

A STUDY ON MEASURING RETURN ON INVESTMENT OF A KEY ACCOUNT MANAGEMENT TRAINING PROGRAM

A. Chamaru De Alwis, W.D.H.M. Rajaratne

Abstract: *Measuring the return on investment (ROI) in training and development and performance improvement has consistently earned a place among the critical issues in the Human Resource Development (HRD) field. HRD plays a significant role in supporting and driving a continuous improvement culture. Training can be a powerful building block in allowing a business to achieve its goals, indicating that it must be seen as a strategy and not an event. The research problem will be evaluating the return on investment of a training program conducted at one of the main garment exporter in Sri Lanka. The study followed a cost-effective conceptual framework of training evaluation developed by Doucouliagos and Sgro [3]. The model is consisted by four sequential steps, commencing with collecting data, pre- and post training exploration of performance, linking performance outcomes to training and, finally, the calculations of return on investment (ROI). The final research findings indicate that the training program has given significantly high ROI and has led to better customer satisfaction and enhancing other key business performance measures. Also it is found that quality of the training program led to better acquisition of the skills relevant to the training program. Major limitations of this study are identified as calculating the monetary value of benefits, Impact of other uncontrollable factors, Time constraints and Availability of data.*

Keywords: *Service Quality, Satisfaction, Attitudes.*

JEL Classification: *M12, M53.*

Introduction

According to Phillips [6] measuring the Return on Investment (ROI) in training and development and performance improvement has consistently earned a place among the critical issues in the Human Resource Development (HRD) field. Although the interest in the topic has heightened and much progress has been made, it is still an issue that challenges even the most sophisticated and progressive HRD departments. While some professionals argue that it is not possible to calculate the ROI, others quietly and deliberately proceed to develop measures and ROI calculations. Regardless of the position taken on the issue, the reasons for measuring the return still exist. Almost all HRD professionals share a concern that they must eventually show a return on their training investment; otherwise, training funds may be reduced or the HRD department may not be able to maintain or enhance its present status and influence in the organization. As Per the Ferketish and Hayden [5] “HRD plays a significant role in supporting and driving a continuous improvement culture”. Further, they argue that training can be a powerful building block in allowing a business to achieve its goals, indicating that it must be seen as a strategy and not an event. There are several

components can be seen in an effective training evaluation program. Among those models Kirkpatrick's [7] model is very comprehensive one and here he adds 5th step and ask to measure monetary value of the results with the costs for the program, usually expressed as a percentage. Stolovitch and Maurice [8] state that less than 20 % of training is actually transferred to performance of the company. In 1997 DTEC study indicated that "the productivity benefits of training would be enhanced, and in many cases can only be achieved, when training is integrated with other aspects of their organizations and/or when the organizations made use of other sustainable competitive advantages." Training represents an investment by firms in their employees. Like other investments undertaken by firms, a cost is incurred in anticipation of a future return to the firm. The future return takes the form of improved productivity, improved workplace performance or improved profitability.

It is important for firms to have accurate measures of ROI in training for this is what determines the level of training that will be conducted. A firm will want to compare the return from investment in training with returns from other forms of investment, and then undertake investments with the best overall rate of return. Under-provision of training may result from a lack of understanding of the benefits of training by firms [1]. Not all training will result in a net benefit. However, there are circumstances where training can be beneficial even if the training has not delivered a net financial return. The training may have produced non-pecuniary benefits. These could include the achievement of a quality assurance rating that will allow a firm to expand into new markets or a safer workplace that will lead to a reduction in staff turnover because of greater job satisfaction. Dockery [2] recommends that the focus of research into the benefits and impacts of training should be to look at training as a purpose-specific input rather than a general input and then evaluate the impact of training against the relevant objectives rather than against general performance measures. A high return from a training program does not imply that the training was fully effective. Doucouliagos and Sgro [3] emphasise that there is a difference between returns from training and effectiveness of training. Although a positive net ROI may have been achieved from a training program, it may have been possible to achieve additional benefits. If an evaluation identifies a divergence between the actual ROI and the potential ROI, then the appropriate type and quality of training may not have been delivered. The firm itself has to set training targets and then determine if they were met. Most firms will have practical constraints on the possible coverage of training that will, by necessity, limit the returns from training. It may not be practicable for all the members of a production team to undergo training, particularly if workers have to be taken off-line to attend. Evaluation is essential, as it will identify if improvements can be made to the scope or delivery of training in the future.

