

## **An Empirical Test of Training Outcomes in the Australian Hotel Industry**

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### **Abstract**

*The purpose of this paper was to empirically test the effective outcomes of a hotel training program. The service-profit chain model was used as the theoretical foundation for examining a causal link between the staff performance and the training program conducted in two Hotels. The method involved a regression analysis to test the level of influence of the training and other variables on staff performance. The findings were that there was a statistically significant difference in staff performance due to the training. A suggestion for future research is to examine outcome measures using random samples of hotel guests. The practical implication for HRM practitioners is that the method is easily replicated to provide objective evidence that can validate the outcomes from training programs.*

**Keywords** –Service-profit chain, training program assessment

### **1. Introduction**

Strategic human resource management is an important factor in an organisation's ability to remain competitive. Investments in human capital have been identified as essential to maintaining a highly skilled work force and to develop the intangible assets such as intellectual capital (Guthrie, 2001). Whicker and Andrews (2004) argued the importance of realising value from the knowledge assets or intellectual capital of an organisation. In essence, training programs are a vital part of an organisations commitment to improve performance and increase productivity. To be successful a training program needs to achieve timely results that are consistent with pre-established performance objectives which in themselves should be related to the organisational goals. The need to measure the contribution to an organisation's performance by training has been a problem in the human resource management discipline for some time (Swanson, 1998; Cifalino & Baraldi, 2009).

Evaluating the effectiveness of training programs is an important process for the human resource department in any organisation. Within the training sector there are a number of approaches that have been developed for the evaluation of training programs (Ostroff, 1991). Of these, the Kirkpatrick Model (Kirkpatrick 1978, 1994), which provides a four level approach to evaluating training programs, is arguably the most widely adopted method (Swanson, 1998). However, even this model has been criticised as being simplistic and lacking in any underlying economic or psychometric theory to provide valid measurements (Swanson, 1998). Typically, training programs under these models are evaluated in terms of the participants' post-training behaviour in regards to the objective of the training as observed and reported by their supervisors.

For training programs that address specific problems or potentially rewarding opportunities the potential benefits should be obvious. However, for the training that is less specific and with a vague purpose the benefits are generally less apparent. Essentially, the payoff from any training will be to increase profit or reduce costs. In the training literature it is common to find money spent on training referred to as a cost. This generally denotes that the monetary value will be deducted from revenues as an expense. Whether the costs of training are technically an expense or an investment is a moot point. Because money spent on training should generate benefits for the business in the future. The calculation of the benefits or returns derived from training and the costs associated with the training can be complex. Increases in profit are derived from training that seeks to improve sales, increase market share, introduce new products, open new markets, enhance customer service, or increase customer loyalty. Reducing costs comes from training that seeks to reduce risks, avoid problems, or prevent unwanted events.

In determining the benefits from training there are two factors to consider: the potential monetary value derived from the improvements and the costs of the training. To address the shortcomings of these qualitative models quantitative approaches such as cost benefit analysis and return on investment (ROI) have been adapted to measure the performance of training programs (Nechvoglod, Karmel & Saunders, 2009; Doucouliagos & Sgro, 2000). The evaluation is expressed in economic and financial terms that represent the outcomes of the investment in the employees. However, although most training professionals recognise the potential value of calculating ROI they often struggle with the question of how to validate the benefits. Inevitably the degree of difficulty associated with identification of the relevant variables and the allocation of dollar values in terms of costs and benefits produces scepticism in the validity of the returns on training dollars spent. Research by Choi and Dickson (2010) focused on the benefits of reduced employee turnover and improved levels of satisfaction as one approach to address the problem faced by human resource departments in providing objective evidence to support the return on investment. This paper addresses this gap in the literature by providing a framework for evaluating a training program using statistical analysis to provide objective evidence. The framework empirically tests the causal relationship between a training program and staff performance.

