

Training Evaluation Models: Comparative Analysis

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Abstract



The descriptive research study aims at evaluating various training evaluation models found in practice with a view to draw a comparative analyses. Training evaluation models are methodically organized systematic frameworks for examining and evaluating the usefulness of training of employees, groups or organizations. The study described and evaluated training evaluation models including; Hamblin Five Levels Framework, Context-Input-Reaction-Output (CIRO) model, Bushnell input-process-output (IPO) Model, and Kirkpatrick training evaluation models. An in-depth analyses of all of the selected models were undertaken and its pros and cons were identified followed by their comparison with each other. The study analyses found Kirkpatrick training evaluation better in application because of its key advantages. Despite few of its limitations, the model 's acceptance as better one is accredited to its easy to use procedure, flexible adaptability across variety of industries and most comprehensive among all.

Keywords: Kirkpatrick, Hamblin, Context, Input, Process, Product (CIPP), Context, Input, Reaction Output (CIRO), Phillips ROI model, Training Evaluation

Introduction

Human capital can be considered an important pillar of any organization for retaining sustainable competitive advantage and efficiency. The human Capital theory rules are often applied by the management of organization to maintain the competitive advantage by developing their knowledge, abilities and skills through different job related trainings (Pasban & Nojodeh, 2016). In the global world, where information is considered a key to success, the skills, knowledge, job related experience, communication skills and creativity of the employees are considered the asset of the organization. Human capital is more precious than any financial and physical capital of organization (Mellander & Florida, 2021). There are many different types of capital that are thought of as inputs into the production services and any other goods, but human capital is not thought of as a straightforward input since it has a more complex role to play in the process of producing things or offering services (Pasban & Nojodeh, 2016). The human capital consider as education, skill, knowledge and psychological ability to tackle organizational problems (Brooke, Rasdi & Samah 2017) and other words, Human capital is the knowledgeable human resource an organization have instead of physical or financial capital including creativity, job related skills and knowledge (Pasban & Nojodeh, 2016). Human resources considered an important capital in organization as the physical and financial capital can be separated from individuals however; they cannot be separated from their knowledge, skills and abilities. For formation of human capital from human resource of an organization, the training and development is crucial.

Training plays important role in the development of effective human capital with relevant skills and knowledge. The idea of human capital was first introduced by Adam Smith in his 18th-century book "An Inquiry into the Nature and Causes of the Wealth of Nations. Smith mentioned in his book "The wealth of a country is built up of its people's knowledge, skills, experience, and abilities (Ucak, 2015). For organization's profitability and efficiency, management must look into the investment on human resource development as all employees do not have same knowledge, abilities and skill related to jobs. Trainings can overcome the weakness of employees by developing their

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skills from training (Maity, 2019). Organizations are able to handle global problems and reach their desired position by offering a variety of training to employees in order to grow their skills and talents (Shirinkina & Kodintsev, 2018). By investing in communication skills, problem solving skills, human resource management and physical and mental health of employees benefited the organization to produce more products and profit and the employees as well in form of more earning. Trainings can enhance the efficiency and effectiveness level of organizations as well as employees (Bhalotra & Clarke, 2020). All activities that promote employees in gaining new knowledge and skills or improving their current ones are considered to be a part of employee training and development (Rafiq, 2015; Niazi, 2011).

Training is a systematic process used by talent development experts to help people become more effective at their jobs (Sung, 2018), while on other hand, Development is the process by which people gain knowledge, abilities, and attitudes that equip them for brand-new roles or responsibilities. Formal education, coaching, mentorship, informal education, self-directed education, and experiential education are just a few of the different ways that employees can be developed (Govil and Usha, 2014). in this global world, modernization taking place and organization in the race of competitive advantage needs more equipped, knowledge and skilled human resource, which could only be achieved through training and development (Johnson et al. 2012). Millions of dollars have been invested by organizations to develop the skills of their employees to face changing business world. Training can affect the efficiency and effectiveness of employees directly (Allen et al, 2022). For the purpose of enhancing employees' talents, knowledge, and skills, businesses offer a variety of training programmes. For instance soft skills training, technical training, safety training, compliance training, management development, executive development, customer service training, leadership development, workforce training, corporate training, enablement of sale (Manzor et al, 2019). Additionally, it fosters a more productive work atmosphere, enhances employees' problem-solving abilities, enables them to learn technical skills to operate equipment and tools and address issues, and increases their personality confidence (Rafiq, 2015). Thus, a lot of businesses make significant investments in training. Training has developed into strategic training because it supports a long-term organization's objectives (Niazi, 2011). For investigating the effective investment into training and analysing return on investment, different training evaluation models have been introduced by different theorists according to the situation and organization (Kassem, 2018). Which includes i.e. Kirkpatrick model, CIPP model by Galvin (1983), six stage model by Brinkerhoff (1987), Kriger model (1993), Holton model (1996) and Philip's Return on Investment (ROI) model (1996) and other (Mohamad & Osman 2017).

