

**A STUDY OF KNOWLEDGE, SKILLS AND ATTITUDE OF EMPLOYEES ON THE
BASIS OF ON- THE- JOB TRAINING COURSES GIVEN IN MALEKE- ASHTAR
UNIVERSITY, IRAN**

Zeinolabedin Nejetsabet

Research scholar

Dept. of Education

University of Mumbai

Dr. Magre Sunita Vithalrao

Associate Professor

Dept. of Education

University of Mumbai.

ABSTRACT

Due to increase in science and technology the need to bring recent updates that will improve organization performance has made it necessary to train employees periodically. The training of employees ensure enhancement of knowledge, skills of the staff will that in turn will help achieve, competency and personal development. A training program will be effective only when it brings about the desired change in behaviors, skill and efficiency of the participants in the program. The increase in productivity at place of work can be measured only through comprehensive evaluation.

The purpose of this study is to investigate the effectiveness of training program of M.A. University based on Kirk Patrick model and the training program of management project unit was evaluated on the basis of Kirk Patrick model. Four indices in this program include the reaction of participants in the training program, the rate of learning, the amount of changes made in the behavior of participants and finally the results at the end of the training program.

The findings indicate the program had effective impact on employees in terms of change in behavior, knowledge and skills. It can be concluded that the training program evaluation reduced problems by 13 percent. Further analysis of evaluation results indicate project management unit training had the efficacy of 46% which is considered satisfactory by training program professionals and managers.

Key words: Evaluation, Training, Measurement and Effectiveness

INTRODUCTION:

On the job training is an effective instrument to improve and effectively develop human resources at every organization level, more so, at universities and research institutions. Every organization needs well-adjusted, trained, and experienced people to perform job functions.

As jobs have become more complex in today's dynamic organizations, the importance of employee education has increased. Aim of employees training is to seek a relatively permanent change in employees that improves their performance.

Thus, training involves enhancing skills, knowledge, changing attitudes, or behavior. This may mean changing in what employees know, how they work, or their attitudes toward their jobs, co-workers, managers, and the organization. One Keeping in mind the importance of on the job training. Researcher will study, understand and review relevant literature, and investigate the strengths and weaknesses of on-the job training.

RATIONALE OF THE STUDY:

a) Review of Related Literature:

The majority of Iran companies frequently use on-the-job training (OJT) to educate their personnel to the frequent use of this type of training stems from three incentives; the favorable relationship between training cost and benefits, the possibility of just-in-time / timely training; and the expectation of a positive transfer of what was learned to the employees' own work situation. Although in professional journals these advantages of OJT are frequently expressed, there is however, relatively little research conducted in this area. Most of the research into OJT focuses on the design and implementation of this type of training. Research dedicated to the topic of effectiveness is extremely scarce.

A well-known author is Jacobs, who investigated the cost and benefits of OJT. Jacobs's projects show that OJT does not always result in favorable benefits. From the empirical data that are available, it is not possible to deduce whether OJT is an effective form of training, or what are the factors that determine its effectiveness. This was due to lack of sufficient data to underpin the effectiveness of OJT.

Present research will focus on investigating particular evaluation of this type of training in more details. There exists no agreement on the definition of OJT. Various definitions are in use. 3 In the project OJT was defined as:

1. It is legitimate for employees to carry out learning activities.
2. The tasks to be learned correspond to the employees' tasks and duties in the actual work situation.
3. The responsibility for the OJT rests with the employer.
4. OJT involves intentional learning: a training arrangement is required. This arrangement includes: Arrangements for length of the training; Clearly defined -training objectives; The presence of sources to achieve the training objectives (for example a trainer, _electronic -written manuals, list of assignments, etc Proper evaluation of the OJT to determine training objectives achieved.

The definition of effectiveness that is used in the project is in line with Kirkpatrick's (1994) body of ideas. In the study the author identifies four levels of effectiveness: reactions of trainees, learning result, job behavior and returns for the organization. Previous research in the field of corporate training showed that it is particularly tricky to measure the last two levels of effectiveness in practice namely job behavior and returns for the organization. The fact is that behavior on the job and organizational returns (for example, an increase in sales) are influenced by a great number of factors. So it is difficult to determine to what extent the training contributed to both these levels of effectiveness. The theoretical framework was primarily based on the work of Baldwin and Ford (1988).