### **1.1 Objectives of the Research and Research Hypothesis**

The literature indicates that the training of front office staff should address the skills identified as key competencies and these should therefore inform the identification of appropriate outcome measures for the study. The evaluation models suggest that; first, clarification should be obtained of improvements; second, such improvements should be attributable to the training program. The overall objective was therefore concerned with identifying the impact of the training on the improvement in staff performance. The expectation was that the training would improve efficiency which would in turn be reflected in improved customer satisfaction ratings and increased reservations or room occupancy rates. The specific objectives of the study are therefore to:

- Identify appropriate outcome measures (independent variables) to be used in the testing of the effectiveness of the training program.
- Determine whether there had been any identifiable improvements pre and post training that would be consistent with the service-profit chain model.
- Empirically test the outcome measures pre and post training to validate the effectiveness of the training program. In order to achieve this the following null hypothesis were devised:
  - $H_0$  - *There will not be a significant correlation between training and staff performance.*

## **2. Literature Review**

The hotel industry has been identified (Park & Gagon 2006) as predominantly focused on providing services, which may involve a variety of activities but most commonly they may be categorised as an integration of room, food and beverage services. This leads to a set of characteristics which Park and Gagon (2010, 94) referred to as the 'hotel product' which requires measures of performance that best reflect the particular activities and services provided. A critical measure of hotel service is usually related to how employee's are perceived by customers (Chartrungruang, Turner, King & Waryszak 2006). The performance of employees may therefore depend upon the level of training they have received and their ability to apply the training.

### **2.1 Service-profit Chain Model**

Research has found that there is a quantifiable link between employee services, customer satisfaction and financial results (Garland, 2001; Brooks, 2000; Heskett, Jones, Loveman, Sasser & Schlesinger, 1994). Loyalty was directly correlated with customer satisfaction. Customer satisfaction in turn was largely due to the value of services provided to the customers. Value in services was created by the knowledgeable and productive employees. The key factors of the abbreviated service-profit chain model indicate that profit is primarily the result of customer loyalty. Figure 1 provides an overview of the key variables in the service-profit chain that are important in terms of justifying the influence that training outcomes can have on the revenue and profit of an organisation.

**Insert figure (1) about here**

The service-profit chain was developed from the analysis of successful service organisations with the intention to provide 'hard' values for 'soft' measures (Heskett et al, 1994). Anderson and Mittal (2000) make the point that organisations need to improve the products and service attributes which emanate from employee performance in providing products or services to customers.

In summary where a service organisation is attentive to the conditions that enable or empower employees to perform well at their job (for example providing training programs), customers will experience improved satisfaction with the services and are more likely to remain loyal to the business, and subsequently the increased revenue and profits can justifiably be claimed to have resulted from the increased customer loyalty. Prior research into customer satisfaction in the hotel industry (Jones & Ioannou, 1993) provides support for the relevance of the role of employees indicated in the service-profit chain model.

## **2.2 Competencies for Front Office Staff**

In the hotel industry McColl-Kennedy and White (1997) reported finding a link between training programs and the quality of service that staff provided. Janes (2005) indicated that training in the hotel (lodging) industry had an important role in achieving a competitive edge. However, Woods (2003) reported finding that training of hotel employees had been neglected and suffered from under investment. In any event, the most common approach used to measure the effectiveness of hotel training relied on surveying the level of satisfaction expressed by guests and employees (Partlow 1996). The area of activity identified as being the main contact point for guests, and therefore with a significant capacity to influence levels of satisfaction, was the front office (Hai-yan & Baum 2006).

Employees working in the front office role can be expected to undertake a variety of tasks but most importantly they can build up a hotel's image and reputation (Hai-yan & Baum 2006 p.509). The term front office was defined by Valen and Valen (2004) as relating to a position which is the main contact point for guests within a hotel, irrespective of the type or size of the hotel. The term front office is therefore predicated on activities occurring around the reception desk, such as meeting and greeting guests, providing information, processing bookings and departures (Baum & Devine 2007; Hai-yan & Baum 2006). The skills required for front office staff are according to Angelo and Vladimir (2004) relevant to the evaluation of proposed training and development. In the hotel industry employees may require a range of skills to perform their duties. For activities such as front desk attendant, porter, and concierge these include: working with colleagues and customers; working in a socially diverse environment; following health, safety and security procedures; performing office procedures; receiving and processing reservations; operating computerised reservation systems; providing accommodation reception services; processing financial transactions; providing porter services; communicating on the telephone; promoting products and services to customers; dealing with conflict situations.