Statement of Problem: The research study is aimed to layout a diagnostic investigation of various training evaluation models being followed in various organization setting, with a view to draw a comparative analysis amongst them and identify the best suited model with rational.

Literature Review:

The significance of training and development in today's human resource management practices cannot be overstated. The ability to build the skills and competences needed to improve the bottom line results for their organisation is made possible by training and development. It is a crucial component for enhancing organisational effectiveness. Any business that strives for ongoing excellence has to invest in the training and development of their employees. Numerous studies and research are conducted to determine how training and development transform organisations and how to improve the practice of training and development (Chahtli et al., 2021). Each level of an employee's knowledge and skills can be improved through training and development, which also broadens the employee's intellectual horizons and overall personality. It makes sure that randomness is minimised and that learning or behaviour modification occurs in an organised manner (Mishra & Nair., 2021).

Training Process: For the purpose of effectively achieving the aim for which training has been established, training is a procedure that must be followed step by step (McNamara, 2012). An organization's investment in training is undertaken with the aim of achieving particular objectives. The organisation stands to gain significantly from a good training programme (Govil and Usha, 2014). The training process consist of main five stages

Need Assessment of Training (TNA): In the first stage, the evaluation of the organization's training need is. This procedure identifies both training and nontraining needs. The cause of the performance gap could be an employee's lack of abilities, knowledge, or attitude (Govil and Usha, 2014). It is

important to distinguish between other performance gaps and KSA inadequacies because they may call for alternative solutions, such as problems with motivation or faculty equipment (McNamara, 2012). During the analytical step, the performance gap's root cause is found. Since training is a remedy, training needs are suggested for performance gaps brought on by deficiencies in knowledge, skills, and abilities. All other causes are referred to as non-training needs. The analysis step also gives the identified training needs priority. Not every criterion will be equally important to the company. In the analysis phase, the data are collected and analyzed to decide whether there is any need of training or not by keeping the organization's expectations and long term goals.

Deciding Training Objectives: One of the key phases of creating an employee training programme is setting (and communicating) training objectives after the analysis phase highlighted training needs, which are taken into account throughout the design phase along with restrictions and support backlogs (Govil and Usha, 2014). Ironically, defining objectives of training is usually ignored in many organizations. Your company's instructional tactics are guided by training objectives, which also help employees understand the value of training and maintain the long-term viability of your training programme (McNamara, 2012). These provide comprehensive instructions on the training content and delivery methods. These objectives specify the results that companies and employees should expect from training, and they provide information for the remaining stages of the model (Homklin et al, 2014). This stage decides what skills, materials will be delivered in training and what will be the expected results on the organizational performance.

Training Design: Choosing the components that should be a part of the training to make learning and application on the job convenient is a step in the training design process (JK Ford, 2014). Training design includes methods of teaching, the practice requirement, organizational training contents and other that suit the training program. The design is basically building a training program after deciding the objectives and goal of the organization. Who could be the trainer depends on the training's design. The person who will oversee the training programme should be chosen based on their aptitude and knowledge requirements for effective training. It might be a consultant, manager, lecturer, businessperson, worker in human resources, etc (Govil and Usha, 2014). Why should people be educated?

To eliminate the knowledge gap, it is essential to have a clear idea of who needs to receive education. Self-motivation, managerial guidance from the HR department, and technique selection are just a few of the options (Niazi, 2011). The trainer must have all the data required to choose the most effective learning techniques for the participants. The training's content is adapted to the identified development areas specifically.