1 Statement of a problem

It is important for firms to have accurate measures of ROI in training for this is what determines the level of training that will be conducted. A firm will want to compare the return from investment in training with returns from other forms of investment, and then undertake investments with the best overall rate of return. Under-provision of training may result from a lack of understanding of the benefits of training

by firms [1]. Key Account Management Program (KAMP) is a major training program conducted by the companies in order to ensure the customers are managed in the most suitable way by Account Managers (AM) which will eventually increase business opportunities. As a significant investment is made to train these managers, there is a greater need to analyze whether this training is effective. Also measuring the return on investment of this training program conducted by the organization will help the top management to understand whether the investments are viable. Under these circumstances, this study is going to identify the level of impact to the ROI through KAMP conducts by the company. Therefore problem of this study is “To what extent KAMP has an impact to the ROI of the training program?”

1.1 Objectives

This research aims to accomplish the following objectives:

- To quantify the net gains derived from a training program.
- To identify whether investment of a training program lead to better organizational performance.
- To use as a feedback to develop better training programs which satisfy job requirements and trainee satisfaction?

1.2 Hypotheses

- Alternative Hypothesis 1: KAMP directly influences to increase positive customer ratings. (Mean of the positive customer ratings have increased during the post-training period compared to pre training period.)
- Alternative Hypothesis 2: KAMP directly influences to increase positive actual sales of each buyer (Mean actual sales of each buyer have increased during the post-training period compared to pre training period.)
- Alternative Hypothesis 3: The training received helped to achieve better acquisition of skills and better application of skills to the business.
- Alternative Hypothesis 4: There is a positive ROI on the KAMP.

2 Significance of the study

As organizations recognize the importance and necessity for training and development, budgets continue to increase annually by organization, industry, and country. Many organizations and countries see training as an investment instead of a cost. Consequently, senior managers are willing to invest because they can anticipate a payoff for their investments. In developing countries, increased training is needed as new jobs are created and new plants and processes are established. Skill upgrading is necessary to develop core competencies needed to maintain a productive labor force. In some countries, the governments require minimum levels of funding for training to ensure that skills are developed. The learning organization concept continues to be implemented in many organizations, requiring additional focus on learning and training. In addition, the concern about intellectual capital and human capital has created a desire to invest more heavily in learning activities and formal training. As expenditures grow, accountability becomes a more critical issue.

A growing budget creates a larger target for internal critics, often prompting the development of an ROI process. The function, department, or process showing the most value will likely receive the largest budget increase.

ROI applications have increased because of the growing interest in a variety of organizational improvement, quality, and change programs, which have dominated in organizations, particularly in North America, Europe, and Asia. Organizations have embraced almost any trend or fad that has appeared on the horizon. Unfortunately, many of these change efforts have not been successful and have turned out to be passing fads embraced in attempts to improve the organizations. The training and development function is often caught in the middle of this activity, either by supporting the process with programs or actually coordinating the new process in these organizations. While the ROI process is an effective way to measure the accountability of training, it has rarely been used in the past. A complete implementation of the process requires thorough needs assessment and significant planning before an ROI program is implemented. If these two elements are in place, unnecessary passing fads, doomed for failure, can be avoided. With the ROI process in place, a new change program that does not produce results will be exposed. Management will be aware of it early so that adjustments can be made. Total Quality Management, Continuous Process Improvement, and Six Sigma have brought increased attention to measurement issues. Today, organizations measure processes and outputs that were not previously measured, monitored, and reported. This focus has placed increased pressure on the training and development function to develop measures of program success. Restructuring and reengineering initiatives and the threat of outsourcing have caused training executives to focus more directly on bottom-line issues. Many training processes have been reengineered to align programs more closely with business needs, and obtain maximum efficiencies in the training cycle. These change processes have brought increased attention to evaluation issues and have resulted in measuring the contribution of specific programs, including ROI.

The business management mindset of many current education and training managers causes them to place more emphasis on economic issues within the function. Today's education and training manager is more aware of bottom-line issues in the organization and more knowledgeable of operational and financial concerns. This new "enlightened" manager often takes a business approach to training and development, with ROI as part of the strategy [9]. ROI is a familiar term and concept for business managers, particularly those with business administration and management degrees. They have studied the ROI process in their academic preparation where ROI is to evaluate the purchase of equipment, building a new facility, or buying a new company. Consequently, they understand and appreciate ROI and are pleased to see the ROI methodology applied to the evaluation of training and performance improvement. There has been a persistent trend of accountability in organizations all over the globe. Every support function is attempting to show its worth by capturing the value that it adds to the organization. From the accountability perspective, the training and development function should be no different from the other functions—it must show its contribution to the organization. This accountability trend has developed a variety of different types of measurement processes, sometimes leaving much

