

## ORGANISATIONAL IMPACT ON EVALUATING TRAINING RETURN ON INVESTMENT

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### ABSTRACT

*Training is one of a great deal matter in human resource development activities. The benefits of a training program conducted can be seen at a very simplified level to a complex stage. Thus, the complex stage of identify the training outcome will be at the organizational results. In order to identify the return from the training invested on organization impact, evaluating return on investment is seemed to be a challenge. The study identifies the models involved in evaluating ROI for training. Further, the importance and the challenges also examined.*

**Field of Research:** Training, Return on Investment (ROI).

### 1. An Introduction: The compelling need for training evaluation

Training is definitely an investment in facilitating organizational improvement (Basarab, Sr., 1990) and a lot been spent on it by organization (Valeda & Caetano, 2007). It is also seen significant amount spent on workplace learning and performance (Murray & Efendioglu (2007). US employers spent 54 billion dollars largely on formal training (Redshaw, 2000). Companies seek to measure the net financial effect of the return once training investment (Ibrahim, 2004). Consequently, there has been pressure to validate the training conducted by organizations on their employees (Harris, 2006). The question of will training value and give positive return for organization has always been a question for employers. Despite a lot of efforts taken by trainers, problem in finding the impact of training is still existing (Murray & Efendioglu (2007). Just by identifying training need analysis may not mean it can derive cash value for the trainings conducted (Brauchle, 2007). Training and development in human resource development aspect identifies solutions and improvement rather to solve significant problem like low capitalization (Redshaw, 2000). These especially true in building new skills that meet the changing needs of

business environment. Thus, we just can't forgo the training because it is important for employees as they are valuable asset to organizations (Tennat, Boonkrong and Roberts, 2002).

Human Resource experts and practitioners have been striving to identify training effectiveness not only for employees but also at the organization level. After all, the reason organizations investing in training is to earn profitability through employees performance. Measuring training effectiveness towards organizational impact requires evaluation at a more complex manner unlike measuring individual effectiveness towards training. Trainers have long seen ROI (return-on-investment) in human capital management (Harris, 2006) as an impact on organization, since evaluating cost on training is popular (Mann and Robertson, 2007).

First of all training is evaluated to find the effectiveness that arises at several stages or levels. Training is not just enough to identify the learning and behaviour change on participants of a training program. The ultimate measure should be identifying the business impact of the training for organization which is more complex measurement. Many trainers or evaluators prefer to go for a simple method of evaluating just to fulfill the organisation training needs (Brauchle, 2007).

Effective training should be able to indicate value for organization (Lin,2008). Thus, evaluating ROI indicates monetary value of a training program. American Society of Training and Development (ASTD) aid the understanding of ROI in training and development to organizations (Harris, 2006) to create an effective measure.

However, measuring the ROI or organizational results is difficult task (Wang & Wilcox (2008). The expenditure of training can be determined but determining the results is unclear (Daniels, 2003). Literature reveal that many organization despite conducting training do not evaluate the ROI effect on it. One possible reason is failing to calculate the ROI where lack of sufficient and appropriate information from the training (Harris, 2006). Subjective matter in calculating the value of employees for organisation which through training is tough to manage (Kline & Harris, 2008)

There are two well known theories, those are Kirkpatrick four levels evaluation and the extension of fifth level by Philips evaluation model (Lien, Hung & McLean, 2007). Level four of Kirkpatrick outlines the measurement of the training impact on achieving wider organizational goals and objectives, and concerned on financial result is being an issue currently (Bates, 2004). Business result measure business impact of the program and ROI compares on monetary value of the result. (Harris, 2006). However, at any level of evaluation the idea is to attain performance for individual and organization (Lin, 2008). This is because evaluating ROI in training is definitely not the same as evaluating other types of investment like on assets and liabilities monetary. Employees' valuation comes with an error (Harris, 2006) whereby accurate measurement of output.

