they did not take action (i.e., negative reinforcement).

A behavioral analysis of the factors reported by participants that deterred success may account for why these factors did not support behavior change. The low success interviews revealed that the top three reasons for no or low success were: 1.) not enough time, 2.) no follow-up from their coach, and 3.) no course follow-up. An environment where there is not enough time to attempt new behaviors will result in no behavior change because participants will never encounter the consequences for their new or changed behaviors. To resolve this barrier, an environment needs to be created where participants can plan for the time and resources they need to implement what they learned. Additionally, “not enough time” meant that the participants did not put a priority on applying what they learned in the training. To make using training a priority in participants’ day, some sort of accountability or consequences must be applied for training use and lack of training use. Accountability or consequences that could be applied to make training use a priority could include: coaches providing consequences, managers providing consequences, feedback, and incentives.

No coach follow-up meant that participants had no accountability (i.e., no consequences) for attempting to try new behaviors especially if their managers did not set expectations with them about applying the course content. No coach follow-up
also meant there were fewer antecedents to prompt participants to try new behaviors. Creating a formal follow-up process between the participants and the coach can enact these antecedents and consequences that are crucial to behavior change. Additionally, regularly remind participants to use their coach may create more follow-up between the participant and the coach.

No course follow-up also meant there were fewer antecedents to prompt participants to try new behaviors and no consequences or accountability for trying new behaviors. Having follow-up sessions and refreshing participants on the content covered during the course can create the consequences and antecedents that support behavior change.
REFERENCES


Appendix A

Web-based Survey
Hello,
You are receiving this message because you completed the Leaders Developing Leaders course. We would like you to help us in evaluating the effectiveness and quality of this course. While we ask about your actions since the course, this is not an evaluation of you or anyone else’s performance.

Please take a few moments to answer these questions. The survey should take approximately five minutes to complete. Please note that any responses are held in strict confidence. We may contact you for additional information. Your input is valuable and will help make the course more effective and to inform future offering of the course. Thank you for your honest and helpful feedback.

Please respond no later than <date>.
Please feel free to contact Anna Rice with any questions you might have.

Anna Rice
Learning & Development
(269) 660-7313

1. Which statement below best represents any action you have taken since your participation in the Leaders Developing Leaders course?
   a. I have implemented something I learned and have achieved a valuable business result (for example, a cost savings, a revenue increase, an improvement in a service or process).
   b. I have implemented something I learned and achieved some key milestones, but it is too early to report any business result yet.
   c. I have started to implement some learning, but can’t report any interim progress results yet.
   d. I have some plans to apply my learning, but I haven’t been able to implement them yet.
   e. For one reason or another (for instance, other priorities, a change in plans) it is unlikely that I will be able to apply any of my learning.

2. As part of the Academy Leaders Developing Leaders course an outcome was an executive development plan. Please select the statement that best represents your current situation:
   a. I have created a development plan and fully executed it.
   b. I created a development plan and partially executed it.
   c. I created a development plan and but have not yet executed any of it.
   d. I did not create a development plan, but I intend to.
   e. I did not create a development plan and have no plans to do so.
3. Provided better coaching to help improve performance
4. Used actions and opportunities to better develop the competence and commitment of others
5. Used coaching and individual work sessions to put greater focus on development needs and agenda of the other person
6. Provided better feedback to improve performance
7. Spent more time coaching my team members
8. Effectively delegated work to develop others
9. Inspired and motivated individuals and my team
10. Practiced active listening skills
11. Practiced asking questions versus telling with people I coach

Answers for 3-11
   a. I tried this and it has produced positive results.
   b. I tried this but I am not sure yet what will result.
   c. I tried this but it did not work.
   d. I have not yet tried this yet.

12. Applications of the Leaders Developing Leaders course may have lead to a range of outcomes. From the list below, select the statements that best represent any outcomes you believe your learning applications may have helped produce.
   a. Retained a high potential team member
   b. Developed someone for a more responsible, challenging leadership position
   c. Helped a marginal performing team member improve performance
   d. Identified development needs to improve my bench strength
   e. Developed a better understanding of my team members’ motivation and inspiration needs
   f. Improved the performance level of my team
   g. None of the above but something else very important (leave a space for open response)
   h. I cannot say that the course and coaching produced any valuable outcomes