Implementation of training: Through the implementation process, training plans are put into action (JK Ford, 2014). It's crucial to create a learning atmosphere that promotes achievement. Role-playing and interactive exercises should be encouraged by the trainer to keep the trainees engaged. Several elements of training programmes come together during this time, but assuming that everything will go according to plan is a mistake. Therefore, it is beneficial to put the programme through both a dry run and a pilot.

Evaluation of training: The last step in the training process is the evaluation phase. Finding out whether or not the training's objectives and aims were met is the goal of the evaluation process. Participants must provide comments on the course's results (Johnson et al. 2012). To find out if participants are using the skills they acquired through the learning programme at work, you can follow up with supervisors. Outcome evaluation is the process of assessing the training's impact over the employees, on the work and company after it has been completed (Morschett et al, 2015).

Evaluation and Effectiveness of Training: Human resource management literature emphasises the importance of employees acquiring job-related knowledge and abilities as a means of gaining a competitive advantage over the long term (Kaur & Kaur 2021; Morschett et al, 2015). In order to thrive in today's dynamic business environment, organisations of all stripes—public and private alike—place a premium on investing in their people through education and training (Johnson et al. 2012). Considering this, training is the only option left for increasing efficiency at both the individual and group levels (Yidi, 2020). A training evaluation is a strategy for gathering and analysing data to evaluate whether or not the training was helpful in preparing the participant for the job (Topno, 2012). The goal of the training evaluation strategy is to create reliable means of assessing and reporting the

efficacy of training so that the findings may be used to further develop and improve training and associated activities (Yidi, 2020).

To assess the efficacy of social intervention programmes, researchers apply a variety of methods from the field of social science which is known as an "evaluation study." By incorporating social research methods into the evaluation process, Rossi and Freeman (1993) expand the traditional definition of evaluation (Welch, 2021). Considering what is meant by "research," we can say that "evaluation" is "the analysis of the training design and its implication with respect to organisational goals and objectives" (Porter & Frizzell., 2018). Boulmetis and Dutwin (2000) describe evaluation as the systematic gathering and analysis of data received from trainees to identify the extent to which the aims and objectives were/are attained (Davidson-Shivers, 2018). Human resource development (HRD) professionals and managers can use the results of this assessment to determine the training their staff members need to reach their full potential. It is also via training that the success of a company's training initiatives is evaluated (Welch, 2021). The evaluation of training identifies the program's strengths and weaknesses that may require modification in accordance with the organization's goals and objectives. Many firms are worried about the influence of training on organisational performance; yet, it is not always possible to validate and quantify this effect. The explanation cited by Huang (2001) is that many firms place a greater emphasis on training quantity than quality, making evaluation of training essential (Pauli, 2020).

In today's competitive corporate markets, trainings have become essential, and enormous investments have been made to improve the knowledge, skills, and abilities of the workforce (Prieto & Phipps, 2011). Every year, organisations invest billions of dollars in training-related programmes to improve the skills and talents of their personnel (Donovan & Darcy, 2011; Morschett et al, 2015). According to the research, however, non-evaluation of training is the cause of undetected ineffectiveness, which bothers employees because it hinders their development and workplace values (Shepherd, 2014, Grohmann, & Kauffeld, 2013). Effective training occurs when participants gain KSA that align with the organization's stated goals and objectives. Training transfer is essential for a profitable return on investment. The evaluation of training is, like the transfer itself, a crucial problem for businesses to face (Topno, H. 2012).

Successful transfer of training-learned knowledge, skills, and abilities to trainees is essential for an organisation to determine the training's effectiveness, and this is what the assessment is designed to measure. Managers can use this information to choose who will participate in the programme and who will get the most from it. The collected information will be useful for making choices about future initiatives. The information acquired could be used to create a database that aids managers in making choices. Training evaluation is the process by which the effectiveness of a training initiative is examined and assessed. Efficacy of training is determined by its results in respect to programme goals and objectives (Chen, 2022).