confusion to the potential user of the processes. There is a variety of measurement possibilities developed in recent years and offered to organizations as a recommended measurement of the process or scheme. While this has created much confusion, many organizations have migrated to the proven acceptance of ROI. Used for hundreds of years, and for the reasons outlined in this section, ROI has become a preferred choice for training and development practitioners to show the monetary payoff of training. ROI is now taking on increased interest in the executive suite. Top executives who watched their training budgets continue to grow without the appropriate accountability measures have become frustrated and, in an attempt to respond to the situation, have turned to ROI. Top executives are now demanding return on investment calculations from departments and functions where they were not previously required. For years, training and development managers convinced top executives that training could not be measured, at least at the monetary contribution level. Yet, many of the executives are now aware that it can and is being measured in many organizations. Top executives are subsequently demanding the same accountability from their training and development functions. The payoff of training is becoming a conversation topic in top executive circles.

3 Problem solving

The research is focused on analyzing and evaluating a major training program conducted by a one of the large apparel exporter in Sri Lanka. The aim of the analysis and evaluation is to identify the ROI of the training program and to identify the relationship of performance of the business and the training. Population of the research will be the “Key Account Management” training program conducted by the organization during last two years. As the research is conducted focusing on a specific training program, the whole population is selected as sample for the purpose of conducting an effective study of the program and to increase the accuracy of the results. Firstly, time series analysis was conducted to analyze the mean customer rating and actual sales made during pre and post training period. Then these data was analyzed using statistical methods of Analysis of Variance (ANOVA) and Regression analysis to evaluate how training has intervened on creating a significant change on the customer rating and actual sales for each customer. Secondly, Statistical technique of co-relation co-efficient was used to measure the relationship of the following: quality of training and organization with acquisition of training skills and quality of training and organization on influence on business measures. Finally, the return on investment of the training program was measured. For this calculation, various costs incurred and benefits received from the training program are obtained through questionnaire and through HR and financial databases. The final calculation was made using the following formula suggested by Phillips [6].

$$ROI \% = \frac{Net\ program\ Benefits}{Program\ cost} \times 100$$

(1)

Source of data: [6]

1, 2, 3, 1.

The framework used by Doucouliagos and Sgro [3] for ROI analysis was used to analyze the ROI of training. Originally, this framework has consisted by four steps as step 1: Collection of data, step 2: Pre and post training analysis, step 3: Multivariate analysis, and step 4: Calculates the ROI. However, under this study, it was used three step method due to unavailability of the necessary data.

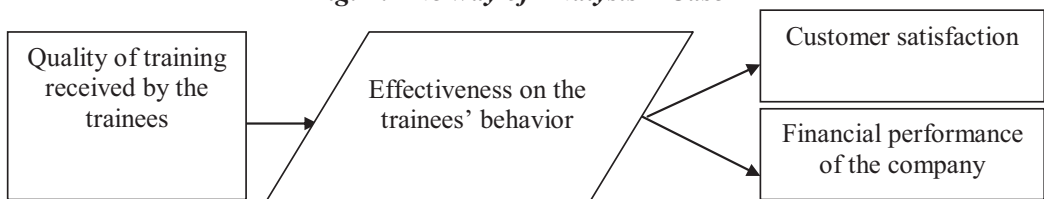
3.1.1 Stage 1: Collection of data

Primary data was obtained by interviewing and through company HR and financial database. Main Primary data, which was obtained from customer survey data collected through the marketing departments, post-training feedback obtained from relevant marketing managers, actual sales information obtained from the finance department and costs of training programs obtained through HR department. Costs of the training program were collected from the HR database. These included man days of the training program, facilitator cost which included facilitation fee and airfare, trainer’s hotel accommodation costs, and costs incurred for food and beverage for the participants. To identify the relationship of business results and objectives of the training program financial data were gathered from the finance department. These included customer wise revenue, contribution which will facilitate to determine whether training resulted in a benefit to the company. Customers’ feedback was gathered from each marketing department where feedback is evaluated on various categories. In addition to the above, a post training evaluation was carried out among participants to get feedback on training and to identify relationship between quality of training program and acquisition of skills and influence on business measures in perspective of trainees.