Organisations that invest in training may face failure because of wrong judgment made on employees output. For example increase in learning may not necessarily increase in

performance and the increases the business or organizational outcome. This failure leads to lack of budget counted for training (Tennat, *et al.*, 2002)The problem with training is the skill and knowledge gained are not applied in performing the job and this eventually leads to failure (Berge, 2008). Training can fail if the trainers and the equipments are not properly used to evaluate training. This can be tackled by evaluating the training effectively. Thus training evaluation should not just end at transferring the knowledge but to identify the business impact at organizational outcome. Research on training and organizational level result is lagging. Research not widely focused on the relationship between training and organizational outcome on (Tharenou, Saks & Moore, 2007). Though, evaluating the training is hard task, needless to say evaluating the calculating the cost effectiveness (Lin, 2008).

Looking the above, this study aims to identify the importance and challenges of evaluating training at measurable organizational level outcome. The current status of training evaluation at organizational level discussed to identified for future research to overcome problems and constraints evaluating training by trainers, consultants and HR experts and to contribute to organisational benefit.

## 2. Measuring Return on Investment on Training

There are many models, theories and assumptions to evaluating training such as: Donald L Kirkpatrick's 4 level model, Jack Phillips' Five level ROI model, Daniel Stuffle Beam's CIPP Model (Context, Input, process, product), Robert Stakes Responsive Evaluation Model, Robert Stakes Congruence Contingency Model, Kaufman's Five level of evaluation, CIRO (Content, Input, Reaction, Outcome), PERT (Program Evaluation and Review Technique), Alkins' UCCA Model, Micheal Scriven's Goal Free Evaluation Approach, Provus's Discrepancy Model, Eisner's Connoisseurship Evaluation Models, Illuminative Evaluation Model, Portraiture Model and American Evaluation Association.

Although there are many ROI approaches, Donald L Kirkpatrick's model become arguably the most widely used and popular model for the evaluation of training and learning. Kirkpatrick is very famous theorist in training. His four level model on training evaluation is now considered an industry standard across the HR and training communities. Most training evaluation practices are dominated by The Kirkpatrick Model (TKM), which is widely known and accepted. In 1959 Kirkpatrick outline his now famous four levels of evaluation for training program: Reaction, Learning, Behavior and Result.

TKM is a sequence of evaluating a training program, where the level cannot be skipped, jump from first to last level and change the order. This is because from one level to another, the evaluating process become difficult, time consuming but will provide valuable information.

**Reaction Level**

“Reaction is defined as what students thought of training, including materials, instructor, facility, teaching methodology, delivery mechanism, content, etc. It does not include a measure of learning that takes place” (Basarab, Jr., 1990). This level is about what the delegates felt about the training or learning experience through “happy sheets”, feedback forms, verbal reaction, post training surveys or questionnaires. This level of evaluation can be done quickly because it’s very easy to obtain and not expensive to gather data or to analyze it.

**Learning Level**

“Measures learning and knowledge changes as it relates to successful program implementation, typically through a variety of methods, including: self assessments; team assessments; facilitator assessments; simulations; case studies; skill practices; and exercises. With increased emphasis on building learning organizations, the issue of capturing learning gains from new programs has become especially important (Burkett, 2005). This level of evaluation can carry out before and after training through assessment or test and interview or observation also can be used. In this level evaluation relatively simple to set up, clear-cut for quantifiable skills and less easy for complex learning.

**Behavior Level**

“The term “behavior” is used inference to measurement of job performance. This level of evaluation determines how well training skills (behavior) have been transferred to the job. Level 3 compares training behavior against behavior being demonstrated by students during performance of their jobs and. This level determines: what training behavior are being used on the job, success of training in establishing those behavior, what training behavior are not being used on the job and why, and d) what job behaviors students had to acquire on their own that training did not provide (Basarab Jr., 1990).

This is the extent of applied learning back on the job implementation through observation and interview. Over time are required to assess change, relevance of change and sustainable of change. The measurement of behavior change typically required cooperation and skill of line managers.