It is against the background of these core competencies that most training programs, for front office employees in hotels, are designed and this is consistent with the general findings of Ryan and Barnett (1995). Therefore, when conducting the analysis of the success of various training programs the outcomes relevant to these competencies require that they be operationalised to identify the effective measure of benefits to the business.

## **3. Research Methodology**

This research involved testing the training program delivered to 23 employees from two hotel sites. For the purpose of the research these sites are identified as hotel "A" which had 12 staff and hotel "B" which had 11 staff undertaking the training. The hotels were part of a chain operating in Australia with a focus on resort style accommodation and facilities. The employees were from the areas covering reception, porter and concierge. Each participant had discussed the training with their respective supervisors as part of their performance review. The performance reviews were deemed to constitute a pre-course evaluation as they established the objectives and identified measurable outcomes. Training was conducted over a period of six weeks. The research was concerned with examining the pre and post- training data relevant to the variables identified in Figure 1.

### **3.1 Data Collection**

The pre-training data was based on the staff appraisals and customer satisfaction feedback for an equivalent period of time before and after the training, this was provided by the hotel management. The collection of the survey data by the hotel management through their normal course of business was considered to serve concerns over confidentiality for guests and staff. For the purpose of the analysis the measurements, identified in Table 1, were selected on the basis that the data were readily available and were also consistent with the elements identified in the service-profit chain model.

**Insert table (1) about here**

The customer satisfaction was monitored by hotel management through the use of guest surveys, and a mystery guest survey program. Employee satisfaction was derived from employee engagement surveys as well as indicators such as staff sick leave taken. Feedback from customers questionnaires were distributed in rooms and were available at reception for completion when guests were leaving. The questionnaires covered three main areas of concern to this analysis, that is, satisfaction with service, prior guest (repeat business) and awareness of products and /or services. The questionnaires and surveys were conducted as part of the normal business practice and confidentiality was maintained by the hotel management as part of their standardised processes.

#### **4. Results**

##### **4.1 Service-Profit Chain Model**

The hotel management provided the aggregated data relating to indicators such as staff turnover (retention), amount of sick leave taken (loyalty) and repeat business measured by the number of guests that had previously stayed at the same hotel or another hotel in the group. For the purpose of analysis the aggregated data as provided by hotel management could not be reliably tested. The details of the changes identified by management are provided in Table 2.

**Insert table (2) about here**

The comparison between the relevant data sets does indicate that changes had occurred however this does not provide evidence of a causal relationship. From the perspective of the service-profit chain model (Figure 1) the data suggests that there may well be a causal relationship between staff performance and training. The data provided by the hotel management established a prima facie case that the training may have been a factor in the change in staff performance.

##### **4.2 Testing of Null Hypothesis**

**H<sub>0</sub>** - *There will not be a significant correlation between training and staff performance.*

To test the null hypothesis, the data was subjected to a Multiple Regression analysis. This analysis was used to examine the effects of the independent variables on a dependent variable. This was undertaken in an effort to isolate the effects of any other variables, that is did any factor other than the training contribute to the changes in staff performance. This analysis tested the impact of the training in conjunction with other possible explanations for the changes.

An additional variable identified as having a possible impact on the performance results was the different work shifts. These were considered to have the potential to provide an alternative explanation for any change in the results. The potential differences due to shift supervision were examined to test for any influence on the performance of employees. The data covered both the pre-test and post-test periods. A dummy variable was used to examine the relevant influence of the training. These variables were tested using a multiple regression analysis and the results are presented in Tables 3, 4, 5, and 6.

