



Evaluating Training Efficacy – Some Challenges

* Mr. Arunava Dey

* Regional Training Manager (East), SBI Life Insurance Co. Ltd, Kolkata

ABSTRACT

Researchers have come up with various training evaluation techniques since 20th century. The most widely accepted training evaluation tool across the globe is Kirkpatrick's 4 levels and Jack J. Philip's Return On Investment which is an update of Kirkpatrick's levels. This research study critically analyzes Donald L Kirkpatrick's "Four steps to measuring training effectiveness" and Jack. J. Philip's Return – On – Investment (ROI) model for evaluating training efficacy to address the business need of an organization. The study was carried out to see the challenges associated with Kirkpatrick's levels and the extent to which the organizations have adopted Kirkpatrick's levels for measuring training efficacy. The study puts special emphasis on the factors affecting the transfer of training to job. The study further analyses the need for ROI as a measurement tool.

Keywords : Evaluation, ROI, Training, Transfer

Introduction:

The modern management era throws heavy responsibility upon the shoulders of Training & Development professionals to showcase the impact of Training in terms of tangible benefits to the organization. Accounting world does not view training as a capital investment. Evaluating a Training program to see its efficacy thus becomes even more important. Evaluating a training program helps to determine whether a particular training program needs to be continued/modified/dropped. It also helps to justify the expenditure incurred in training besides avoiding training budget cuts when cash flows are scarce in an organization.

Training evaluation involves the systematic collection of descriptive and judgmental information that can be used to make effective training decisions. Such decisions include the selection, adoption, modification, and financial evaluation of various training activities (Goldstein & Ford, 2002)

The goal of training evaluation is not simply to label a training program as good or bad. This is important to keep in mind, some trainers avoid evaluations that might identify minor problems or errors for fear that top management may try to "pull the plug" on such a program. Instead, the focus should be on how making minor modifications based on training evaluation can make a training program more effective in meeting its objectives (Brown & Gerhardt, 2002; Goldstein & Ford, 2002)

1.1 The Kirkpatrick Model:

The model uses four levels for the evaluation of the effectiveness of a training program. The four levels are:

- Level 1 – Reaction
- Level 2 – Learning
- Level 3 – Behaviour
- Level 4 – Results

Kirkpatrick's four levels have stood the test of time and are as relevant today as they were over four decades ago. They are perhaps even more relevant today, as the pressure on the training professionals to deliver results and not just positive "Smile sheets" grows greater every year.

The first level describes how the participants in the training

program react to it. This level is primarily concerned on how the trainees "feel" about the course / content / delivery of the program. The feedback is taken in a sheet termed as "Reaction sheet" which forms Kirkpatrick level 1 evaluation. What is basically asked in the "Reaction sheet" (happiness sheet) is how happy was the trainee with the training program.

The second level describes about learning. A pre – test and post – test is taken and the results are compared. The questions need to be objective and closely related to the course objectives. In this way it can be determined whether the training actually delivered knowledge and whether this was understood by the trainees at that time.

The third level describes about behaviour. Level 3 determines the extent to which change in behaviour occurs because of the training program. No final results can be expected unless a positive change in behaviour occurs. Therefore it is important to see whether the knowledge, skills, and /or attitudes learned in the program transfer to the job.

Kirkpatrick's Level 4 – "Results" speaks about determining the final results of a training program. More precisely it takes into consideration whether the training has resulted into tangible benefits to the organization – Often it is improved quality, productivity or safety. It may also be improved morale or better team work, which it is hoped will lead to better quality, productivity, safety and profits.

Reaction and learning criteria are considered internal criteria because they focus on what occurred within the training program. Behavioural and results criteria are considered external criteria because they assess changes that occur back on the job.

2. CRITICAL ANALYSIS:

2.1 The extent to which organizations adopt Kirkpatrick's 4 levels:

Surveys of companies' evaluation practices indicate that organizations frequently use reaction criteria, but they use learning, behavioural and results criteria much less frequently. Specifically, a survey indicated that organizations are using the four evaluation levels at the following percentages: reaction: 78%; learning: 32%; behaviour: 9%; and results: 7%

(Van Buren & Erskine, 2002)

Kirkpatrick in one of his latest publication opined that people are concentrating on levels 1 & 2, and there is not enough activity at levels 3 & 4.