**Result Level**

The last level is result evaluation is the effect on the business or environment by the trainee. This measure is already in place via normal management systems and reporting but the challenge is when relate it to the trainee. This measurement individually not difficult, unlike whole organization process must attribute clear accountabilities.

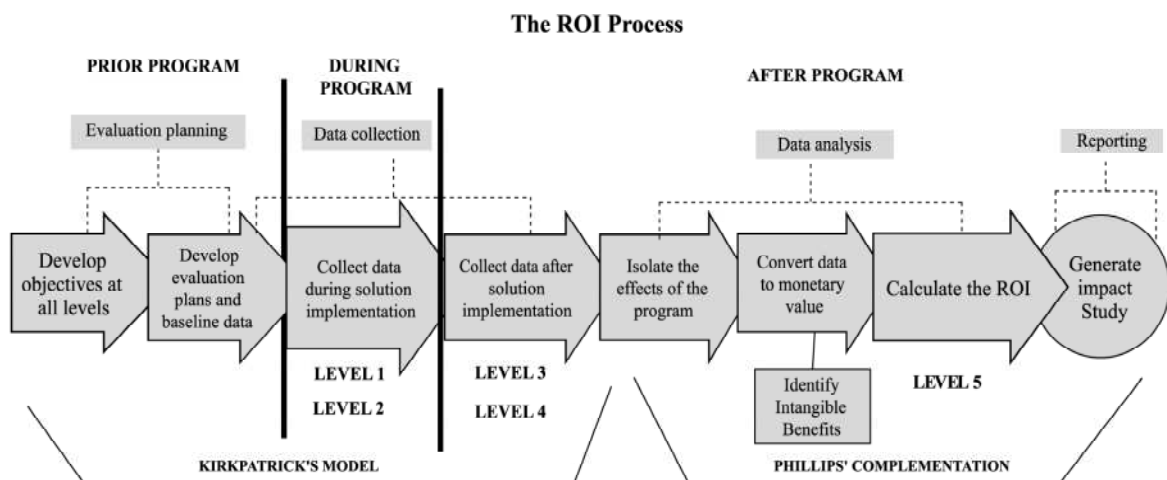
"A systemic approach to measuring training's impact begins with an evaluation framework. Donald Kirkpatrick (1998) created a four-level model of categorizing evaluation data that has been used as a common frame of reference for decades. Jack Phillips expanded upon this framework to incorporate a fifth level of evaluation for capturing the financial impact of training programs or return-on-investment, ROI (Burkett, 2005).

Jack Phillips Evaluation Model	
LEVEL	MEASUREMENT FOCUS
1. Reaction & Planned Action	Measures participant satisfaction with the program and captures planned actions.
2. Learning	Measures changes in knowledge, skills, and attitudes
3. Application And Implementation	Measures changes in on-the-job behavior and progress with application.
4. Business Impact	Captures changes in business impact measures.
5. Return on Investment	Compares program monetary benefits to the program costs.

In addition Phillips model contribute a quantitative result. The fifth level provides an acceptable form of training measurement. The Phillips ROI model is also a detailed approach to conducting impact studies to help prove or disprove is a learning measurement program was a positive influence on the organization. There are three steps to calculate the ROI:

- a) calculate the cost of developing and delivering training
- b) assign value of the return from training
- c) calculate the ROI

The following diagram shows the whole process of ROI:



Source: Torres and Kline (2004)

ROI measures the monetary benefits obtain by an organization over a specified time period in return for a given investment in a training program. As a conclusion, the main argument for better evaluation of training is to validate training as a business tool because training is one of many actions that an organization can take to improve its performance and profitability. Only if training is properly evaluated can it be compared against these other methods and expect therefore to be selected either in preference to or in combination with other methods. Next is to justify the costs incurred in training. This is because when money is insufficient, training budgets are amongst the first to be sacrificed. So only through quantitative proves training department can make the case necessary to resist the cuts. Additionally is to improve the design of training where the training programs should be continuously improved to provide better value and increased benefits for an organization. Finally, to help in selecting training methods there are many alternative approaches available for training department through comparative evaluation techniques; organizations can make rational decisions about the perfect method to employ.