13. What factors (if any) helped you use the content presented? (Check all that apply.)
   a. My solid understanding of the skills learned in the course
   b. Best practice sharing and networking with other leaders
   c. Executive leader interaction
   d. My belief that the course will improve my results
   e. Discussion with my manager about how the course would help me and help our business to be successful
   f. Coaching sessions to develop my executive development plan
   g. Availability of support from the facilitators
   h. Planned time and resources to implement my learnings
i. Work environment in which learning and knowledge sharing is valued
j. Knowledge sharing with other participants in the course
k. Follow-up discussion with my manager
l. Other: open ended area for response

14. What factors (if any) hindered your ability to implement the content presented effectively? (Check all that apply.)
a. My feeling that the course will not improve my results
b. Lack of clear management support for the course
c. Lack of support from the facilitators
d. Lack of planned time and/or resources
e. Work environment that discourages learning and knowledge sharing
f. Other: open ended area for response

15. Do you consent that the information you provided can be used for research purposes to be published in a dissertation? The information you provided will be combined across all participants. Your identity will not be attached to any data that is published or presented.
a. Yes, I consent
b. No, I do not consent

Thank you. Please return your survey by pressing submit.
Appendix B

Recruitment Script for Interview
Hello,
I am calling you today as Mike Bivens informed you, you have been chosen to provide feedback on the Leaders Developing Leaders course. I would like to conduct an interview with you to find out more about your answers on the survey. I am attempting to gather data to evaluate the course and to get more information on how you applied your learnings from the course and what might have hindered you from applying your learnings. I am also collecting suggestions for improvements to the course. Your input is valuable and will help make the course more effective and inform future offerings of the course.

The interview will take up to 30 minutes and will be conducted by telephone. I assure you that this call will be completely confidential and your name will never be associated with the information you provide. The data will be summarized.

I will send a meeting invitation to schedule the interview.

Thank you,
Anna Rice
Appendix C

Questions for Success Interview and Low or No Success Interview
Success Interview

My name is Anna Rice. I want to talk to you today to get more information about the Leaders Developing Leaders course. I assure you that this call is completely confidential and your name will never be associated with the information you provide to me today.

1. How did you successfully apply your learning to achieve a result? What part of the course was used and how was it used? With whom did you use it? When? Under what conditions or circumstances was it used? Could you have learned this skill somewhere else? Did you have this skill before the course?

2. Did your manager set expectations about applying the course content? What was that meeting like (i.e., what did he or she say, exactly? Was it before or after the course?)

3. What parts of the course were used the most? What parts of the course were used the least or not at all?

4. What short-term or other results were achieved? Why are these results important? What measurable difference was achieved? How did you know you made a difference?

5. How did these results contribute to business value, such as reduced costs, increased revenues, and so forth? What dollar value are these results worth?

6. What evidence is there that this outcome occurred?

7. What factors in your environment helped you apply your learnings? For example, were there any special incentives, rewards, job objectives, work requirements, that contributed to your success? What about your manager’s support or lack of support? Where there any tools, references, information sources, or job aids that you used? Did the timing of the course help or hinder your success? Did you receive any feedback that contributed to your success? Were there any priorities, urgencies, or other extenuating circumstances that spurred your success?

8. What got in the way of you using and applying your learnings?

9. What suggestions do you have to improve the program? For example, additional resources, better tools, better incentives, more course content.

10. What additional course content would be valuable to add to the course?

11. Do you consent that the information you provided can be used for research purposes to be published in a dissertation? The information you provided will be combined across all participants so you cannot be identified. Your identity will not be attached to any data that is published or presented.
   a. Yes, I consent
   b. No, I do not consent

Thank you so much for your time today. I assure you that this conversation will be kept confidential and your name will never be associated with this information.
Low or No Success Interview

My name is Anna Rice. I want to talk to you today to get more information about the Leaders Developing Leaders course. I am attempting to gather data to evaluate the course and to get more information on how what hindered you from applying your learnings from the course. Our survey showed that several people were not able, for one reason or another, to do anything much with the content of the program. I would like to gather information on what hindered your success. I am also collecting suggestions for improvements to the course. I assure you that this call is completely confidential and your name will never be associated with the information you provide to me today. Do you still wish to participate in this interview?