3.1.2 Stage 2: Pre and Post-training Analysis

Pre and post-training analysis was used to compare a measured outcome before a training initiative to a measured outcome after a training initiative. Following analysis were carried out in this stage.

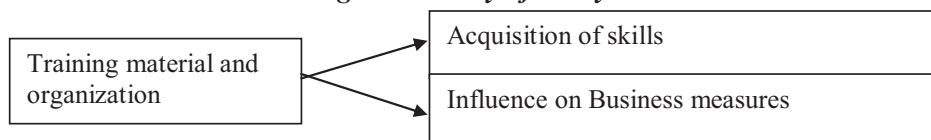
Fig. 1: The way of Analysis – Case 1



Source of data: Conceptual framework of the study

This was for the testing hypothesis 1 and 2. Under this, it was going to evaluate the level of influence come from quality of the training to customer satisfaction and the financial performance of the company.

Fig. 2: The way of Analysis – Case 2



Source of data: Conceptual framework of the study

This was where hypothesis 3 was tested. In this analysis, trainees are evaluated based on two outcomes. The first analysis is focused on identifying how training affected trainee’s behavioral outcomes and secondly the application of learning to the business. These two outcomes are analyzed based on trainees’ perspective.

3.1.3 Stage 3: Calculating the ROI

At the final stage ROI of the training program was calculated based on the formula suggested by Phillips [6]. This is the ultimate level of training evaluation. This is the level where Hypothesis 4 will be tested.

1, 2, 3, 4, 1.

4 Findings of the study

Version 14 of MINITAB Statistical software was used for all statistical calculations and graphical illustrations to ensure statistical accuracy.

For both hypotheses 1 and 2 the tabulated value for degree of freedom $v = 5$ in each case, and a 1-tailed, 95% confidence level is $F_{5, 5} = 5.0503$. Based on the results it can be seen that mean customer rating for each customer has increased in post training period compared to pre training period. As F-statistic for each customer is greater than tabulated F value of 5.0503, it can be said that differences of means between pre and post training period are statistically significant. The probability of making a Type I error i.e.: reject the null hypothesis when the null hypothesis is true is eliminated as P is zero for almost all of the customers.

Following table shows the results obtained from One-way ANOVA.

Tab. 1: One-way Analysis of Variance for customer rating

	Pre training Mean Customer rating	Post training Mean Customer rating	F-statistic	P
GAP	3.65	4.40	49.99	0.000
M&S	3.20	3.94	53.69	0.000
LE	3.25	3.76	10.35	0.009
Next	3.38	3.96	46.71	0.000
Total	3.37	4.01	36.11	0.000

Source of data: survey data

The above analysis will be further justified using multiple regression method where pre and post training customer rating trend line slopes are analyzed.

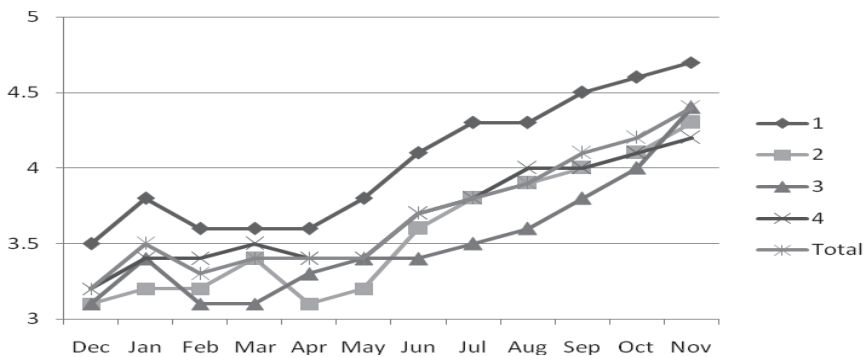
Tab. 2: Regression data for customer rating

Customer	Pre training trend line slope of customer rating (X1)	Post training trend line slope of customer rating (X3)+ (X1)
GAP	0.03061	0.12245
M&S	0.01837	0.12041
LE	0.01837	0.19184
Next	0.01633	0.09592
Total	0.0209	0.1329

Source of data: survey data

Post training trend line slope of customer rating (X3) + (X1) has increased by a greater extent from its pre training period level (X1). Thus, customer rating has increased from smaller rate to a much higher rate. Therefore, based on these findings and analysis it can be statistically justified that while other factors are constant, the training has had made a significant influence on increasing customer rating to a higher rate. The following graph depicts the increase in customer rating for different customers during the pre and post training period.

Fig. 1: Pre and Post training time series plot for actual sales data



Source of data: survey data

The time series graph clearly depicts that after the training in the month of May, the customer rating has increased at a significant level.