The authors developed a model, based on an extensive review of literature, wherein they distinguished three clusters of factors that impact the effectiveness of training; the trainee, the training and the workplace. The use of this model is advocated to gain more insight into the various factors that contribute to the explanation of training effectiveness. Although the Baldwin and Ford Model proved to be useful, an update was necessary to assure the model reflects the latest research insights. This was done by the analysis of recent studies to understand the effectiveness of in- organization and vocational training.

b. Personal Experience, Weaknesses, Strength of the J.T.C.

Employees after graduating from their respective University join the University for to be able to keep their job; need to learn something more specific skills other than what they learnt at their University. Basically, understand why knowledge gained at the University does not colligate with the job specifications. It is seen that before the training employees are unable to perform, but after training they are more productive and employees towards work is changed. He becomes more optimistic about his job and its functions. JTC does not guarantee employee performance. Some of these trainees are unable to learn and benefit from the training course and thus can't perform efficiently.

C) Present condition of J.T.C., Iran in M.A.U.

The Present condition is not satisfactory. The results of previous evaluation showed that trainers and staff couldn't reach desired level of performance at work.

Statement of the problem:

The implementation of training or development course in an organization must be cost effective. Effectiveness of the programs can be determine by analyzing, whether the benefits gained outweigh the cost of the learning experience. It should be noted that at Maleke-Ashtar University in Iran. JTC and development programs cost millions of Rials annually. Generating a new training program is not very difficult, but post training no evaluation process is in place.

Unfortunately, researches indicates that nearly half of all training programs are not measured, in relation to their sustentative out comes such as employees' retention, satisfaction or productivity. The key question in this research will be:

"Is there a effective training program in Maleke-Ashtar University?" and "How we can make it effective?"

Also secondary questions in this research are:

Do learners react to training programs held in the organization in desirable manner?

Was the training held able to create the desired effect in the level of learner's knowledge?

Was the training course able to create .desirable effect in changing the behavior of learners?

Was the training course able to achieve the organizational objectives (solve the created problem)?

AIM OF THE STUDY:

The main aim of this study is to understand pathology of training programs pitfalls, and challenges at Maleke-Ashtar University based on related recent literature.

OBJECTIVES OF THE STUDY:

1. To Study reaction to/ acceptance of training programs for employees of MAU-Iran.
2. To Study change in the level of trainees' knowledge due to training.
3. To Study effect on trainees behavior (skills and attitude) due to the training he underwent.
4. To Study whether organizational objectives (solve the created problem) were achieved due to the training.

HYPOTHESIS OF THE STUDY:

1. There is no significant difference in the views of managers and employees regarding on-the job training program.
2. There is no significant difference in the views of managers and employees regarding on the job training attended on the basis of personal characteristics like age, level of education and years of experience.

SCOPE AND LIMITATIONS:

This research is simply limited to people who have minimum Bachelor degree in any subject. Also, present research will focus on training centers of Maleke- Ashtar University, Tehran branch only and not in other cities in Iran.

SIGNIFICANCE OF THE STUDY:

The present study can help to:

Improve staff performance, staff attitude and vision. Improve staff skills and knowledge, Develop human resources, talent pool and Help effective succession

(substitution) planning. Successful organizations have an ability to balance between training and development, definitely there is manpower that not only has ability to perform current job responsibilities but is also ready to accept new functions and duties.

On the job training is an effective instrument for them (George Green, 2003). Most of the researchers believe that training and education are essential and vital to universities, research and development centers (Gart w-right, 2003). Therefore; it is necessary to do the present research namely Study of knowledge, skills and attitude of employees on the Basis of on- the- job training courses given in Maleke- Ashtar University, Iran.

NEEDS OF THE STUDY:

Every organization needs to measure the effectiveness of their training programs and identify the needs of its resources. Every year much of organizational budget, staff time and other resources allocate to training programs. Therefore it is necessary to estimate the effectiveness of the training programs. Evaluation of training programs' effectiveness shows the weaknesses, challenges and strengths of such programs and helps us to plan and organize the training programs correctly and clearly.

Levels of evaluation:

As introduced in the previous section, evaluation of training can be carried out at different levels based on the specified outcomes as objectives - during the training, after the training, as well as in the longer term. Before one moves into the discussion of the levels of evaluation, a brief mention must be made here concerning the linkage between the identification of training needs and the setting of training objectives, which is crucial to the evaluation process. Evaluation can only be carried out when training needs have been accurately analyzed and, as far as possible, measurable behavioral training objectives which are broken down in terms of knowledge, skills and attitude have been set. An accurate measure is necessary against which to evaluate. Ideally, training objectives should be set at four different levels which in turn equate to the most-quoted four levels of evaluation by Kirkpatrick. They are the reaction level, the learning level, the behavior level, and finally the results or the organization level. These are the four levels at which one can gauge the quality be it efficiency and/or effectiveness - of a training program. Kirkpatrick's model, which is the most popular and widely accepted, one, will be discussed below and will be the chosen framework for the evaluation of on-the-job training courses in Maleke- Ashtar University.