It is not simple to calculate ROI. For first time, an organization should select one course to measure ROI (Phillips, 1996). It is impossible for an organization to calculate ROI for the entire training program because it involved too many calculation and time consuming. In the case the organization can choose the best training to be evaluated for ROI (Phillips, 1996). Overall by doing so can help the organization to increase productivity and hence decrease turnover. On other word, it helps organization improve monetary values. Approaches of Kirkpatrick model has been added to fifth level by Phillips that compares the training monetary benefits with the cost spend on training.

Training evaluation on organizational result based on utility analysis that measure dollar value gained on employee. Human capital theory identifies that investment on employees if the net present value is positive (Ng, 2005). A study conducted by Arthur, Jr. and Benett, Jr., (2003) on training and development literature from 1960-2000 found training design and evaluation has relationship through meta-analysis procedures. The result found that training method used skill or task characteristic trained and choice of training evaluation are related to observed effectiveness of training program. In training evaluation hard data needs to be measured such as increased sales, market share, reduce operating cost, lower absenteeism and other objective impact.

Kirkpatrick and Swanson training evaluation model have similarities. Swanson PLS(1994) measure performance based on business result and financial result. Seven companies were interviewed and these companies have an aim of providing quality training program and performance improvement is important (Lien, Hung and McClean, 2007). In one study some participants argued ROI is not important and others have developed ROI measures whereby only one company so far measured ROI. Majority of these companies' measure reaction and learning and even behaviour level. In China, training is used merely to overcome skill deficiencies and to enhance productivity since skill learning is not noticeable in their education system (Ng, 2005). Some of the approaches identified to manage ROI in training (Harris, 2006); yield management, asset management and Total quality management. ROI values must be placed on estimates.

Cost allocation, transfer pricing, inventory adjustment, depreciation must be given benchmark success of failure prediction.

Bruachle, 2004 has recommended steps prior conducting ROI evaluation. The first the need to set training objectives, next to have a focus at micro level of a single program, information should be collected through various method, other intervening factors should be avoided and not all training programs may be suitable to evaluate.

According to Brauchle (2007) monetary benefits can be evaluated the outcome of not training employee or employee performance. However, a popular one is cost/benefit analysis. Cost/benefit ratio method is particularly useful in evaluating the benefit that derived from HRD activities performed (Smith, 2004). In one study proved training course results through cost/.benefit analysis (Elliot and Edwards, 2009). This can be called as "ratio of the benefits" (Murray and Efendioglu,2007).

ROI in training and development measuring all economic returns generated from an investment in a training and development programme, where by the return are compared with the true cost of programme (Naish, 2001). Actually the methods of determining ROI in Human Resource Development (HRD) has been long practice (Harris, 2006). ROI is a ratio of resources gained/lost in a process or investment or result to the total amount of resources provided (White, 2007). This is being used in libraries to evaluate organization performance. ROI can be used for intangible services and benefit like customer services evaluation. Thus ROI is a valuation tool.

The weakness of Kirpatrick model is at the initial stage of training evaluation business need to identify (Elliot & Edwards,2009). In one study proved training course results through cost/benefit analysis. Some of the measures are employee and customer satisfaction, quality of products and services, cycle time, retention, revenue and overall productivity (Murray and Efendioglu, 2007).

The formula outlined by Smith (2004) is cost of HRD/operational effectiveness = ROI (or for a for-profit organization – cost of HRD/operational effectiveness + in revenue = ROI). Smith (2004) elaborated that first effectiveness ROI measure needed, next HRD is quantified and understood, the HRD effect able to be demonstrated in concrete outcomes.