1, 2, 3, 4, 4.1, 4.2.

The tabulated value for degree of freedom $v = 5$ in each case, and a 1-tailed, 95% confidence level is $F_{5, 5} = 5.0503$.

Tab. 3: One-way Analysis of Variance for actual sales data

Customer	Pre training Mean Actual Sales (\$ '000)	Post training Mean Actual Sales, (\$ '000)	F-statistic	P
1	2,463	2,902	5.11	0.047
2	1,693	2,245	9.74	0.011
3	1,576	2,345	14.62	0.003
4	262	377	5.16	0.046
Total	5,994	7,868	11.06	0.008

Source of data: survey data

Based on the results the mean actual sales value for each customer has increased in post training period compared to pre training period. As F-statistic for each customer is greater than tabulated F value of 5.0503, it can be said that differences of means between pre and post training period are statistically significant. The probability of making a Type I error i.e.: reject the null hypothesis when the null hypothesis is true is very low for all of the customers as represented by Probability value which is less than critical value of 0.05.

Tab. 4: Regression data for actual sales data

Customer	Pre training trend line slope of actual sales (X1), \$ '000	Post training trend line slope of actual sales (X3)+ (X1) \$ '000
4	(90)	213
2	5	196
3	(9)	237
4	(11)	59
Total	(105)	705

Source: survey data

Post training trend line slope of actual \$ sales (X3) + (X1) has increased by a greater extent from its pre training period level (X1). Thus, actual sales have increased from smaller rate to a much higher rate. Therefore, based on these findings and analysis it can be statistically justified that while other factors are constant, the training has had made a significant influence on increasing actual sales value to a higher rate.

1, 2, 3, 4, 4.1, 4.2, 4.3.

Hypothesis 3 was analyzed using the statistical method of co-relation co-efficient.

Case 1: Relationship between qualities of training received by the trainees and customer satisfaction / financial performances

Through the application of formula of co-relation co-efficient the answer derived is 0.84. Hence, as per the interpretation of co-relation co-efficient, there is a positive relationship between the two variables, because r takes the form of a positive figure. I.e. in other words the nature of relationship between the quality of the training received and the acquisition of the training skills is positive and Strength. Therefore, Case 1 of hypothesis number 3 is justified through the findings.

Case 2: Relationship between training material, organization, and acquisition of skills and influence to the business measures

Through the application of formula of co-relation co-efficient the answer derived is 0.77. Hence, as per the interpretation of co-relation co-efficient, there is a positive relationship between the two variables, because r takes the form of a positive figure. I.e. in other words the nature of relationship between the Quality of the training received and the Influence on business measures is positive. Therefore, Case 2 of hypothesis number 3 is justified through this analysis. To analyze the hypothesis number 4 data relating to the costs of the training program and monetary benefits of the training program had to be gathered. The types of data gathered were listed as follows. Actually, data were needed in order to evaluate the impact of training on the 'bottom line'. The facilitators cost, costs of materials, cost of refreshments provided and opportunity coast of the time are the costs were added d for this analysis.

Based on trainees feedback it was found that averagely training has resulted contributing to net profit by following percentages on variance on monthly average sales between pre and post training period. This is an average estimate as it is often difficult to clearly identify the impact on net profit due to influence of various variables which are not considered in this study. The contribution is annualized by multiplying by 12.

Tab. 5: Impact of the training program on net profit

Customer	Pre training Mean Actual Sales, \$ '000	Post training Mean Actual Sales, \$ '000	Variance \$ '000	% Impact on Net Profit	Impact on Net Profit \$ '000
1	2,463	2,902	439	5%	22
2	1,693	2,245	551	3%	17
3	1,576	2,345	768	4%	31
4	262	377	115	2%	2
Total	5,994	7,868	1,873	4%	72

Source of data: survey data

Over the period studied it is found that training program generated and ROI of 24523%. This is roughly 245 times of the initial investment on training. This is obvious considering the fact that initial investment is smaller compared to the higher profit earned due to the training. Therefore it can be justified that the financial return obtained from this training program is positive and much larger compared to the initial investment.