1. What got in the way of you using and applying your learnings? (for example, no time, not enough resources, bad timing, no incentives to apply them, not feedback, no manager support)
2. What suggestions do you have to improve the program? For example, additional resources, better tools, better incentives, more content.
3. Is there anything that might help others in the future to apply the concepts from the course?
4. Did your manager set expectations about applying the course content? What was that meeting like (i.e., what did he or she say, exactly? Was it before or after the course?)
5. Did you get anything from the course?
6. Did you develop an executive development plan?
7. Do you consent that the information you provided can be used for research purposes to be published in a dissertation? The information you provided will be combined across all participants so you cannot be identified. Your identity will not be attached to any data that is published or presented.
   a. Yes, I consent
   b. No, I do not consent

Thank you so much for your time today. I assure you that this conversation will be kept confidential and your name will never be associated with this information
Appendix D

Knowledge Test
Self-Reflection

Date:

Multiple Choice: For each of the following questions, circle the letter of the answer that best answers the question.

1. What does the acronym LEAD stand for?
   a. Listen, examine, act, deliver
   b. Learn, examine, act, drive accountability
   c. Learn, explore, action, drive accountability
   d. Listen, explore, action, deliver

2. Below is the leader development process. Select the set of words that go in the white boxes.

   a. Understand the situation, analyze the situation, create solutions, continuous improvement
   b. Assessment, classification, action, monitor
   c. Measure, analyze, create direction
   d. Identify, assess, develop, monitor & measure

3. Which of the following is not what top companies for leaders do?
   a. make a compelling case for leadership capability
   b. state the unique leadership needed for strategic results.

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c. assess leaders and leadership
d. reward leadership
e. invest in branded leadership capability
f. measure impact of investment
g. ensure reputation

4. Encourage agreement, minimize risk taking, and bosses are decision makers are all part of what paradigm?
   a. Control
   b. Commitment
c. Union
d. Push
e. Freedom

5. Manage by principle, information should be shared widely and openly, encourages disagreement are all part of what paradigm?
   a. Control
   b. Commitment
c. Union
d. Push
e. Freedom

6. Which of the following is not an active listening skill?
   a. Summarizing
   b. Acknowledging
c. Asking effective questions
d. Paraphrasing

7. What is not one the two types of questions?
   a. Expanding
8. What type of question is the following: “Can you give me examples of the problem?”
   a. Expanding
   b. Broadening
   c. Contracting

9. What type of question is the following: “When can we meet again to decide on our next steps?”
   a. Expanding
   b. Broadening
   c. Contracting

10. Place the letter of the correct label of each box of Johari’s window?

11. Feedback should focus on the person, not the issue
12. Feedback should always be delivered immediately
   a. True
   b. False

13. Which is not a step in the SARA cycle?
   a. Resistance & rejection
   b. Acceptance & action planning
   c. Surprise & shock
   d. Annoyance & anger
   e. Denial & Refusal

14. The sweet spot as part of the talent formula is realized when which of the following 3 things come together?
   a. Competence, priorities, passion
   b. Engagement, skills, knowledge
   c. Commitment, leadership, execution
   d. Technical skills, Leadership skills, engagement

15. Which one of the following is not one of the 6B’s of organizational competence strategies?
   a. Boost
   b. Buy
   c. Build
   d. Bolster
   e. Borrow
   f. Bind
   g. Bounce
16. Which of the following is not one of the leaders developing leaders roles?
   a. Experience Optimizer
   b. Performance Advisor
   c. Relationship Broker
   d. Experience Broker
   e. Performance Optimizer
   f. Career Champion

17. In order to create change the resistance to change must be less than ___ X ___ X ___.
   a. Commitment, competence, communication
   b. Desire for future state, clear vision of success, ability to identify first steps
   c. Support, time, vision
   d. Vision or mission, need for change, commitment

18. Do you consent that the information you provided can be used for research purposes to be published in a dissertation? The information you provided will be combined across all participants so you cannot be identified. Your identity will not be attached to any data that is published or presented.
   a. Yes, I consent
   b. No, I do not consent
Appendix E

Satisfaction Survey
How satisfied are you:

<table>
<thead>
<tr>
<th></th>
<th>Very Satisfied</th>
<th>Satisfied</th>
<th>Neutral</th>
<th>Dissatisfied</th>
<th>Very Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>With the relevance of the course content to your needs?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>With the location and quality of the Leadership Academy facility?</td>
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<tr>
<td>With the communication you received regarding this course?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Learning and Development courses overall?</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

If dissatisfied or very dissatisfied with Learning and Development courses overall, please list suggestions for improvement here.