UNDERLYING ASSUMPTIONS OF THE FOUR LEVELS OF EVALUATION:

The above discussion on the four levels of evaluation has been mainly drawn from Kirkpatrick's approach to evaluation namely reaction, learning, behavior and results. There are several assumptions that have to be taken into account before one puts forth or discusses framework of proposed evaluation and its practical application. Firstly, it is believed that the value of information has greater value when one goes from measuring reactions to measuring results.

In other words, evaluation of results is of greater importance to the organization. Secondly, the most frequently used evaluation method is the measurement of reactions while the least frequently used evaluation method is that –of results level. Many studies support this assumption. It appears that there aren't many training personnel or evaluators working on the fourth level of evaluation. Thirdly, measuring reactions is easier than measuring results. This can be easily verified if one looks at the methods of measurement. It is a relatively simple process to gather data on trainees' reactions but a much more complicated one to gauge accurately the impact of training on organization. According to Kirkpatrick the need for training evaluation at all four levels has greater significance. It is only through such a level of evaluation total worth of training can be assessed. The four levels may be seen as a chain of cause and effect which can be broken at any of its links. Similarly, Hamblin has pointed out: "A trainee may react correctly but fail to learn; or he may learn, but fail to apply this learning on the job; or he may change his job behavior, but this may have no effect on the functioning of the firm. Thus, ideally we should evaluate at every level. If we ignore the more distant levels; we will only discover more superficial changes. If we ignore the immediate levels we are in danger of being unable to explain any changes that we discover because we have not followed through every link in the chain.

DESIGN OF THE STUDY:

The research method used, was a survey method and poll forms distributed to selected sample namely course participants that completed training Sample included-managers and other employees of the University like-principals, directors, non teaching staff.

Research method:

In Present study due to the second criterion (how data collection) is the type of descriptive researches (survey). In descriptive researches, attention is more focused on describing and report writing of the situations and events, based on information that have purely descriptive aspect. Descriptive research is used for further recognition of existing conditions or to help decision-

The method used in present study is a survey research. Survey researches study the characteristic distribution of a statistical population.

Training course in Maleke-Ashtar University is in following two forms:

The internal training in the education field & External training in an private institutions.

From the courses offered at MAU a course is selected in consultation with officials of Maleke-Ashtar University. The employees for training at Maleke-Ashtar University are considered as statistical population and will be evaluated by the selected model (Patrick)

Among the training courses given in Maleke-Ashtar University, Project Management course was chosen as a pilot program to asses and evaluate. In this study the sample size is 98 selected from the participants of Project Management course.

Tools:

The main tool is an open-ended questionnaire. In order to get more information, interviews will be held with top managers and human resource managers. The following steps are considered to get the desired result. In the first step, questionnaire (**Feedback**) was used that contain agents which will be effective in running a training course (reaction). In the second step, the pre-test and post-test is used to measure learning and training effect on knowledge gained (**learning**). In the third step, the two questionnaires (**Feedback**) used, were completed by partnership among multi-stakeholder providing education, such as direct supervisor, employees (**the behavior**). In the fourth step the documents have been investigated (**conclusion**).

Sample:

Population size consists of 490 employee.at Maleke-Ashtar University, including 320 employees (non-managers) and 170 managers. From this population the researcher randomly

selected 20 percent sample for the present study. Out of that 64 non manager’s employee and 24 managers.

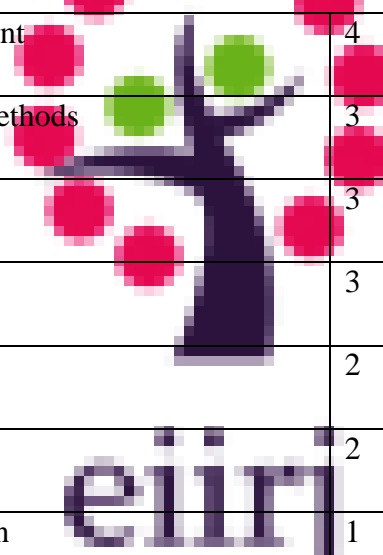
Data Analysis

Analysis of data based on research questions about the subject are presented below:

Question: Do learners react to training programs held in the organization in desirable manner?