### **3. Significance of return on training investment**

ROI from training should be obtained through strategic goal rather from short term goal (Daniels, 2003). Measuring the last level of training evaluation is important for reasons to assess the benefit of training and perform budget for training (Kline and Harris, 2008). Indeed, studies show that significant link training and performance (Eikebrokk and Olsen, 2009). If a clear

documented and subsisted ROI calculation is feasible at all situations (Basarab Jr.,1990), training will be able to show constructive and objective impact on organization.

Most importantly to evaluate the business impact on training the support from top management is important (Kline & Harris, 2008; Naish, 2001) because it increases productivity that benefits the employers ultimately (Rosholm, Nielsen and Dabalen, 2005). It also improves quality and facilitates continuous improvement (Tennat, *et al.*, 2002). Thus conducting training by knowing the effectiveness at the organizational outcome or ROI evaluation certainly will proof the organizational benefit for a long run.

Though, training evaluation models may have its controversy on its incompleteness but it should be understood that guidance given to evaluate the effectiveness by training bodies (Kline & Harris, 2008). Training should be link to organization strategy rather in short term result (Danials, 2003). Evaluating justify ROI so that training budget can be outlined appropriately. However, since the results are intangible in calculating the cost often becomes difficult (Lin, 2008).

Evaluation is usually conducted either one or partial indicator of training evaluated (Daniel del Valle, Castillo and Rodriquez-Duarte, 2009). Training indicator helps cover greater homogeneity. Methodological problem avoided by having objective result measurement and size filter in sample. Training investment was worthwhile in service industry by measuring client quality perception as service ends with clients. Training has create positive affect on the organizational result which this supports previous literature.

Some empirical study identified training in service companies on employee were identified in terms of economic impact over nine years which has cause competitive advantage and profitability (Daniel del Valle, Castillo & Rodriquez-Duarte, 2009). In the e-business SME (small medium enterprises of 339, training indicates positive relationship between performance in terms of efficacy, complementaries, lock in and novelty measured as variances (Eikebrokk & Olsen,2009).

It was found that training expenditure is increasing and is seen as significant investment and organizations wants to see the impact or outcome of it (Brauchle, 2004). The benefit of ROI in measuring in HRD as stated by Naish (2001) as validate training as business tool, justifies the costs incur, help improve the training design, help select training method or type.

#### **4.0 Impediment and challenges measuring training value to organisation**

Recently, not only the business impact on training matters but also focus on financial impact (Bates, 2004). Unfortunately scholars, practioners have encounter difficulties in assessing the business impact in terms of ROI from the training conducted.



Some difficulty exists in measuring training and organizational result according to Wang and Wilcox (2006). Training always not measured separately rather integrated part of human resource practice and without reaching maturation period of training investment (Daniel del Valle, Castillo & Rodriguez-Duarte, 2009). This means a time frame has to be given before evaluating the return of the training from the training expenditure. This is the reason why training program unable to see the value. Secondly, inability to use valid and reliable information to calculate ROI measurement and lack of interest to measure (Harris and Kline 2005) and belief waste of time (Flynn, 1998) is another reason training not being evaluated. Besides, benefit and costs in ROI measurement is ambiguous (Kline and Harris, 2006). According to Harris (2006) measuring human aspects and relating to organizational performance by monetary figure is not possible. Much previous literature indicates only slight indication between training and performance (Daniel del Valle, Castillo & Rodriguez-Duarte, 2009).

A study in Taiwan found that evaluating training program is costly investment and the results needs time to be effective (Lien, Hung and McClean, 2007). Further, there is a perception that training automatically create learned employees who will contribute to performance and evaluating the training program is not necessary. In US, training in public sector is declining simply because of the inability to match the previous expenditure on training (Bills and Hudson, 2007). ROI calculation on training is a based on long term outcome which is categorized as summative outcome. (Brinkerhoff, 2002)

In many cases organisations do not have systematic training as posed in the ADDIE model (Analysis, Design, Develop and Evaluate) process as a whole. This is especially true in measuring organizational results or ROI seems to be hardly visible. The net program benefit is obtained through total program benefit subtract the total program cost. In reality the net program benefit is not precise as other organizational variables are intervening and this calculating doesn't give ROI impact for organisation. Thus, when evaluating a training program, organization should identify what type of impact should be measured which can be qualitative or quantitative measure. In measuring organizational impact time, cost and quality is important when conducting training which are related to productivity. If appropriate ADDIE is used and results can generate time delivery, quality and reduce cost in products and service, then employers will not hesitate to spend on training. Thus organisation impact measurement from training must have a metric that the organization values which the training can give an organizational impact.