**Insert table (3) about here**

The results from Table 3 indicate that the improvement in the number of reservations processed was not significantly influenced by the different shifts however, training was significant at the .05 level. *Whilst the different shifts did not provide a significant explanation for any difference in the number of reservations processed by staff the training was found to be significant therefore the null hypothesis is rejected.* To further examine the relationship a multiple regression analysis was conducted using time taken to process reservations as the dependent variable.

**Insert table (4) about here**

The results from Table 4 indicate that the average time taken to process reservations was not significantly different due to the different shifts nor was training. To further examine the relationship a multiple regression analysis was conducted using the number of errors occurring when process reservations as the dependent variable.

**Insert table (5) about here**

The results from Table 5 indicate that the average number of errors incurred in the course of processing reservations was significantly different due to the training (significant at the .05 level). An additional regression was conducted to further asses the relationship between the number of errors and the number of reservations processed and the time involved in the processing and the results are reported in Table 6.

**Insert table (6) about here**

The results from Table 6 indicate that the average number of errors incurred during the processing of reservations was significantly correlated to the number of reservations processed (significant at the .05 level) and that this was also related to the average amount of time involved in processing the reservations (significant at the .05 level).

**5. Discussion**

The results from the multiple regression analysis provided evidence that the improvements in the number of reservations processed (Table 3); the average time taken to process reservations (Table 4); and the reduced average number of errors incurred in the course of processing reservations (Table 6) were all significantly influenced by the training. A significant difference was also found to exist between the hotels and this may be due reasons which whilst not examined in this study may be a matter for future research. The average number of errors incurred during the processing of reservations was found to be significantly correlated to the number of reservations processed (Table 9). This finding suggests that the more reservations processed the greater the chance of making an error and this was also correlated to the average time taken. Surprisingly training was not significantly correlated with processing reservations and this may also be an area for future research to explore.

**6. Conclusion**

The significance of this study lies in the use of the service-profit chain model to test and validate the causal relationship between improved staff performance and training programs. The study addressed the gap in the literature by providing a framework for evaluating a training program using statistical analysis to provide objective evidence. The empirical nature of the statistical tests provided objective evidence that the observed changes in performance by the staff was not due to mere chance. The finding is that the improvements in performance were the result of the training program that the staff had undertaken.

**6.1 Implications for Industry**

This has practical implications for human resource management seeking to justify and validate causal relationship between improvements in staff performance and training programs. The method used in this paper can easily be replicated and applied to the evaluation of training programs by human resource management practitioners. The approach provides an important means to address the under investment in training that was noted by Woods (2003).

**6.2 Limitations and future research**

The limitations generally associated with generalizability were addressed by the examination of subjects in the industry and the use of statistical analysis to evaluate the outcomes. Construct validity was addressed by the use of variables which were indicative of the outcome measures expected from the training. However, future research could test additional outcome measures and may provide more generalizable results by examining a training program for a larger number of staff or by conducting a longitudinal study. Reliance on the surveys conducted by the hotel in the normal course of business may also be biased and future research may be better served by conducting alternative surveys of hotel guests randomly selected with questions focused on specific job duties. Further insights may also be gained in regards to potential differences between individuals based on examining learning styles or the learning curve as newly acquired skills are applied in the work place.

**References**

- Anderson, E. & Mitall, V. (2000). Strengthening the Satisfaction-Profit Chain, *Journal of Service Research*, 3(2), 107-120.
- Angelo, R. & Vladimir, A. (2004). *Hospitality Today. An Introduction*, Tourism Press: Beijing.
- Baum, T. & Devine, F. (2007). Skills and training in the hotel sector: The case of front office employment in Northern Ireland, *Tourism and Hospitality Research*, 7(3/4), pp.269-280.
- Brooks, R. (2000). Why Loyal Employees and Customers Improve the Bottom Line, *The Journal for Quality and Participation*, 23(2), 40-44.
- Chartrunguang, B., Turner, L., King, B. & Waryszak, R. (2006). Customer Satisfaction, Training and TQM: A Comparative Study of Western and Thai Hotels, *The Journal of Services Marketing*, 11(4), 249-264.
- Choi, Y. & Dickson, D. (2010). A case Study in the Benefits of Management Training Programs: Impacts on Hotel Employee Turnover and Satisfaction Level, *Journal of Human Resources in Hospitality & Tourism*, 9(1), 103-116.
- Cullen, J., Sawzin, S., Sisson, G. & Swanson, R. (1978). Cost Effectiveness: A Model for Assessing the Training investment, *Training and Development Journal*, January, 24-29.