According to the analysis of learners’ reaction, desirability of effective factors in project management training course was calculated.

Table No. 1 differentia of effective factors in training course:



| | |
|------------------|---|
| (Goal)Content | 4 |
| Teaching Methods | 3 |
| Instructor | 3 |
| Equipment | 3 |
| Space | 2 |
| Schedule | 2 |
| Coordination | 1 |

Table no. 1

According To the results obtained in accordance with Table 1 of the course learners the content (target) operating was most effective and coordination is not good.

Table no. 2 desirability Number of spectra of effective factors in training courses;

| | |
|------------------|-----|
| (Goal)Content | 4.1 |
| Teaching Methods | 4.4 |
| Instructor | 4.3 |

| | |
|---------------------|-----|
| Equipment | 3.9 |
| Space | 2.7 |
| Schedule | 3 |
| Coordination | 3.3 |
| Desirability number | 3.8 |

Table No.

2

According to the results of table no. 2 in the opinion of employees of project management who underwent, training the most effective and most desirable was the method of teaching. Between these factors according to the considered range, none of the factors in terms of desirability was weak. The factors of content, teaching method and instructor were desirable and the factors of space, schedule and coordination were fairly desirable. Total desirability number according to the given differentia to the factors in table 1, 3.8 were obtained which is Desirable according to the considered range. So, learners have shown favorable reaction to implement project management training course. To test which of these factors, more than 60% are desirable, the following statistical assumptions for each of the test can

$$H_0 : \mu \leq 3.6$$

$$H_1 : \mu > 3.6$$

Average less than or equal to 3 / 6, indicates that learners respond well to training and have shown an average of greater than 3 / 6, they will sign – favorable response.

T-test results with an average difference of 3 / 6 for 2, 3, 5 and 6 showed a significant factor that has had a significant effect of training programs held by Bryan ($p < 0/01$) on factor 1 moderate training program was held. Programs training for the 4 and 7 have no significant effect.

T-test results with an average difference of 3 / 6 showed a significant ($t = 2.982, p < 0/001$) Average greater than or equal to 3 / 6, indicates that learners respond well to training of project management have shown.

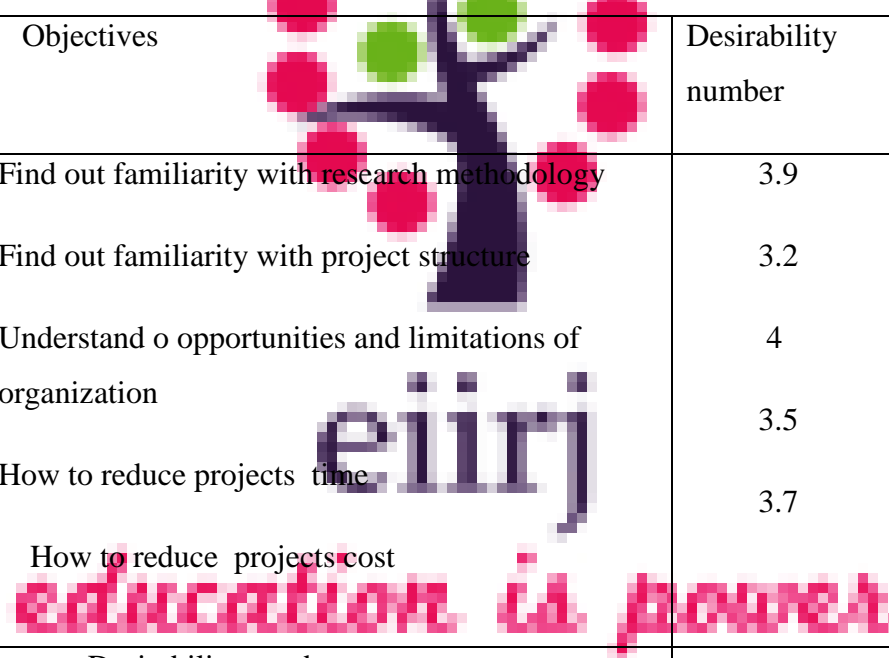
Question: was the training held able to create the desired effect in the level of learner’s knowledge?

According to the Form No. 2 and teacher comments to the occurred changes in the level of learning, the desirability range number was 3 and 2, Considering this number it can be concluded that in the opinion of instructor increasing in the level of learners knowledge is Desirable (in the opinion of the instructors there was desirable effect on learners knowledge). Since people’s opinion does not suffice whether changes occurred we used statistically meaningful measurement of these changes. We used T Statistical test for dependent groups that its Calculation by SPSS Software is obtained as follows:

Question: was the training course able to create desirable effect in changing the desirably?