The American Society of Training & Development (ASTD) 2005 state of the Industry report provided the results of a benchmarking survey of large global organizations most of which are based in the USA. In the survey these organizations were asked whether they evaluated training at each level of the four levels (based on Donald Kirkpatrick's four – step model). 91.3% reported evaluating their training programs at Level 1 and 53.9% reported evaluating at level 2. Only 22.9% of organizations surveyed reported evaluating at level 3 and only 7.4% evaluated at level 4.

While the training professionals are more focused on Level 1 & 2, the top management is more interested to see tangible benefits to the organization. In a recent survey, responses were sought from the CEOs of 401 Fortune 500 companies and 50 large private organizations, 96 CEOs gave insight into their perceptions on the following 8 parameters pertaining to training – Inputs, Efficiency, Reaction, Learning, Application, Impact, and ROI & Awards. Reaction was ranked the lowest, although it is the number 1 measure reported to executives. The highest ranking categories were impact and ROI. CEOs always want to see these types of data, especially during tough economic times. These are the least reported data sets, yet are of the most value to executives. (Jack J. Philips, 2009, Measurement & Evaluation at Work).

2.2 The Challenges associated with the Kirkpatrick's levels:

2.2.1 Kirkpatrick's level 1(Reaction) & level 2(Learning) – The challenges:

Discussion about the insufficiency of reaction measures has been prevalent in the literature since the late 1980s. Noe and Suchmitt (1986) determined that trainee satisfaction was not related to learning, and learning was not related to behaviour change. Dixon (1990) found no significant relationship between trainee perceptions of job relevance, amount learned, enjoyment, or instructor skill and subjects' post – test scores. Warr and Bunce (1995) determined that there was no association between reported enjoyment and learning scores.

Strong corroboration of these findings is provided in a meta-analytic study conducted by Alliger *et al.* (1997) in which an analysis of 34 studies containing 115 correlation coefficients yielded only a weak association between reactions of any type and immediate learning. Alliger *et al.* concluded that 'reaction measures cannot be used as surrogates of other measures' (ibid: 353).

Traci Sitzmann (2008) who has done the research on Meta – studies on 68,245 trainees over 354 research reports expressed similar views through her research studies that it is not true that the satisfied students learn more than dissatisfied students.

In fact, ratings are sensitive to mood. The activities that immediately precede the end – of – course ratings can affect the data. For e.g. a celebratory atmosphere in the training room may improve the rating. (John E. Jones, 1990).

Kirkpatrick's level 1 & 2 have been accused of putting no value addition to an organization as Robert O. Brinkerhoff and Timothy P. Mooney (2010) argue that the benefits to the organization derives not from what was learned but from what actually gets used – that is, value doesn't come from mere exposure to the training or the acquisition of new capability. Instead, value comes from the changes in performance that the training eventually leads to.

Dixon (1987) expresses similar opinion as the scholar claims

that "the use of participant reaction forms can cause more problems than benefits for the training function of an organization". This statement is especially true when participant reactions are the only evaluation method used.

According to Carnevale and Schulz (1990), the measurement tools used to evaluate learning should reflect each training program's particular objectives. Also, measures of learning changes may be taken during or at the end of a training session. They caution that such a measure of learning changes "may indicate that a program's instructional methods are effective, but it doesn't show whether or how participants' new learning will be applied on the job".

Antheil and Casper, 1986 suggests that the participant reaction is a measure of "customer satisfaction" indicating the level of effectiveness and usefulness of the training program at the time the participants are experiencing it and sometimes weeks or even months forward. They however caution the evaluators that the data collected regarding participants reactions reflect participant opinion and should not be considered proof of learning.

