Corporate Training – Calculating the Economic Viability, Cost/Benefit Analysis and ROI
Hello!

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Corporate Training can be defined as the ability of a company to acquire, impart, and apply knowledge to discover solutions to known problems, explore new ventures and improve efficiency of its employees.
The game of Chess, known as “Chaturanga” in Sanskrit language, was invented in India during the 6th century AD.

The game was devised to plan strategic military troop movements in battle. Thereby, becoming the oldest documented corporate training.
In 1812, during the Prussian times in Germany, the Kriegsspiel or “WarGame” was invented by Herr von Reisswitz.

It was an instruction to represent military operations in a topographical map.
Roots of Corporate Training (contd.)

Towards the end of the 19th century, Brown and Sharpe Company and R. Hoe and Company were heralding apprentice programs with both shop and class trainings.

Unlike the apprenticeship, these theory class and practical shop training ensured a faster learning curve.

Chief Financial Officer: “What happens if we train the employees and they leave?”

Chief Executive Officer: “What happens if we don’t and they stay?”

- Unknown
The Dilemma

- Company leaders might not train employees because they fear employees might leave for better opportunities.
- However, employees sometimes leave because they do not receive adequate training.
- If companies offer training, employees are more likely to remain.

Hamori, M., Cao, J., & Koyuncu, B. (2012). Why top young managers are in a nonstop job hunt (No. hal-00779318).
What the surveys say!

- In a survey by InterCall’s Digital Media Services:
  - Two out of three employees said that training played an important role in their decision to stay with the company
  - Three quarters of employees had participated in job-related training within the previous year

How have U.S. companies invested in learning?

2016
- Around $70.6 billion
- Large companies (10,000+ employees) invested $14.3 million
- Midsize companies (1,000–9,999 employees) invested around $1.4 million

2015
- Around $70.6 billion
- Large Companies (10,000+ employees) invested $17.4 million
- Midsize companies (1,000–9,999 employees) invested around $1.4 million

How have U.S. companies invested in learning? (contd.)

2016
- Small companies (100–999 employees) invested $376,251

2015
- Small companies (100–999 employees) invested $350,301

How is Training perceived by Accounting Department?

- Wentworth (2016) notes that training is a corporation’s biggest budget line item
- Corporate accountants view training as an expense rather than as an investment
- Companies are not required to report training expenditures as a discrete item, so it is often lumped in with other overhead costs

What the Leaders want?

- A survey by Association for Talent Development (ATD), showed that the primary desire of CEOs was to quantify business impact from implementing learning and development

- For Business impact, only 8% could see it

- For ROI, only 4% were able to see it

Corporations are apprehensive to invest in Training because...

- Doubts about recovering their money
- Not enough lead time to create and deliver training
- Fear that employees quit after getting trained
- Expensive
- Lack of knowledge to evaluate the training effectiveness and Return on Investment (ROI) from training
Evaluating Results & Effectiveness

◦ “The reason for evaluating is to determine the effectiveness of a Training Program.”

◦ Models:
  ▫ Kirkpatrick’s Model
  ▫ CIRO Model
  ▫ CIPP Model
  ▫ Brinkerhoff Model
  ▫ Phillips Model

Kirkpatrick’s Model

- **Level 1: Measure Learner’s Reaction**
  - Post course surveys
  - About course setting, course content, delivery style, materials, interactions etc.

- **Level 2: Measure of what they learned**
  - Typically a Pretest and a Posttest

- **Learning Gain Score**
  - Formula for Learning Gain = \((Post-assessment - Pre-assessment) / (100\% - Pre-assessment)\)
Kirkpatrick’s Model (contd.)

- **Level 3: Behavioral changes post training**
  - Supervisor or Peer assessment about changes in behavior

- **Level 4: Business Impacts**
  - Contributes to the Organization’s goals and mission per United States Office of Personnel Management (USOPM)
  - Customer satisfaction, improved sales, lower complaints, better processes and the like

Phillips Level 5: ROI

- **Level 5**: ROI calculated by converting productivity and quality improvements to monetary values
  - In other words, it is the success of the training initiative in economic terms

Purpose of the Study

- According to a 2009 study by ATD
  - 92% of organizations indicated that they evaluate training at Level 1;
  - However, this drops dramatically, with only 18% indicating that they evaluate at Level 5

- Even at Level 5, only the “WHAT” is discussed
  - Example: The company had 10% increase

- The “HOW” (methodology with data) has never been discussed so far in any published literature

Study Design

- U.S. based health food company
- 15% phone sales and 85% ecommerce sales
- Teams: Customer Service, Sales, Retention, and Technical Support
- Sales team was trained: 85 Sales associates (with similar pc or sales skills)
- Mode of Training: Traditional (Classroom) or eLearning (Online)
Study Design (contd.)

- Associates were selected via Lottery Method (42 for Traditional & 43 for eLearning)

- 16 hours training and 1 hour proctored exam
  - 2 day class for Traditional
  - 16 hours of open access to the Learning Management System for the eLearning
  - 1 hour of exam not included in the ROI calculation

- Associates were unaware that they were being evaluated
Research Questions

◦ **Research Question 1:** *Comparing Pre-Training Test Scores vs. Post-Training Test Scores*
  
  ▫ A statistically significant difference in test scores between Post-Training and Pre-Training exam:
    ▬ $t(84) = -32.665, p = 0.000$.