Doucouliagos, C. & Sgro, P. (2000). *Enterprise Return on a Training Investment*, National Centre for Vocational Education Research Ltd: Adelaide.

Garland, R. (2002). What Influences Customer Profitability? Service-Profit Chain: Non-financial drivers of customer profitability in personal banking, *Journal of Targeting, Measurement and Analysis for Marketing*, 10(3), 233-248.

Hai-yan, K. & Baum, T. (2006). Skills and work in the hospitality sector: The case of hotel front office employees in China, *International Journal of Contemporary Hospitality Management*, 18(6), 509-518.

Haskett, J., Jones, T., Loveman, G., Sasser, W. & Schlesinger, L. (1994). Putting the Service-Profit Chain to Work, *Harvard Business Review*, 72(2),164-174.

Janes, P. (2005). The Challenges of Providing Training in Small Sized Lodging Properties, *Journal of Human Resources in Hospitality & Tourism*, 3(2), 125-150.

Johnson, D. (2004). *Human Resource Management in the Tourism Industry*, Publishing House of Performance: Beijing.

Jones, P. & Ioannou, A. (1993). Measuring Guest Satisfaction in UK-based International Hotel Chains: Principles and Practice, *International Journal of Contemporary Hospitality Management*, 5(5), 27-31.

Kirkpatrick, D.L. (1978). Evaluating in-house training programs, *Training and Development Journal*, 38, 32-37.

Kirkpatrick, D.L. (1994). *Evaluating training programs: the four levels*, Berrett-Koehler: San Fransisco.

Mc-Coll-Kennedy, J.R. & White, T. (1997), Service provider training programs at odds with customer requirements in five-star hotels, *Journal of Human Resources in Hospitality & Tourism*, 5(1), 51-75.

Nechvoglod, L., Karmel, T. & Saunders, J. (2009). *The Cost of Training Apprentices, Occasional Paper*, National Centre for Vocational Education Research Ltd: Adelaide.

Ostroff, C. 1991. Training Effectiveness Measures and Scoring Schemes: A Comparison, *Personnel Psychology*, 44(2), pp.353-374.

Park, J.A. & Gagon, G.B. (2006), A Causal Relationship Between the Balanced Scorecard Perspectives, *Journal of Human Resources in Hospitality & Tourism*, 5(2), 91-116.

Ryan, C. & Barnett, S. (1995). Hotel conference managers: skills and training needs in New Zealand, *Journal of Vacation Marketing*, 1(4), 349-359.

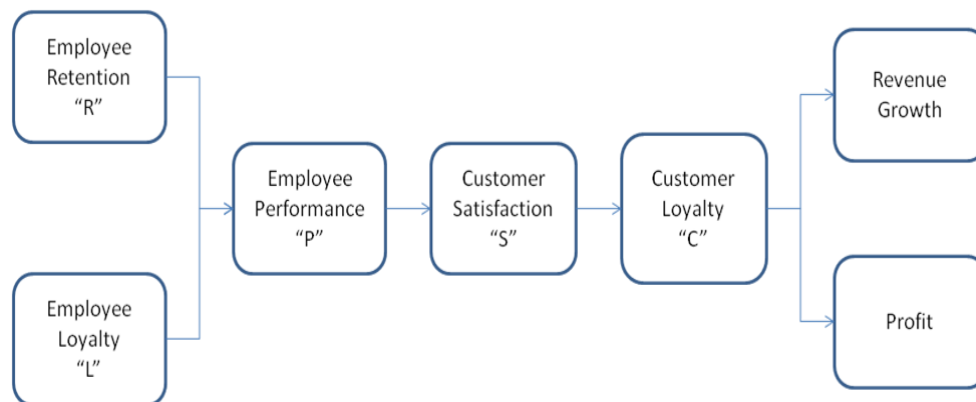
Swanson, R.A. 1998. Demonstrating the Financial Benefit of Human Resource Development: Status and Update on the Theory and Practice, *Human Resource Development Quarterly*, 9(3), pp.285-295.