Some trainers and researchers feel that measurements of participant reactions are inaccurate and counterproductive. For instance, Conway and Ross (1984) found that participants have a tendency to underestimate their pre - training skills and overestimate their post - training skills in an attempt to justify participating in the training. Their research is consistent with research in the field of social psychology indicating that people have a strong need to justify their behaviour and actions and consequently may alter their opinions and their interpretation of past events. Thus, if trainers continue to use participant reactions as the sole means of evaluation-and management continues to allow such use-the outcome can be misleading and extremely costly.

2.2.2 Kirkpatrick's level 3(transfer of learning to job) & level 4(business impact) - The challenges:

Alliger and colleagues (1997) used the term "transfer" instead of "behaviour" for Kirkpatrick's level 3 to emphasize that these measures assessed on –the –job performance.

Transfer of learning is the degree to which trainees apply the knowledge, skills and attitudes gained in training to their jobs (Machin, 2002; Wexley & Latham, 2002).

Kirkpatrick in one of his latest publication admitted that the process of evaluation for Level 3 is complicated and time consuming since change in behaviour does not occur instantly after the training program. It takes time for its occurrence. But how do we measure that? One needs to decide whether to use interviews, survey questionnaires, or both. One must also decide whom to contact for the evaluation. The other difficult decision is when and how often to conduct the evaluation. It thus discourages most trainers from even making an attempt to evaluate at level 3.

James D. Kirkpatrick (2005), son of Donald L. Kirkpatrick explains three challenges on transfer of learning. Firstly; Training professionals focus mostly on Level 1 & 2 since these are the levels that they have most control over. Top executives are interested in level 4 (i.e. results). That leaves level 3 (transfer of learning) out there on its own with no one really owning it. Secondly, the trainers lose their "control" when their training participants move from level 1 & 2 to level 3. In other words, while participants are in the class room or using e – learning methods, the instructor has total control over what is being taught and how it is being presented. Once the actual training is over and the participants go back to their jobs, all that is left for members of the training or learning team to use to achieve successful level 3 measures is *influence*. Thirdly, most of us tend to do things that we are familiar and comfortable with, even if there are better ways thus, inhibiting the transfer.

Nanda (1988) opines that the factor that often inhibits transfer

of learning to job is the organizational climate, which may be inconsistent with what is taught in the training program. This inconsistency often renders such training programs entirely ineffective. As Nanda says, "Perhaps changes in attitude among top managers are key to the skill development of supervisors."

Endres and Kleiner (1990) echoes similar views as they caution evaluators that other factors can impact the effectiveness of management training and development, including the manager, the trainer, the organization, and the environment. As they state, "All four are complex creatures".

Kelly (1982) opines that only 10% of a company's training transfers skills to the job. Then what happens to the remaining 90% of the training? The Scholar suggests that 40% is lost because the training function is often isolated or peripheral. An additional 40 percent, she suggests, is lost because most trainers or management educators do not build transfer into the training programs. Finally, 10 percent may be lost when the course designer does not deliver the training.

A Meta – analysis of the training effectiveness literature revealed a similar disconnect between learning and behaviour .When learning criteria were compared with subsequent behavioural criteria (i.e. work behaviours), effect sizes decreased substantially (Arthur *et al.*, 2003). Further demonstrating the gap between learning and behaviour, Van Wijk *et al.* (2008) conducted a meta – analysis and found a corrected correlation of only 0.22 between organizational knowledge transfer and performance.

Kirkpatrick's levels 3 & 4 does not filter precisely the non – training factors that contribute to the success of training. Robert O. Brinkerhoff and Timothy P. Mooney, (2010) argue that training alone does not produce results ; there are always a number of non training factors that enable or impede successful results from training. In a Sales training program, for example, we might see an increase in sales, or we might not. How do we know it was the training that led to increased sales or the failure to get increases? May be it was some other factor, such as a change in the market, a new incentive to sell more, or something else. Supervisory support, incentives, opportunities to try out learning, and the timing of the training , to name a few, are examples of the sorts of non training or performance system factors that determine whether or how well training works to improve performance.