Return on Investment (ROI) is the ratio of earnings (net benefit) to investment (cost); it is the most common measure for value added benefits in operational functions. "Is it worth the Cost to calculating the ROI of Training?" is the common question will occurred in evaluating a training program. A research shown that without reinforcement as much as 70% of what you learn today can be forgotten within 24 hours. It is widely thought that 80% of what is thought on a training program will be forgotten within a week of attending a course. Most of the people who attend a training course do not look at or review their course notes or materials when they return to the office. So by adopting an ROI based training approach its easy to get a better return from training initiatives, make training budget go further, guarantee that the training undertaken will make a difference to the business and ensure the staff makes the most of their training

programs. ROI is quite different then cost saving is a reduction in expense, while ROI is the rate or percent and return on the investment.

Although ROI based training is not a new concept, but very few training provides actually adhere to its approach. There are challenges in implementing the forth level of Kirkpatrick's training evaluation model that is result level where it needs ROI process. One of its challenge is the controversy is cause by the problems with the assessment of benefits and the simplicity of the methodology used in calculating ROI where its become problem and significant amount to controversy surrounding the valuation effort. Isolating program effort used to ensure accuracy in calculating the ROI and to ensure an accurate picture of the program is benefits. Excluding this step in the process will result in an incurrent, invalid and inappropriate ROI calculation. "It would be beneficial to compare and contrast other methods of isolating data in future ROI initiatives wherever practical and cost efficient to do so". (Berthiez, 2001). So our recommendation upon this issue is, a training program must be focus on the components of ROI based training which includes Training Needs Analysis (TNA), management commitment, program research and development, establishment of performance benchmarks, program implementation, program evaluation and reinforcement framework. All this components are key to making ROI based training works and it leads to an accurate methodology to be implemented.

Another most common reason to avoid this level of evaluation is the process is most difficult. This is because too many question occurred to analyze the result but many more questions remain unanswered by trainer for two reasons as mention by Kirkpatrick is, first trainers don't know how to measure the results and compare them with the last of the program. Secondly, even if they do know how, the findings probably provide evidence at best and not clear proof that the positive results came from the training program. Although the process is the most difficult part, but it leads to most important statement that the money spend on training is well spent, increase productivity, reduction of waste and improved employee retention.

In addition ROI calculation also include time constrain. This is because the time between training and application on the job may be different from each individual. This includes the previous level of evaluation that is reaction, learning and behavior. Even though the training provided at by the same time, same environment and by the same training instructor but the acceptance, reaction, learning and behavior level will be differ according to the individual. Some will be react very fast, some moderate and some will be take time to give feedback. Do in deciding on the time lapse before evaluating, a trainer must consider all the factors that are involved. According to Kirkpatrick the higher the value of potential results and the more times the program will be offered, it need more time to be spent. The value of the actual results should then be compared to the cost of the program. The results of this evaluation should determine whether the program should be continued or not. So our suggestion here is we need to decide the effective and efficiency to conducting a training and development program. It can be time constrain but it's a must in completing an evaluation as a whole.

Another barrier which not allows most of the organization until the last stage of evaluation is the ROI measurement is, the cost is high. According to Kirkpatrick is considering cost versus benefits in conducting ROI in training evaluation. "the amount of money that should be spent on level four evaluation should be determined by the amount of money that the training program costs, the potential results that can accrue because of the program and the number of times that the program will be offered", (Kirkpatrick, 1998). Our view regarding on this matter is ROI process is necessary even its costly because to implement a training program also include cost An organization can't keep on spending on training without get to know whether it contributes or not. Although it's costly but it gives information to an organization to decide whether to continue, modified or not continue the training.