Discussion and Conclusion

It was identified that customer rating and actual sales have had a significant influence from the KAMP and it is statistically proven and justified. In analyzing hypotheses 1 and 2 it was found that customer rating and actual sales have increased significantly after the training program which was conducted in May 2009. Based on the post training evaluation questionnaire trainees have agreed that quality of the training program is related with both acquisition of skills and contents from the

training program and influence of the training to key business measures. Based on the findings over 82% of trainees agreed that the training program has a very significant influence on enhancing the “communication with customers”. This is one of the key findings and an area which the organization has focused heavily on improving. Not only that respondents agree that training had a very significant influence on areas of “improving service quality” “gaining more market share” which had 22% and 14% respondents respectively. Another key finding is that training program only had a moderate level of influence on net profits as per the trainees. Although this is subjective, the company has made an increase of \$72,000 on net profit per month after the training period. This may be due to the fact that impact of various factors when determining net profit.

The final ROI figure of 24523% is due to the huge impact of net profit, which can be directly related to the training program. This signifies the fact that investment on training program gives very high return on investment. Nevertheless, this study also identified following intangible measures which cannot be quantified for monetary values. Employee satisfaction is perhaps one of the most important intangible measures. Some HRD programs are designed to improve employee satisfaction. While employee satisfaction has always been an important issue in employee relations, in recent years it has taken on new importance because of the key relationships of job satisfaction to other measures.

These data reflect work climate changes such as communication, openness, trust, and quality of feedback. Climate surveys are more general and often focus on a range of workplace issues and environmental enablers and inhibitors. Climate surveys conducted before and after training may reflect the extent to which training has changed these intangible measures. Perhaps the most difficult measure is leadership, yet leadership can make the difference in the success or failure of an organization. Without the appropriate leadership behaviors throughout the organization, the other resources can be misapplied or wasted. Measuring leadership has been a difficulty in this study.

A variety of measures are often monitored to reflect how well teams are working. Although the output of teams and the quality of their work are often measured as hard data and converted to monetary values, other interpersonal measures have not considered in this study. Other than the above factors, one of the research objectives of developing a simple and practical model of training evaluation has been a success in this study. Introducing some statistical methods helped the organization to identify some meaningful data and relationships between these data which in turn provide some meaningful information. These methods helped the organization to analyze the data in various ways and enhancing ways of capturing data which will give information that is more meaningful. All in all it can be concluded that Investment on training will lead to better business performance and will give better business results. This research confirms the fact that training can be a powerful building block in allowing a business to achieve its goals, indicating that it must be seen as a strategy and not an event.

Acknowledgement

This research was conducted with the financial support of the Internal Grant Agency of Faculty of Management and Economics on Tomas Bata University, Project-No IGA/57/FaME/11/D.

References

- [1] BARTEL, A *Measuring the employers return on investment in training: Evidence from the literature*, Industrial Relations: a Journal of Economy and Society, 2000, Vol.39, No.3, July, pp.502–524.
- [2] DOCKERY, A. M. *Training innovation and business performance: An analysis of the business longitudinal survey*. Adelaide, Australia: National Centre for Vocational Education Research Ltd Carnevale, 2001
- [3] DOUCOULIAGOS, C & SGRO, P, *Enterprise return on a training investment*, NCVER, Adelaide., 2000
- [4] DTEC (Department of Training and Education Coordination) NSW (Marcroft L), *Relationships between training and productivity*, DTEC NSW, Sydney.1997
- [5] FERKETISH, B.J. & HAYDEN, J.W. . *HRD & quality: The chicken or the egg?* Training & Development Journal, 1992 January: 38-42.
- [6] PHILLIPS, J , *Return on investment in training and performance improvement programs*, Gulf Publishing, Houston, 1997
- [7] KIRKPATRICK, DONALD L. *Evaluating Training Programs: The Four Levels*, 2nd ed. San Francisco: Berrett Koehler 1998.
- [8] STOLOVITCH, H & MAURICE, J *Calculating the return on investment in training: A critical analysis and case study*, Performance Improvement, 1998, Vol.37, No.8, pp.9–19.
- [9] VAN ADELSBERG D AND TROLLEY EA, *Running Training Like a Business—Delivering Unmistakable Value*, Berrett-Koehler Publishers Inc (Executive summary) ,1999

Contact Address

A. Chamaru De Alwis M.Sc, B.Sc

Faculty of Management and Economics, Tomas Bata University in Zlín
Mostní 5139, 760 01 Zlín, Czech Republic
Email: Dealwisac@gmail.com
Phone number: 775426008

W.D.H.M. Rajaratne B.B, CIMA

Department of Human Resource Management
University of Kelaniya, Sri Lanka

Received: 24. 05. 2011

Reviewed: 14. 10. 2011

Approved for publication: 30. 11. 2011