Bruce C. Aaron, (2010) echoes similar views and suggests the evaluators that the only way to know the connection between a particular training program and measured business impact is to deliberately isolate the effects of the program on the specific business outcomes of interest. This ensures that the data analysis allocates to the program only that part of the performance improvement that is connected to the program. Without this important step, the conclusions of the evaluation process will lack credibility. The scholar cautions the evaluators that giving full credit for performance results to a single program without accounting for other factors that clearly have a similar potential effect on results would be certainly questionable. Credible evaluation requires an effort to ensure that only the results that are directly attributable to the training program should be reported to stakeholders.

Baldwin and Ford (1988) were one of the first researchers to introduce a model which proposes three sets of factors related to transfer of learning: (a) trainee characteristics, including cognitive ability, self – efficacy, motivation and perceived utility of training; (b) training design, including Behavioural modelling, Error management and Realistic training environment (c) the work environment, including Transfer climate, Support, Opportunity to perform and follow up.

Since Baldwin and Ford's (1998) review of the literature , considerable progress has been made in identifying specific factors that affect transfer , especially as related to understanding

work environment factors (Awoniyi *et al.*, 2002; Cromwell and Kolb, 2002; Gumuseli and Ergin, 2002; Kontoghiorghes,2001; Lim and Johnson,2002; Roullier and Goldstein,1993; Tracey *et al.*, 1995)

3. Factors affecting transfer of learning based on Baldwin & Ford (1988):

In recent years, scholars have described the transfer literature as having 'mixed findings' and a lack of 'synthesis' (Blume *et al.*, 2010). In this study, the strongest and the most consistent findings from literature have been extracted. Practically it may not be possible for organizations to incorporate every factor that has been linked to transfer into the training program. However, organizations can benefit from those 'factors' which are most likely to make a significant impact on the transfer outcomes.

3.1 Trainee Characteristics:

It is widely accepted that trainee characteristics play a powerful role in the transfer of training (Burke & Hutchins, 2007). Some argue that such characteristics account for the bulk of variability in training outcomes (Van der Klink *et al.*, 2001). In fact the Trainee should be ready to accept the training so that they transfer the learning back to the job. Trainee readiness refers to whether the participant has the personal characteristics necessary to acquire knowledge from a training program and apply it to the job (Noe, 2002). It is worth mentioning that cognitive ability, self – efficacy, motivation and perceived utility of training are the traits that have proved the strongest and most consistent relationship with transfer.

3.1.1 Cognitive ability:

Assessing cognitive ability before training can be useful in grouping individuals based on their readiness to learn the material. Kanfer and Ackerman's (1989) research suggests that cognitive ability affects trainee performance through its influence on attentional resource capacity. Individuals with high cognitive ability may be better equipped to process and retain information provided during training. Strong evidence of the role of cognitive ability was found in an extensive Meta – analysis based on two decades of training research (Colquitt *et al.*, 2000). The author reported a corrected correlation coefficient between cognitive ability and training transfer of 0.43. More recently, Blume *et al.* (2010) echoed these findings in another thorough Meta – analytic review of the transfer literature. Overall, research suggests that cognitive ability is crucial for the transfer of training. In a nutshell, trainees higher in cognitive ability have more success in processing, retaining, and generalizing trained skills (Baldwin & Ford, 1988; Blume *et al.*, Burke & Hutchins, 2007; Colquitt *et al.*, 2000; Kanfer & Ackerman, 1989; Velada *et al.*, 2007)

3.1.2 Self – efficacy:

Self – efficacy which has also been linked to the transfer of learning can be defined as a judgment an individual makes about his or her ability to perform a given task (Bandura, 1982). The higher the trainees' self – efficacy, the more confidence they will have in their ability to successfully acquire targeted skills and perform trained tasks. Self –efficacy has consistently shown positive relationships with the transfer of training (Burke & Hutchins, 2007). Chiaburu and Marinova (2005) indicate that self – efficacy positively relates to pre - training motivation, which, in turn, significantly predicts transfer. Chiaburu and Lindsay (2008) drew similar conclusions after investigating the role of self – efficacy in transfer outcomes. Several other studies have also demonstrated a positive relationship between self – efficacy and transfer, either directly or indirectly, through trainee motivation. (E.g. Ford *et al.*, 1998; Holladay & Quinones, 2003).