Lack of reliable information also one of the barrier in conducting ROI in training. "In a court of law, juries are asked to determine if the defendant is guilty beyond a reasonable doubt. The fact that some people don't tell the truth and that testimony and "facts" can conflict necessitates this concept instead of the concept of proof. The situation is similar when we evaluate results. We look for evidence beyond a reasonable doubt that the results observed occurred because of a training program. Some critics can say, "isn't it possible that other factors could have influenced the results?" the answer is usually yes", (Kirkpatrick 1998).

The calculation of ROI is an exercise in "numbers in, numbers out" or input versus output. However, there are challenges. Accountants, revenue managers, and chief financial officers can track money, time, product, and the value of real estate, but the challenge with tracing the variables related to the impact of training is, inherently, subjective to a great degree. While training can include a comprehensive evaluation of the program using several different criteria and strategies (Tracey and Tews, 1995), the human variable means that a reaction to a training program does not always mean the same reaction will be consistently implemented when applied to task. Is the ambiguity, subjectivity, time value of information, individuality of behavior, and lack of time and interest in reducing the error associated with each cost and benefit analysis just too labor intensive (Kline, 2008).

Parry (1996) suggests that ROI is still worth calculating and offers four more reasonable approach that permit solid guesstimates. In lodging industry, US, ROI is lacking. One reason is ROI is not expected at the bottom line by top management. Some hurdles found was human perception factor discretion to convey efficiencies (Elliot and Edwards, 2009).

Organisations prefer to calculate ROI in simple method in training activities. However two problems encountered; it is relatively easy to assign monetary value to training costs, but difficult for result or tangible like increase in moral, stress, etc, how to give value. These are all returns but ROI are best estimates only (Murray and Efendioglu, 2007).

So the discussion shows its true that the last level of Kirkpatrick model is most difficult part in evaluate an effectiveness and efficiency of training program but its consider difficult versus important of ROI to be implemented. For a complete training evaluation includes all the four level, that is reaction, learning, behavior and result. To move from one level to another, it requires more effort, time, money and data to be gathered. So cooperation and commitment will leads to accurate and valuable information and results.

## **5.0 Conclusion**

It can be viewed companies best justification of training is to identify monetary analysis. This is because organizations are concerned at whatever input should gained higher output. Cost benefit analysis is identified as one of the best means of evaluating ROI there are some drawbacks and intervention of other variances. In measuring ROI from training specific outcome need to be identified. Literature evidence supports that training has positive returns from training investment. The failure to identify the benefit of training ROI at the highest level is because of several internal and external factors of organizations. Time, cost, top management support, training objective, number of employees involve are some of the major issues in evaluating training.

Thus, organization should conduct a pre-analysis on what is the need of training and objective and systematic training preparation will certainly identifies the return easily to the organizations. Training indicates reverse causality effect, that companies have made greater training effort because positive results obtained ((Daniel del Valle, Castillo & Rodriquez-Duarte, 2009). Thus, obtaining the maximum outcome becomes a mandatory.

Training should be seen as a long term impact and should link training with organizational needs. The training effect can only be seen with large number of employees involved (Redshaw, 2000). Besides, it is important practioners and researchers needs to have good understanding of designing and evaluating training (Arthur, Jr. & Bennet Jr., 2003) in order to have effective training. Training is certainly an investment not expenses (Daniel del Valle, Castillo & Rodriquez-Duarte, 2009).

Success of training evaluation on organization has determining factor like genuine training needs and involvement of line managers involve in planning (Redshaw,2000). analysis, forecasting, participant estimation, customer input and expert estimation. Usually training take into consideration measurement and evaluation which solely focus on individual a few integrated courses.

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