Training effectiveness is fundamentally an understanding of the consequences of training programmes. It focuses on the outcomes of the training programme. Individuals' learning and enhancement of job-related abilities can be determined through training evaluation, whereas the program's effectiveness can be determined by determining what individuals learnt and why they did not learn (McNamara, 2012). The evaluation concludes with a measurement of the improvements produced by the training programme in the development of employees and the efficacy of training, which reveals the causes of these changes and informs professionals of what modifications are necessary for the future training programme (Dessler, 2013; Salamon & Blume 2021). Since 1952, the Kirkpatrick model evaluation of training has been regarded as one of the key models (Rafiq, 2015). Explanation of the Kirkpatrick model is in the current study.

Selected Training models Review

To meet the training demand and needs accordance to the area, different training models have been introduced; however, the evaluation of training is still the most under-developed area. Numerous problems affect both evaluation ignorance and difficulties that arise during evaluation (Topno, H. 2012; Passmore, 2014). Keeping in view the need of evaluation in respect to the situation, different models were launched. The detail is as below;

Hamblin (1974); the Five Levels Approach: Hamblin was one of the early people to modify Kirkpatrick's model. His model and Kirkpatrick's model are quite similar in their first three levels.

The last level has split in two main parts: organisation and ultimate value (Choudhury & Sharma., 2019). The five levels of Hamblin model of training evaluation is as under;

- a) **Reaction:** the first level of Hamblin model was as similar as Kirkpatrick's' models first level. In this level, the trainees' reactions towards the ongoing training program have been assessed. For evaluating the feelings about the training, the questionnaires used for responses of trainees.
- b) **Learning:** The Learning level asses the change in the knowledge of the trainees in the workplace due to the training program. This level is also the same as per the original kirkpatrick model. Performance assessments are used at this level to evaluate changes in knowledge, competence, and attitude.
- c) **Job behavior:** This level assesses the changes in the employees in the performance of job due to gaining new knowledge, learning through training in the organization. This includes putting new learning and job behaviour improvements into practice. Assessment was based on information on trainee output and observation.
- d) **Organization:** the fourth level of Hamblin model evaluates the training impact over the organization. The performance assesses the performance change of the employees after the training program.
- e) **Ultimate value:** the ultimate value level of Hamblin model asses the overall effect of the training program on the organization's financial and economic situation. It asses that after training how much development in the skills and knowledge of the employees has been made and how efficiently they are working.

The Hamblin framework is designed to be used alongside other classification schemes. Hamblin first introduced this idea in a research article in 1968, but it has since been greatly improved and refined (Saxena, 2020). A conceptual evaluation scheme was devised that navigates Kirkpatrick's confusing evaluation stages by fusing training objectives with assessment objectives, such as cost-benefit or job-related, training-centered approach. Furthermore, Hamblin has worked to produce guidelines for the creation of various management strategies at various levels of evaluation.

CIRO Model: According to Córdova & Sandoval, (2018), the CIRO model for managerial training assessment was proposed in 1970. The four components of context, input, reaction, and results formed the basis of this approach for assessing training effectiveness. The CIRO method, as described by Tennant et al. (2002), places an emphasis on monitoring progress before, during, and after training (Asgar & Satyanarayana, 2021). The CIRO model's best attribute is that it considers both the objectives (in their contextual setting) and the tools available for practice (input). Evaluating a company's environment and culture in order to effectively assess training needs and create objectives is one example of a context evaluation. During the input evaluation procedure, the training activity's execution and effectiveness are examined. The goal of reaction evaluation is to gather and use information about the effectiveness of a training session (Alsalamah & Callinan, 2020). The goal of outcome assessment is to measure the short-term, intermediate, and long-term effects of an endeavour. Changes in a trainee's knowledge, skills, or attitude can be evaluated right away so that adjustments can be made before the trainee's return to work. The influence of training on job performance and the means through which knowledge is transferred back to the workplace are the focus of intermediate evaluation, as defined by Santos and Stuart (2003). Last but not least, the purpose of the final evaluation is to establish how the training affected the overall performance of the assigned division or organisation (Kraiger et al., 2015).