3.1.3 Motivation:

In more recent years, trainee motivation has emerged as a significant contributor to the transfer of training (Baldwin *et al.*, 2009). Trainee motivation is the extent to which trainees are interested in attending training, learning from training and transferring the skills and knowledge acquired in train-

ing back to the job (Ford et al, 1998; Mathieu & Martineau, 1997). For transfer to occur, trainees must believe that they are capable of learning, that their effort to learn will change their performance and that a change in their performance will lead to valued outcomes (Facteau et al., 1995). In relation to transfer, motivation has been conceptualized and studied in various ways. Specifically, pre - training motivation, motivation to learn and motivation to transfer have all exhibited important relationships with training outcomes (Burke & Hutchins, 2007). Chiaburu and Lindsay (2008) examined both motivation to learn and motivation to transfer and found that motivation to transfer exhibited a markedly stronger relationship with transfer (0.43) than did motivation to learn (0.07). Interestingly, however, they also found a positive relationship between motivation to learn and motivation to transfer (0.26), suggesting that motivation to transfer may still play an important, albeit indirect role. The authors proposed that motivation to learn might influence trainees' performance in the instructional environment, yet motivation to transfer is more likely to trigger the proactive behaviors necessary for actual transfer. Taken together, these findings indicate that it is critical that trainees remain motivated during multiple stages of the training process for transfer to occur.

3.1.4 Perceived utility of training:

Transfer can also be influenced by the perceived utility or value associated with participating in training (Burke & Hutchins, 2007). Training has high utility or instrumentality when trainees perceive a clear link between required performance and outcomes that they value (Chiaburu & Lindsay, 2008). Burke and Hutchins (2007) summarized factors that influence perceptions of training utility. These include trainees' evaluation of the credibility of the new skills for improving performance, their recognition of a need to improve job performance, their belief that applying new learning will improve performance and their perception of the practicality of the new skills for ease of transfer. Velada et al. (2007) showed that trainees' assessments of how applicable the training was to the job, or the degree to which training instructions matched job requirements, significantly related to training transfer. Similarly, Gilpin-Jackson and Bushe (2007) emphasized the importance of trainees' judgments about the value of the training. In a nutshell, trainees who perceive training as useful and valuable are far more likely to apply new competencies in the workplace. (Burke & Hutchins, 2007; Chiaburu & Lindsay, 2008; Gilpin - Jackson & Bushe, 2007; Velada et al., 2007)

3.2 TRAINING DESIGN:

It is worth mentioning that the use of behavioural modelling, error management and realistic training environment show strong relationships with the transfer of training and hence chosen for discussion in this study.

3.2.1 Behaviour Modelling

Based on Bandura's (1977) social learning theory, this approach includes clearly defined explanations of behaviours to be learned, models displaying the effective use of these behaviours, opportunities for trainees to practice learned skills and the provision of feedback and social reinforcement following practice (Taylor et al., 2005). In fact, Behavioural modelling facilitates transfer when both positive and negative models are used, and when opportunities to practice are provided. (Taylor et al., 2005)

3.2.2 Error management

Error management is a related training strategy that has also proven to effectively promote transfer (Burke & Hutchins, 2007). Error-based training allows trainees to anticipate what can go wrong, and equips them with the knowledge of how to handle potential problems. Furthermore, such training can enhance the perceived utility of training by exemplifying negative outcomes that can occur without the acquisition of trained skills (Burke & Hutchins, 2007). Additional support was found in a recent meta-analysis in which error management training yielded greater transfer outcomes than error-avoidant training methods (Keith & Frese, 2008). In a nutshell, Error manage-

ment promotes the transfer of training by allowing trainees to anticipate potential issues, providing them with knowledge of how to handle such problems, and highlighting the negative outcomes that can occur if training is not transferred. (Burke & Hutchins, 2007; Heimbeck et al., 2003)