<table>
<thead>
<tr>
<th>Facilitator</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrated thorough knowledge of the course content and</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>an understanding the company</td>
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<tr>
<td>Delivered content in an appropriate, organized, and well-paced manner</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responded effectively to questions and issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Content**

| Course outcomes were clearly identified and accomplished |  |
| Information presented was relevant to my role |  |
| Course materials and resources |  |

**Overall**

| The course met my expectations |  |
| The course will help me be more effective in my job |  |

1. To what extent would you recommend this course to others?
2. What is the best part of the course?

3. What are your suggestions to improve the course?

4. Do you consent that the information you provided can be used for research purposes to be published in a dissertation? The information you provided will be combined across all participants so you cannot be identified. Your identity will not be attached to any data that is published or presented.
   a. Yes, I consent
   b. No, I do not consent
Appendix F

HSIRB Approval Letter
Date: June 25, 2010

To: John Austin, Principal Investigator
   Anna Rice, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number: 10-06-21

This letter will serve as confirmation that your research project titled "Evaluation of the Impact of a Large Corporate Leadership Development Course" has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: June 25, 2011
Appendix G

Approval Letter for Use of Data
Letter of Approval for Use of Data

"Evaluation of the Impact of a Large Corporate Leadership Development Course"

Principal Investigator: John Austin, PhD
Student Investigator: Anna Rice, MA

[Company Logo]

has given permission for Dr. John Austin and Anna Rice to use the data collected by this company to evaluate the leadership development course. Data will not include any information that could be used to identify individuals who participated in the evaluation. The researchers will redact any identifying information before the data are examined by the organization.

[Company Logo]

has discussed, in detail, the guarantee from the investigators that the identity of [Name of Company] will be kept completely confidential in all presentations and/or publications. Additionally, the participants’ identity will be kept completely confidential, and the company officials believe that the proposed presentation and/or publication will not adversely impact the performance or well-being of the employees who participated in this project. [Company Logo]

may terminate this approval at any time before presentation and/or publication and for any reason without penalty.

Sincerely,

[Company Logo]

5/20/2010
Date
Appendix H

Impact Map
<table>
<thead>
<tr>
<th>Participants</th>
<th>Knowledge + Skills</th>
<th>Critical Applications</th>
<th>Improved Results</th>
<th>Business Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 150 leaders of the Company</td>
<td>Knowledge of how to deliver feedback</td>
<td>Leaders more effectively coaching their team</td>
<td>Leaders spending more developmental time with their people</td>
<td>Delivers against “Building a Talent Powerhouse” for our Executives by focusing on their development and the development of others</td>
</tr>
<tr>
<td></td>
<td>Knowledge of how to delegate work to others</td>
<td>Leaders delivering effective feedback to their team members</td>
<td>Improved team and individual performance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Active listening skills</td>
<td>Leaders effectively delegating work to others</td>
<td>Improved bench strength for key leadership position</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effectively asking questions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Knowledge of LEAD coaching framework</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix I

Knowledge Test Error Analysis
Figure I.1. Percent of participants who got each question wrong for the pre-test and the post-test.
Appendix J

Paper-based Survey Responses
Which statement below best represents any action you have taken since you participation in the W.K. Kellogg Leadership Academy?

I have implemented something I learned and have achieved a valuable business result (for example, a cost savings, a revenue increase, an improvement in a service or process).

I have implemented something I learned and achieved some key milestones, but it is too early to report any business result yet.

I have started to implement some learning but can't report any interim progress results yet.

I have some plans to apply my learning, but I haven't been able to implement them yet.

For one reason or another (for instance, other priorities, a change in plans) it is unlikely that I will be able to apply any of my learning.

Figure J.1. Participant action taken since the course.

As part of the W.K. Kellogg Leadership Academy Leaders Developing Leaders course an outcome was an executive development plan.

I have created a development plan and fully executed it.

I created a development plan and partially executed it.

I created a development plan and but have not yet executed any of it.

I did not create a development plan, but I intend to.

I did not create a development plan and have no plans to do so.

Figure J.2. Participant creation and execution of executive development plan.
Figure J.3. Participant actions taken since completion of the course.

Figure J.4. Participant application of the course concepts.
What factors (if any) helped you use the content presented?

Figure J.5. Factors that contributed to participants applying the course content.

What factors (if any) hindered your ability to implement the content presented effectively?

Figure J.6. Factors that hindered participants’ ability to implement content from the course.