Bushnell (1990) IPO Model: Bushnell's initial public offering (IPO) model's components are classified in a hierarchical structure (i.e., Input, Process, Outcomes). According to Bushnell (1990), using this paradigm can maximise training efficiency while reducing programme costs. He elaborates that IPO tells decision-makers whether or not the training programmes were successful, whether or not the "design and layout, content, and delivery" need modification, and whether or not the trainees learned what was expected of them (Kraiger et al., 2015). In tandem with its efforts to strengthen its global education network, IBM has established a thorough strategy for evaluating employee training. A training system has three parts: an input, a procedure, and a result, as described by the IPO model of evaluation (Bushnell, 1990). A "partially self-correcting" training system could be recognised by its use of feedback loops. To ensure that the desired output is produced at E6, the trainer must ensure that all process elements are adjusted appropriately. Input-stage SPIs are anticipated to increase the

"overall effectiveness of a training programme." Considerations such as "trainee qualifications, the instructor's skills, the availability of already tested instructional materials, the types of equipment and training facilities, and the training budget" are crucial at this stage (Córdova & Sandoval, 2018). After the input stage has been fine-tuned, the evaluation moves on to the process stage, which oversees the execution of the training plan. Here is where you should assess not only the success of the training itself, but also its goals, design, techniques, and resources (Reio et al., 2017). Participants' "reaction to training, knowledge and skills developed as a result of training, and enhanced performance back in the workplace" should all be assessed at this phase of output. Then, the results would be the main focus of the evaluation. While "outcomes allude to short-term advantages or effects of training". Output refers to long-term results associated to the development of the organization's bottom line, such as profit, competitiveness, and existence (Córdova & Sandoval, 2018). The IPO model allows for an organisation to pick the evaluation package based on its needs, objectives, and budget, which Bushnell (1990) states can "improve training flexibility and responsiveness" while lowering training programme costs (Passmore, 2014). Depending on its goals, resources, and other factors, a company may choose to focus its evaluation efforts on either the input or the output phases.

Five level models of Kauffman and Kellers (1994): In the winter 1994 issue of Human Resource Development's Quarterly, Roger Kaufman and John M. Keller released Beyond Kirkpatrick: Five Levels of Evaluation (Córdova & Sandoval, 2018). Kaufman's learning evaluation model is a common name used for this. One of the most often used models for assessing training is the Kirkpatrick Model, on which Kaufman's model is based (Alsalamah & Callinan, 2020). The following are the stages;

Level 1A: Input: This word refers to trainer resources, such as digital materials, that are employed alongside coaching or training.

Level 1B: Process: On this initial stage, we assess how well received and effective the procedure is. Alternatively, the actual process through which the education is provided.

Level 2: Acquisition: The second level of Kaufman's approach examines the incentives for individuals and small groups. As the "micro-client," you would evaluate the learner's retention and application of the material.

Level 3: Application: This level will evaluate the trainees' application of KSA that are learnt from training.

Level 4: Organisational payoffs: The fourth level of Kaufman's hierarchy is used to assess the returns of the overall organisation. Typically, the "macro-level client" is the organisation doing the evaluation. At this level, performance improvement evaluations and cost-benefit and/or cost-consequence assessments are incorporated.

Level 5: Societal Outcomes: The 'mega-level clients' occupied the top tier of Kaufman's pyramid, level five. Either a company's clientele or the general public could fall under this category.

Other evaluation models: Many other models, such as Holton's model (1996), Kaufman and Keller's (1994), and Phillips' (1995), have been developed or adapted from kirkpatrick models. Researchers have used the Kirkpatrick model to encourage HRD experts to conduct useful training evaluations (Phillips, 2016). The kirkpatrick model has been the subject of several revisions over the years, but its central ideas have remained mostly unchanged. Some of them are as below;

- Extending the reaction level to assess how well training approaches are received by participants and how they perform.
- Differentiate between emotional and cognitive training reactions.
- The participant's impression of a training program's enjoyment, usefulness, obstacles, and challenges.
- Using the level three behaviour, the Knowledge skills, immediately learned abilities, and maintained and employed abilities were distinguished.
- For the purpose of calculating a company's ROI, a fifth, "beyond result," level was added to the previous four and added HRD evaluation program outcomes on society.