3.2.3 Realistic training environment

Many organizations go as far as conducting on-the-job training, which takes place in the actual physical and social environment where the tasks being trained will be performed (Salas et al., 2006). Kraiger (2003), for example, summarized training techniques that have been shown to enhance transfer. These include the use of identical elements, stimulus variability and varying conditions of practice. Such strategies allow trainees to gain experience with multiple conditions that can occur on the job. Similarly, practice scenarios should encompass characteristics of the actual work environment (Salas et al., 2006). Accordingly, many training programs now incorporate the use of simulations. Interestingly, both low-fidelity (e.g. role-playing) and high-fidelity (e.g. full-motion simulators) simulations have shown to be equally effective training strategies. Realistic practice scenarios also help promote active learning, a technique thought to maintain trainees' attention and contribute to transfer (Burke & Hutchins, 2007). In a nutshell, Conducting training and practice in environments that resemble the workplace increases the likelihood that trained competencies will transfer (Burke & Hutchins, 2007; Kraiger, 2003; Salas et al., 2006)

3.3 Work environment:

The effectiveness of a training program is largely dependent on the trainees' ability to use their newly acquired competencies on the job (Salas et al., 2006). The most important components of work environment include transfer climate, support, opportunity and follow – ups.

3.3.1 Transfer climate

Transfer climate has been conceptualized as observable or perceived situations in organizations that inhibit or facilitate the use of learned skills (Rouiller & Goldstein, 1993). When trainees perceive a positive transfer climate, they tend to apply learned competencies more readily on the job (Salas et al., 2006). Colquitt et al.(2002) reported a corrected correlation coefficient of 0.37 between climate and transfer. In a qualitative exploratory study, trainees identified an unsupportive transfer climate as the greatest inhibitor to the transfer of training (Gilpin-Jackson & Bushe, 2007). Trainees were reportedly hesitant to apply new skills to the workplace when they feared breaking organizational norms. Kontoghiorghes (2001) found evidence that transfer climate, specifically task cues that prompt the use of new skills and knowledge acquired in training, was among the most influential variables for the transfer of training. Situational cues and consequences largely determine whether or not learned competencies are applied in the workplace. (Blume et al., 2010; Burke et al., 2008; Colquitt et al., 2000; Gilpin-Jackson & Bushe, 2007; Kontoghiorghes, 2001; Rouiller & Goldstein, 1993; Salas et al., 2006)

3.3.2 Support:

Both supervisor and peer support significantly influence the propensity for trainees to utilize trained competencies in the workplace. In fact, support from peers has shown consistent relationships with transefer. Chiaburu and Marinova (2005), for instance, reported that peer support showed a strong, direct relationship with transfer, as well as an indirect influence through its impact on motivation. Research indicates that new employees learn about the way training is viewed in the organization early in the socialization process and continue gathering information with each training course they attend (Feldman, 1989). For example, new employees whose co-workers grin sarcastically and ask "When do you go for training?" are likely to conclude that the less time spent in training, the better impression they will make on peers. Thus, organizations need to pay careful attention to messages employees hear about training within and across departments. Goal setting can have

a significant impact on transfer outcomes. Research indicates that specific and difficult goals, in combination with feedback, can greatly enhance motivation and, in turn, performance (Robbins & Judge, 2009). It is worth noting, however, that the benefits of goal setting are not without their limitations. Some scholars have argued that when particularly specific or difficult, goals can actually be detrimental due to their potential to narrow one's focus, shift risk attitudes and precipitate the psychological costs associated with goal failure (Ordonez *et al.*, 2009). Furthermore, the same goals may not prove beneficial when applied to different people, as individuals differ in their abilities and the degrees to which they identify with certain goals. Nevertheless, research generally indicates a positive relationship between goal setting and transfer (e.g. Burke & Hutchins, 2007). Supervisors can likely facilitate optimal transfer outcomes by implementing goal setting while remaining cognizant of its potential limitations. Supervisors can also support trainees by providing recognition, encouragement and rewards, and modelling trained behaviours (Salas & Stagl, 2009; Salas *et al.*, 2006). Cromwell and Kolb (2004) showed that trainees who received high levels of supervisor support transferred more knowledge and skills 1 year after participating in a training program than those who reported lower levels of support. Various studies have emphasized the importance of supervisor involvement or participation in training for transfer outcomes (Gilpin – Jackson & Bushe, 2007; Saks & Belcourt, 2006). Thus it is important for managers (Supervisors) to consider transfer issues when adopting training programs, and to take steps to ensure the supportiveness of the post – training work environment.