On this basis it can be concluded that the implementation of project management training course in changing the behavior of employees, has created fairly desirable effect.

Table No. 3 Specific objectives of training Course:



| Tier | Objectives | Desirability number |
|---|--|---------------------|
| 1 | Find out familiarity with research methodology | 3.9 |
| 2 | Find out familiarity with project structure | 3.2 |
| 3 | Understand o opportunities and limitations of organization | 4 |
| 4 | How to reduce projects time | 3.5 |
| 5 | How to reduce projects cost | 3.7 |
| Desirability number of objectives realization | | 3.66 |

Table No.3

Question: was the training course able to achieve the organizational objectives (solve the created problem)?

In university of Malke Ashtar, because the time and costs of training projects were high, for this unit the head of the unit requested implementing the training course for project

management employees. As such it was determined the overall goal of this course was solving the problems of process of project management. First effective factors to create the problem identified by in form 4-1, which was expressed in table 4. Tier No.1&2 of these factors shows lack of operator’s skills which Represents the staff training need. With more attention given to the percentage to factors, average of percentages given to lack of skill (training need), was calculated. In Table No.4 identified factors causing the repetitions in pathology of management of project have been reported. Also in Table No.5 percentages of training effect in optimum of process of management of project from stakeholders was clarified and after multiply into their differentia was calculated.

Table No.4 Identified Factors causing problems of implement projects:

| tier | Factors |
|------|--|
| 1 | Lack of skill in Team working |
| 2 | Not enough recognized methods of management of project |
| 3 | Limitations of organization |
| 4 | Laws and manual of organization |
| 5 | Other adversaries |



Finally According to the provided formula in the previous season, Calculation took place.

education is power

Statistical changes (Δ) =Statistics of prior period- statistics of posterior (Reduce of problems in implement of projects) Statistical changes 30% 104=209-105

In the above formula the Difference between the statistics of reduce of problems in implement of projects before running training course and after running training course was calculated and then according to the Total number of problems toward reduction through statistic was calculated.

$$\text{Final result} = \frac{\text{percentage of training effect} - \text{percentage of statistical changes}}{\text{percentage of training effect}}$$

$$\text{(Reaction)} \quad 76\% = \frac{100 \times 3.8}{5}$$

$$\text{(Learning)} \quad 64\% = \frac{100 \times 3.2}{5}$$

$$\text{(Behavior)} \quad 72\% = \frac{100 \times 3.6}{5}$$

$$\text{(Result)} \quad 13\% = \frac{23\% - 20\%}{23\%}$$

At the end obtained Results of each level in order to be comparable, were converted to percent. That respectively for levels of reaction, learning, behavior and results percentage of 76%, 64%, 72% and 13% is obtained.

Table No.5 Desirability percent of each Assessment Levels:

| | | |
|----------|-----|---|
| Reaction | 76% | 1 |
| Learning | 64% | 1 |
| Behavior | 72% | 2 |
| Results | 13% | 3 |

Table No.5

By calculating the achieved percentage for each level of Kirkpatrick model and multiplying the percentages in related differentia was concluded that project management training course was 46% effective.

Employees and managers to compare the 7 factors:

In the average of two different viewpoints employees and managers in factor 2 no significant effect found and in Factor 1 and 4 as managers were significantly more positive than employees. In factor 2, 3, 5, 6 and 7 employees were significantly more positive than managers.

Comparing employees with bachelor's and master's degree in 7 factors:

Between employees with degree bachelor and master degree in factor 2, 4 and 5 were significantly different (were better MA) and in factor 1, 3, 6 and 7 significant difference was found.

CONCLUSION:

Kirkpatrick's Four Levels Evaluation Model faced training courses with 4 questions that performing each level answers these questions.

Did the learners of training course react positively toward the training?

Did the training course create desirable effect on increase in the knowledge of learners?

Did the training course brought about desired change in behavior?

Did the training course achieve organizational objectives (created problems)?

In university of Malke Ashtar, every year countless costly training courses are held. If the training program is effective it will increase the quality of management of projects. From the large number of courses, training project management unit was selected. Model was evaluated keeping in mind Kirkpatrick model.