Numerous approaches and frameworks for the evaluation process have developed over time to help narrow the many choices available when assessing training programmes. Of all the frameworks and models used to assess training, Kirkpatrick's is the first, most widely used, and most influential. Kirkpatrick's method has been extended by numerous other frameworks, such as "Context, Input, Process, and Product (CIPP)", Brinkerhoff, and Phillips, by addressing aspects of evaluation beyond post-program effectiveness (Table 1). Galvin suggested the CIPP concept as a means of

training personnel (1983). This method assesses the training environment in terms of a needs assessment, the resources available for training in the form of an analysis of time and money, the steps used to carry out the training, and the results of the training (Toosi et al, 2021). Goal-setting, programme design, programme implementation, immediate outcomes, intermediate or usage outcomes, and impacts and worth are the six pillars of Brinkerhoff's (1987) training assessment technique (Malik & Asghar, 2020). The idea proposes a chain of overlapping procedures, with problems found at one stage possibly being the result of unfavourable occurrences at earlier stages. In contrast to Kirkpatrick's model, this one includes the training's evaluation phase in its requirement assessment, design, and operational phases (Alsalamah & Callinan, 2020). The first three phases of Brinkerhoff's paradigm involve these steps (goal setting, programme design, and programme implementation).

Table 1: Training evaluation models

Model/framework	Training evaluation criteria
1. Kirkpatrick (1967, 1987, 1994)	Four levels: Reaction, Learning, Behavior, and Results
2. CIPP (Stufflebeam, D.L, 1983)	Four levels: Context, Input, Process, and Product
3. Brinkerhoff (1987)	Six stages: Goal Setting, Program Design, Program Implementation, Immediate Outcomes, Intermediate or Usage Outcomes, and Impacts and Worth
4. Kriger, Ford, and Salas (1993)	A classification scheme that specifies three categories of learning outcomes (cognitive, skill-based, affective) suggested by the literature and proposes evaluation measures appropriate for each category of outcomes
5. Holton (1996)	Identifies five categories of variables and the relationships among them: Secondary Influences, Motivation Elements, Environmental Elements, Outcomes, Ability/Inability Elements
6. Phillips (1996)	Five levels: Reaction and planned Action, Learning, Applied Learning on the job, Business Results, Return on Investment

Source: Warner and DeSimone (2009)

Both Holton's (1996) and Kriger et al (1993) 's models place emphasis on theorised learning outcomes and research variables that impact training (Rieo, 2017). Considering that training's effects may be split into three distinct domains—skills, emotions, and intellect—Kriger et al. (1993) devised a system for categorising these outcomes. This approach is quite detailed since it lays out the precise metrics that can be used to evaluate each class of learning outcomes (Passmore & Velez, 2014). An advanced model similar to that proposed by Kirkpatrick (including individual performance, organisational results, and individual learning) was proposed by Holton (1996). These outcomes may have been influenced by both human and environmental factors, such as external events and the transfer climate, as well as by characteristics such as drive to learn, motivation to transfer, cognitive ability, and job attitudes (Hughes & Salas, 2020). Kirkpatrick and Phillips both agree that measuring the impact of training on organisational performance is a crucial area of problem. This evaluation might be based on a variety of performance measures, including productivity, punctuality, and cost savings (Ebner & Gegenfurtner, 2019). While it's crucial to the company's success to develop efficiency at the reaction, learning, and job behaviour levels, this may put them at a disadvantage relative to departments that can more easily convey the financial impact of their efforts. Phillips's (1996) evaluation approach, on the other hand, included ROI calculations. Despite the fact that Kirkpatrick's approach has been criticised, it is still valuable in identifying which measures of training efficacy must be taken (Salamon & Blume, 2021). Acquiring information for each of the four levels of evaluation criteria is preferable (depending on the questions that drive the evaluation research). Due to its simplicity, clarity, and ease of implementation—all of which are highly valued by educators—four-level Kirkpatrick's model is also the most commonly recognised and used model of training evaluation (Cahapay, 2021; Paull et.al, 2016). The concept is still widely used and studied in many fields, including academia and business (Allen et al, 2022).