3.3.3 Opportunity to perform

For training to successfully transfer, trainees need the resources and opportunities to apply their new skills and abilities to the workplace. (Burke & Hutchins, 2007; Clarke, 2002; Cromwell & Kolb, 2004; Gilpin-Jackson & Bushe, 2007; Lim & Johnson, 2002; Salas *et al.*, 2006). A study by Lim and Johnson (2002) demonstrated that the provision of opportunities can also be conceptualized as a form of support. Trainees rated opportunity to use trained skills as the highest form of support, and conversely, the lack of opportunity to use training as the biggest obstacle to transfer.

3.3.4 Follow up:

To facilitate transfer, the formal training period should be followed by additional learning opportunities (e.g. after action reviews, feedback, job aids). (Baldwin *et al.*, 2009; Salas & Stagl, 2009). Velada *et al.*, (2007) for example found that feedback regarding trainees' post – training performance significantly influenced transfer. Furthermore, Salas *et al.*, (2006) emphasize the use of job aids, tools that are designed to assist with job performance further facilitate the transfer of training. Thus, in order to promote positive transfer, the organizations need to continuously facilitate the learning process post completion of the training program.

4. The need for ROI as a measurement tool:

Kirkpatrick's level 4 measures the final results or the business impact of a training program, however it does not provide the outcome as ROI. In fact, level 4 evaluation method has totally ignored measuring the business impact in terms of Return – on – Investment (ROI) as Kirkpatrick in one of his latest publication remarks – *"I almost laugh when I hear people say that training professionals should be able to show benefits in terms of return on investment (ROI) from a company standpoint."* (Evaluating Training Programs, 2005, Third Edition: Donald L. Kirkpatrick & James D. Kirkpatrick).

Although a training program may produce measurable business impact, there is still a concern that the program may have cost too much. (Patricia Pulliam Phillips & Jack J. Phillips, 2008). This is where the concept of Return on Investment (ROI) comes into play.

ROI is an update of Kirkpatrick's levels. It compares the monetary value of the results with the costs for the program, usu-

ally expressed as a percentage.

Patricia Pulliam Phillips & Jack Phillips (2008) opines that ROI evaluation is suitable for training programs that are expensive, high – profile, offered to a large audience, linked to business objectives and strategy as well as the programs which are of interest to senior management.

4.1 The ROI Model:

The ROI Model is an update of Kirkpatrick's levels. The update is basically on two aspects: a) It takes into consideration the monetary value of business impact and b) It isolates the effects of Learning & Development. In this step of the process, specific strategies are explored to determine the amount of output performance directly related to the program, resulting in increased accuracy and credibility of ROI calculations.

The calculation of ROI as developed by Jack J. Phillips follows the basic model starting from Planning Evaluation to data collection. Both hard data (e.g. Output, quality, cost and time) and soft data (for e.g. Job satisfaction and customer satisfaction) are collected. This is followed by analyzing the data by isolating the effects of Learning and Development & converting the data to monetary values.

The final step in ROI calculation is to tabulate the cost of the program starting from cost of designing the program to all other relevant costs applicable to the training program.