The results are indicative of learner's desirable reaction to the course. At these level factors evaluated in a training course were factors of content, teaching method and instructor. The effectiveness of these factors was desirable. Other factors of space, schedule and coordination of training were evaluated and found to be fairly desirable. In all; learners demonstrated positive, desirable reaction toward project management training course.

About second question tools like instructors' opinion and Statistical test are used. First through the forms, instructors' opinion regarding the occurred changes in learners' reaction were noted. This is after the training course. According to the opinion of project management unit training instructor the occurred changes in the level of learners' knowledge were desirable and more important were changes in the level of learners' knowledge.

This was supported by T statistical test for dependent groups. These changes with 95% statistically trustful are significant. In the third level of objectives: behavior changes that at the beginning of course were specified were achieved. The evaluation results showed training course for project management unit was able to create fairy desirable change in the behavior of learners.

In the last level (fourth level) the goal of organization to hold training that might decrease problems in implementation of projects, was evaluated. The results show that training was effective in reducing 30% of problems.

Finally, by calculating the percentages obtained for each 4 levels, shows that the project management course was 46% effective and in the opinion of instruction level experts of university of Malke Ashtar this percent is desirable percentage in effectiveness of mentioned training course.

Since no one in the country, till now completed research using the Kirkpatrick model and because the present research is the kind of case study (Local of university of Malke Ashtar), this has restricted the comparison and generalization of results.

As expressed in previous research, evaluation of training effectiveness, did not go beyond the first level of Kirkpatrick model (the reaction of learners), and the decisions were taken according to the results of the first level training effectiveness. This was the weakness of previous researches which the scholar has tried to eliminate even though partially.

SUGGESTIONS:

Perhaps one of the most important parts of a research or scientific study is to provide scientific and practical solutions for a given situation or how best to perform under the circumstances and obtain results or achievements for later studies. As such in this study following suggestions are offered for effective evaluation of training course:

Evaluation of training course starts at the beginning of need assessment and not confined to the assessing results at the end of training course. Use of existing models while eliminating the weaknesses of each model. If possible selecting some training course as sample and evaluating the effectiveness to invoke the results.

Relating performance at training course to promotion of the employees and similar decision will motivate staff to participate in training course. This will enhance participation in training activities and motivate to perform better in their respective occupations.

Fifth calculating what is the monetary value (Investment return) of evaluation of training effectiveness. Conducting evaluation of training course is very expensive. As such organizations are reluctant to implement evaluation of on the-job-training held for the

employees. It may be recalled that evaluation of a program is a manual process. There is an element of human error in collection and analysis of the data.

To eliminate this drawback it is recommended that to evaluate performance after the training and gather related data, a software be designed that will computerize the evaluation process of a training program. The computerized evaluation program will not only cut the cost of evaluation of on-the-job-training but also yield accurate outcome of the evaluation.

RESTRICTIONS:

At times staff and supervisors did not cooperate due to lack of faith in research work. Research statistical population meaning only training for project management unit alone did not serve as well as a sample. May be selecting training for some other units will be ideal to generalize features of result. Most of the times answers and opinions regarding the evaluation form depend on judgment of people as such prejudices and peoples experiences affect the research results. Some factors beyond control viz, measurement tools, prejudices, learning may affect the research outcomes.

REFERENCES:

- Decenzo, David, Robbin, Stephan (2005), Fundamentals of Human Resource Management, John Wiley and Sons.
- Glaudé , M.(1994),"Werkplek-Opleiden als innovatie" ,("on-the-job training as innovation"), paper presented at the ORD, Utrecht.
- De Jong , J.A (1995),"The multiple forms of onsite training", Human Resource Development Quarterly ,Vol.2 No.2, pp. 307-17
- Baldwin, T.T. and Ford, J.K (1988). "Transfer of Training: a review and directions for future research", Personnel Psychology, Vol.41, pp.63-105.
- Gielen , E.W.M (1995)," Transfer of training in a corporate setting ",dissertation , University of Twente , Enschede.
- Van der Klink, M.R. Gielen, E. and Nauta, C. (2001)," Supervisory Support as a Major condition to Enhance Transfer", international journal of training and development, Vol.5 No.1.pp. 52-63.

JJ. Neagle, September 1983,"Trainer's Manual - Practical Methods of Evaluating and Validating Training", Training and Development, p.ii.

John. W. Newstrom, "Catch~22: The Problems of Incomplete Evaluation of Training", Training and Development Journal (November, 1978), pp.22-23.

11. John w. Best and James v. Kahn "Research in Education" Published by Asoka
k. Ghosh(2010), p.79



eiirj

education is power