Analysis of models:

The models has been analyzed in the light of strengths and limitations as per available in literature shown in table given below;

Table 2: Strength and Limitations of models

Model	Strengths	Limitations
Kirkpatrick	<ul style="list-style-type: none"> • The model is simple and easy to execute. • Due to simplicity, the training evaluation is less costly. • The model is well known and popular. • Kirkpatrick model is well established and practically executed in different environment i.e. industries, professional and academia. • Kirkpatrick model provides a proper process and structure of training evaluation, specially the learning measurement. • Kirkpatrick model is understandable and effective. 	<ul style="list-style-type: none"> • The model is too simple and ignores the individual and environmental factors in evaluation. • There may need to be more levels, such as those for return on investment and impact on society, according to certain designs. • According to the Kirkpatrick model, each level provides more information than the one before it. Because of that presumption, managers and trainers only concentrate on level four of the Kirkpatrick pyramid, which leads to a weak conceptual framework for the data collected and the claim of a successful training evaluation.
Hamblin	<ul style="list-style-type: none"> • The Hamblin model is considered as cycle of events in organization that repeats training, which leads to the training objectives. • The model provides guideline to the managers as cycle of evaluation, in which manager involve continuously in evaluation process. • The model as cycle provides clear directions about the training program and identifies the weakness at any stage. (Sharma., 2016) 	
CIPP	<ul style="list-style-type: none"> • The CIPP model can be simply adapted to several evaluation scenarios because it was not created with any particular application or solution in mind. • Program design, programme outcomes, and the fulfillment of fundamental principles can all be evaluated using its all-encompassing approach. • The model is well-known and has a long history of being useful. (Choudhury, & Sharma., 2019) 	<ul style="list-style-type: none"> • It might be argued that the approach blurs the distinction between evaluation and other investigative techniques like needs assessment. • In the subject of performance improvement, it is not as well-known or utilised as other models.
Phillips's ROI	<ul style="list-style-type: none"> • The ROI model assesses the complete impact of training by adding fifth level and in case of failure helps in identification the reason. • The model measures intangibles in form soft outcomes in addition to hard outcomes. 	<ul style="list-style-type: none"> • The ROI models time consuming and would impossible to assess and make changes during the training program as the return on investment (ROI) can be evaluated upon the completion of training. • The model is useful to the limited training program only 5-10 % as the fifth level is not necessary in most of the program.
CIRO	<ul style="list-style-type: none"> • The CIRO model provides clear portrait in every step that how training developed the performance of employees within the organization. • The models provides opportunity to share the learned knowledge with the others employees. • By evaluating each step, the model provides chance to make modifications and 	<ul style="list-style-type: none"> • The retraining requirement could be a cost factor as the trainings have allocated budgets. • The employees might be reluctant to sit again the same training program and there are more chances of failure of training effectiveness.

	changes in the training program. (Kopp., 2014)	
Kaufman	<ul style="list-style-type: none"> • The model provides more detail of input and process covering all training aspects. • This evaluation make on micro, macro and mega level which focuses in depth evaluation. • The fifth level societal outcomes cover the broader view in respect to society. (Deller., 2020; Downes., 2015) 	<ul style="list-style-type: none"> • Complicated model as the first level divided into micro and macro levels and may more time consuming. • The fifth level of model is mostly ignored in many organizations and difficult to execute as the societal impact might far different from organizational goal. • The execution of all five levels is more costly as compare to other evaluation models.

Recommended Model & Rational: After examining the numerous models for measuring the success of training in depth, as we have done above, it becomes clear that each model is developed from a unique angle and with a specific set of goals in mind. Companies that care primarily about profit would do well to adopt models like Hamblin's, Phillips', and ROI's. As with the Kaufman model, the social and ecological effects of every given decision are taken into account. The ability of Kirkpatrick's model to anticipate outcomes based on learning and behaviour makes it a valuable tool for assessing the effectiveness of training initiatives in R&D settings. Because of its ease of use and comprehensive set of training parameters, the Kirkpatrick model is preferred over the others. The four-level Kirkpatrick training approaches of assessment is a well-known and widely used model at reputable training and research institutions, as evidenced by the work of researchers like Tamkin et al. (2002), Paull et al. (2016), Cahapay (2021), and Mohanty et al. (2019).

Models	Kirkpatrick's	Kaufman	Phillips's	CIPP	Hamblin	CIRO
Outcomes	Learning & behavioural Outcomes	Societal Outcomes	Return on Investment	Identifying contextual factors	Cost Benefit Outcomes	Cognitive Skill based Affective

Source: Choudhury & Sharma (2019)

After carefully analysing each model's pros and cons, we found that the Kirkpatrick model, with its four distinct phases, was the most suitable for our learning organisation. Kirkpatrick's model framework is the most widely used model for evaluating the efficacy of training since it is simple and straightforward to implement (Saad & Mat, 2013; Guerci et al., 2010; Homklin et al., 2014; Sachdeva, 2014).