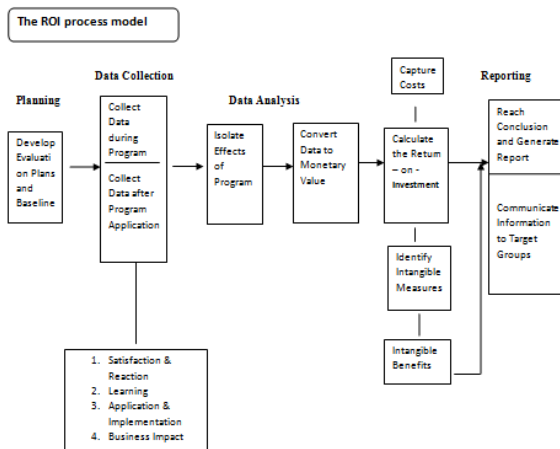
4.2 Calculating the ROI:

The ROI calculation uses the net benefits divided by program costs. The net benefits are the program benefits minus the costs. In formula form, the ROI becomes:

$$ROI (\%) = \frac{\text{Net Program Benefits}}{\text{Program Costs}} \times 100$$

This is the same basic formula used in evaluating other investments for which ROI is traditionally reported as earnings divided by investment.

Jack J. Phillips (2008) suggests that during data analysis, every attempt is made to convert all data to monetary values. All hard data such as output, quality, and time are converted to monetary values. The conversion of soft data is attempted for each data item. However, if the process used for conversion is too subjective or inaccurate and the resulting value loses credibility in the process, then the data is listed as an intangible benefit with the appropriate explanation. For some programs, intangible, non – monetary benefits are extremely valuable, often carrying as much influence as the hard data items. This is followed by reporting the data to the stake holders.



5. Scope for future research:

This research study tried to highlight the fact that although the participant reaction (Level 1) and learning measures (Level 2) are predominantly used in organisations for evaluation, yet they do not seem to contribute greatly in predicting transfer of learning nor do they seem to predict actual improvement in performance. In fact, as on date there is no research study available in the literature that supports Kirkpatrick's reaction & learning measures (level 1 & 2) in accurately predicting transfer of learning to job. However, more research may be undertaken by the researchers to confirm this fact. Though some considerable research has been made by the researchers on the factors affecting transfer of learning to job, yet more research needs to be undertaken to understand the role of each factor in different types of training programs, viz. Functional training, Behavioural training, Induction training etc. and when the factors are most important – before, during or after the training.

6. Conclusion:

With so many frame works for evaluation, the question becomes, "Which one is the best?" This is again a debatable issue as which is best for one organization may not be appropriate for another. The most important course of action is to select a model around which an organization will focus its evaluation. The framework developed by Kirkpatrick has been the most widely used approach in organizations. The ROI framework an update of Kirkpatrick's approach is rapidly gaining acceptance. ROI is the ultimate, but not the only, measure of program success. Other important outcomes

occur as programs are implemented. Reporting ROI in the context of other measures of performance gives the measure additional meaning and provides all stakeholders information they can use to make decisions about the program.

Considering the fact that Kirkpatrick's level 1 (reaction) & level 2 (learning) do not seem to contribute greatly in predicting transfer of learning and actual improvement in performance, evaluators may prefer to evaluate the efficacy of a training program at level 3 (behaviour / transfer of learning) and level 4 (results). However, in tune with D.L. Kirkpatrick's (2005) opinion, this research study strongly argues that directly evaluating a training program at level 3 & 4 by avoiding level 1 & 2 may give results which may be questioned. This is because if the evaluation is done at level 3 and it is discovered that little or no change in behaviour has occurred then the conclusion would be that the training program was not good and it needs to be discontinued or modified. This conclusion may be entirely wrong since the reason for no change in job behaviour may be that the climate has prevented it. Supervisors may have gone back to the job with the necessary knowledge, skills and attitudes, but the boss wouldn't allow change to take place. Therefore it is important to evaluate at level 1 & 2 so that the evaluator can determine whether the reason for no change in behaviour was due to lack of learning or negative job climate. Finally, training evaluation should be done to improve upon the future programs to get the desired results and not as a punitive measure to penalize the failure or not achieving the results up to the desired level since the success of a training program is a multiple responsibility shared by several groups.

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