Vallen, J. & Vallene, G. (2004). *Check In, Check Out: Managing Hotel Operations*, Prentice-Hall: Upper Saddle River, NJ.

Woods, R. (2003). *Managing Hospitality Human Resources*, Tourism Press: Beijing.

Whicker, L.M. and Andrews, K.M. (2004). HRM in the Knowledge Economy: Realising the Potential, *Asia Pacific Journal of Human Resources*, 42, 156-165.

**Figure 1. Abbreviated Service-Profit Chain Model**



Source: Modified version adapted from Haskett et al, 1994

**Table 1. Data Collection Details per Staff Member**

<b>Objective is to improve:</b>	<b>Operationalised as:</b>
Providing accommodation reception services	Reservations processed Time to complete process Errors/complaints
Employee job satisfaction	Sick leave

**Table 2. Service-profit Chain of Pre-training vs Post-training Changes**

<i>Service-Profit Chain Elements</i>		<i>Change</i>
R	Staff turnover rates	- 0.75%
L	Sick leave rates	- 1%
P	Employee performance surveys	+ 0.75
S	Customer Satisfaction	+ 1.00
C	Customer Loyalty	+ 1%

**Table 3. Multiple Regression Analysis Results “# Processed” against “Shift” and “Training”**

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	30.00234	15.00117	2.12660678	0.131612698
Residual	43	303.3237	7.054041		
Total	45	333.3261			
<i>Standard</i>					
	<i>Coefficients</i>	<i>Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>
Intercept	15.68795987	1.261463	12.43633	7.7718E-16	13.14397822
Shift	-0.14615385	0.789944	-0.18502	0.85408482	-1.73922742
Training	1.608695652	0.783195	2.054016	0.04608557	0.029231876

**Table 4. Multiple Regression Analysis Results “Time” against “Shift” and “Training”**

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	3.114548	1.557274	0.34071233	0.713166141
Residual	43	196.5376	4.570642		
Total	45	199.6522			
<i>Standard</i>					
	<i>Coefficients</i>	<i>Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>
Intercept	10.54431438	1.015416	10.38423	2.7147E-13	8.496532858
Shift	-0.28846154	0.635866	-0.45365	0.65236123	-1.57080831
Training	-0.43478261	0.630434	-0.68966	0.49411586	-1.70617415

**Table 5. Multiple Regression Analysis Results “Errors” against “Hotel”, “Shift” and “Training”**

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	5.566722	2.783361	2.58239552	0.087273756
Residual	43	46.34632	1.077821		
Total	45	51.91304			
<i>Standard</i>					
	<i>Coefficients</i>	<i>Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>
Intercept	2.32090301	0.493093	4.706827	2.628E-05	1.326486329
Shift	-0.0115384	0.308781	-0.03737	0.97036471	-0.6342548
Training	-0.6956521	0.306143	-2.27231	0.0281259	-1.31304858

**Table 6. Multiple Regression Analysis Results “Errors” against “# Processed” and “Time”**

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	6.910412	3.455206	3.22510933	0.049539902
Residual	43	46.06785	1.071345		
Total	45	52.97826			
<i>Standard</i>					
	<i>Coefficients</i>	<i>Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>
Intercept	-1.82033956	1.53494	-1.18594	0.2421599	-4.91584168
# Processed	0.118408572	0.060929	1.9434	0.05853181	-0.00446557
Time	0.188441208	0.08133	2.317001	0.0253329	0.024424051