◦ **Research Question 2:** *Comparing Traditional Scores vs. Online Scores*
  
  ▫ No statistically significant difference in test scores between the Classroom and Online participants:
    ▬ $t(83) = -3.71, p = 0.712$. 
Research Questions

◦ **Research Question 3:** *Comparing Pre-Training Sales Figures Vs. Post-Training Sales Figures (both Classroom and Online)*

  ▪ A statistically significant difference between Post-Training sales and Pre-Training sales figures:
    ■ \( t(84) = -8.824.665, p = 0.000. \)

◦ **Research Question 4:** *Comparing Post-Training Sales Figures of Classroom vs. Online*

  ▪ No statistically significant difference in sales figures between the Classroom participants and Online participants:
    ■ \( t(83) = -5.52, p = 0.582. \)
Return on Investment (ROI) – The “HOW”

Sales Figures Before Training
- Sold = 5479 units
- Total Sales in Dollars = $1,944,050

Sales Figures After Training
- Sold = 5710 units
- Total Sales in Dollars = $2,026,100
Return on Investment (ROI) – The “HOW” (contd.)

- Total Sales Difference (After – Before) = $82,050
- Company’s Average Gross Profit = 49.9%
  - Gross Profit = 49.9% X $82,050 = $40,942.95
- Company’s Average Net Income = $16.7%
  - Net Income = 16.7% X $40,942.95 = $6,837.47
## Cost of Training

<table>
<thead>
<tr>
<th>Items</th>
<th>Description</th>
<th>eLearning (Online)</th>
<th>Traditional (Classroom)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logistical Costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># of Associates</td>
<td>43</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td># of hours</td>
<td>16</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Wage/hour/Associates</td>
<td>$16/hr.</td>
<td>$16/hr.</td>
<td></td>
</tr>
<tr>
<td>Misc. Cost (travel, food, printouts, etc.)</td>
<td>0</td>
<td>$147.62 pp for 2 days</td>
<td></td>
</tr>
<tr>
<td>Sub-Total 1</td>
<td>$11,008</td>
<td>$16,952</td>
<td></td>
</tr>
<tr>
<td><strong>IT Costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to Learning Management System (LMS)</td>
<td>$99</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sub-Total 2</td>
<td>$4,257</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Trainer Costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor Wages</td>
<td>$10,000</td>
<td>$12,500</td>
<td></td>
</tr>
<tr>
<td>Travel, Food, Flight, Car etc.</td>
<td>0</td>
<td>$5,000</td>
<td></td>
</tr>
<tr>
<td>Sub-Total 3</td>
<td>$10,000</td>
<td>$17,500</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$25,265</td>
<td>$34,452</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cost of the Training Exercise</strong></td>
<td></td>
<td>$59,717</td>
<td></td>
</tr>
</tbody>
</table>
ROI & Benefit/Cost Ratio (BCR) Formula

- According to Brinkerhoff (1991), ROI (return on investment) is the ratio between the cost of a program and the value (monetary) of its outcomes.

- **First Method:**
  - \( BCR = \frac{\text{Program Benefits}}{\text{Program Costs}} \)
  - \( = \frac{82,050}{59,717} = 1.37 \)
  - This calculation shows, for every $1 invested returns $1.37 in benefits.

Therefore, ROI would be:

\[ \text{ROI} = \frac{\text{Net Benefits}}{\text{Program Costs}} \times 100 \]

Where,

\[ \text{Net Benefits} = \text{Program Benefits} - \text{Program Costs} \]

\[ = \frac{82,050 - 59,717}{59,717} \times 100 = 37.4\% \]

Thus, for each one dollar invested in the program, there is a return of an additional 37.4 cents in net benefits.
Benefit/Cost Ratio (BCR) Formula (contd.)

- **Second Method:**
  - Knight (2015) says that, the most common mistake that experts make is to calculate ROI using the sales revenues, whereas, net profit is a more accurate approach.
  - \[
  \text{ROI}_{\text{Monthly}} = \frac{\text{Monthly Net Profit}}{\text{Program Cost}} \times 100
  \]
  - \[
  = \frac{\$6,837.47}{\$59,717} \times 100
  \]
  - \[
  = 11.45\% \text{ per month}
  \]

Benefit/Cost Ratio (BCR) Formula (contd.)

- \( \text{ROI}_{\text{Annual}} = \text{ROI}_{\text{Monthly}} \times 12 \text{ months} \)

- \( = 11.45 \times 12 \text{ (months)} = 137.4\% . \)

- Thus, for each one dollar invested in the program, there is a return of an additional 37.4 cents in net benefits.

Limitations of the Study

- Only ROI was considered. Intangible benefits were not taken into account
  - When doing it for the first time, Phillips (1996) suggested only one metric should be selected

- The entire year was not taken into account for the ROI calculations

- Market conditions were stable during the study

- Teams received other trainings too, which could result in overlapped benefits

Conclusion

- Organizations should consider money spent on training programs not as an expense but as an investment.
- When using multiple modes of training, instructor should ensure consistent message.
- Trainings should be flexible to accommodate employee schedule.
- Success or Failure, everyone in the organization is responsible.
- Have a clear roadmap to the implementation.
Questions?