The analysis conducted of each model in proceeding paragraphs regarding suggested that each model holds some advantages and disadvantages with its suitability in different organizational setting, however keeping in view the operational environment of learning organizations and comparative analysis amid all models, the research study recommends Kirkpatrick model of training effectiveness evaluation as the best suited training model.

Even though it's an important factor, training evaluation is still a primitive idea. Many academics have contributed to this topic by proposing many models; a few well-known models have already been covered in this work. This area still requires a prominent and deep research to develop a clear and easy model as all previous models are subjective and descriptive in nature (Srivastava & Walia., 2018). Other factors like individual and environmental factors have also been ignored in these models which need to be addressed for effective evaluation.

Findings & Conclusion

Training is a methodically premeditated motion that is aimed at gaining awareness, skills and attitudes. The importance of continuous training of the employees for a progressive organization cannot be overemphasized. Training evaluation and training effectiveness are two diverse purviews in the training process. Training evaluation deals with ascertaining the accomplishment of learning results including acquisition of required knowledge and skills. Training effectiveness is more related to the transfer of the job related payback worth for the employee and the organization. The comparative review of various models in this study is discoursed with the viewpoint of all-inclusive dimensions of training evaluation including; training effectiveness, learning evaluation, and the efficiency of training material and methodology. The study found each of the selected models with an exclusive and distinctive set of benefits and weaknesses. However, the practicability of Kirkpatrick

Model and its merits outweigh other models on one pretext or the other in varying conditions and circumstances. The comparative study concluded that extended Kirkpatrick Model is the widely-used and most popularly perceived training evaluation model amongst trainers. The easy to use innovative model, firstly developed in 1959, was refined in 1993 with the publication of “Evaluating Training Programs: The Four Levels”. The most frequently cited “5th level” Phillips ROI Model was incorporated in the Kirkpatrick Model that enabled organizations a way of computing the ROI of their training.

Despite its wider use in training, the Kirkpatrick model is ticked for its limitations regarding its comprehensiveness due to the missing causality amongst levels. Detailed critical evaluation of the model points out that the extended evaluation model seems a mere taxonomy of outcomes because of the absence of correlation or causality amid different stages of evaluation. The model envelops two issues at one time that are participants’ satisfaction survey and the effectiveness of training. Therefore, despite its wider use in training, the Kirkpatrick model is ticked for its limitations regarding its comprehensiveness due to the missing causality amongst levels. The level of fulfillment and awareness are associated with each other and both are probable to bring variations in behavior. Since, the literature does not condition acquisition of knowledge as predictor of satisfaction than then why should it an illustrator of any behavior change? Furthermore, keeping attitude, motivation and confidence as the part of 2nd level is beyond justification, as these elements more fit at first level. Furthermore, the model is criticized because of its lengthy evaluation process, spread over from few months to year long period, therefore mostly it is stopped at level two because of time and budget constraints.

The acceptance of the Kirkpatrick model can be accredited to its methodical and easy to use approach towards assessing the multifaceted procedure of training. The model is flexible in its arrangements and adaptability to variety of industries and provides detailed data to manage organizational goals. The model lay downs clearly explained evaluative phases to follow without any confusion. Furthermore, the model is unique in its effective use with traditional and digital learning programs without any hurdle or need for any modification. The model is very explanatory and facilitative for the management and human resource training professionals including management of small and large organization for providing valuable insight into their training programs and their the training effect on their organizational outcomes. The Kirkpatrick model holds semi-dimensional measurement of training effectiveness of the multidimensional areas of learning and the behavior i.e. Cognitive learning, skill acquisition, and affective out come. Despite of its old age design and some limitations, the Kirkpatrick Evaluation Model is considered one of the most popular and widely used training evaluation approaches today.

Implications

The comparative analyses, iting pros and cons of various training evaluation models from the selected list will assist the Human Resource managers, training professionals, and organizations to select, adopt, design and apply the best suited training programs in given circumstances. The training professional would be better placed in designing training methodology with optimum resources for reaching out to the anticipated results from the training, thereby fetching all-out benefits for the employees and organizations having undergone to training scheduled.

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