
Role and Effectiveness of Industrial Training in Tourism Education

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Abstract: Tourism education plays a key role in tourism and hospitality management education with emphasis on developing students' managerial, rather than operational skills (Roberts and Whitelaw, 1999). Combination of theory with practice is viewed as an essential component of tourism and hospitality management education. Industrial training component of tourism and education can hold real educational benefits in preparing students for future management roles. Given the proliferation of tourism and hospitality related courses over the past decade and the relative importance attributed to industrial training in developing students' management competencies. This research undertakes an empirical study to find the enhancement in competencies experienced by students after their industrial training. The study also attempts to find out the effectiveness of the industrial training underwent by the hospitality and tourism students. Further this study attempts to identify the relationship between the enhancement of the competencies and effectiveness of the industrial training. For the study purpose three institutions offering tourism and hospitality education in Jammu namely Center for Hospitality and Tourism Management, Satyam Institute of Hotel Management & Tourism; and Travel and Tourism branch of Government Polytechnic College Jammu has been taken into consideration. This study highlights the importance of industrial training in tourism education.

Keywords: Industrial training, competencies, training effectiveness and tourism education.

Introduction

Worldwide travel and tourism industries generate direct and indirect employment for 204million people and create twice as many jobs as the average industry. However, a potential barrier to the future growth of these industries is the lack of appropriate human resources. Tourism and hospitality employers have raised concern regarding the scarcity of suitably qualified workers. They claim there is a severe shortage of both management and skilled workers, and that the education of these potential employees needs to be aligned with industry needs (Goodman Sprague. 1991: Jones, 1991) This reflects more general concerns regarding a critical shortage of suitably qualified managers with the knowledge and skills to meet the demands and challenges of the 21st century. Thus, developments in training and education need to ensure expected industry growth and future competitive demands.

The challenges for educational institutions have been highlighted by the rapidly changing business environment that presents new demands of management. Forces such as increased globalization, rapid technological innovation and the customization of products and services are considered major influences on world markets and the nature of business enterprises. This dynamic and challenging environment will demand a change in the nature of workers, the way they think and the range of skills they possess. High quality employees who can adapt to inevitable change will be one of the essential ingredients for organizational success (Terpestra1996). It is argued that, to meet the future demands for appropriately skilled managers and workers, ongoing collaboration and consultation with industry is required to ensure the goals of all stake holders- students, educationists and industry employers are met. One form of collaboration often inducted in tourism related courses is industrial training or summer training or internship. This practical component of courses is aimed at enhancing students' practical skills and management competencies.

Different structures and approaches to industrial training are used, with considerable variations apparent in length of the placement time, location within the degree program, whether students are paid or unpaid and the nature of work undertaken. While there is still much debate surrounding its legitimacy as an academic exercise (Petrillose and Montgonery, 1998), it is well documented that internship or industrial training can realize many benefits for all three stake holders. For employers, industrial training provides access to pool of workers who are usually enthusiastic and dedicated to the industry and who bring fresh ideas to the workplace. It also provides them the opportunity to screen potential employees without naming long term commitment's and to have direct involvement in training the industries' future managers (pause, Johnson and Miller, 1989). For education providers, industrial training strengthens links with industry. This can enhance collaborative research opportunities, raise the institutions' profile and establish long term working relationships between industry and the institution to optimize future graduate employment opportunities. (Bell and Schtimidt, 1996, Walo1999). For student, industrial training provides opportunities to practice what they have learnt in the class room, gain a greater understanding of the industries' requirements, test career choices and develop important workplace skills (Casado, 1991) It is also argued that industrial training contributes to developing students' management competencies (Mariam polslci, spears and Vaden, 1980). Students through industrial training can reportedly develop competence in several generic areas of management. However there is limited empirical evidence to support these claims with few studies assessing changes in students' management competencies as a result of undertaking an industrial training. Consequently, research into the role of industrial training in developing management competencies would seem valuable. In an attempt to address this important research area, this study aims to assess the contribution that the industrial training component of tourism and hospitality related courses of three main institutions of Jammu makes in enhancing students' management competencies. Besides, the study measures the effectiveness of the industrial training from the perspective of students; as well as identifies the degree of relationship between the competence and effectiveness of the training.

Review of literature

The Karpin report (1995) highlighted the importance of work experience in developing managers' skills and competencies. Management development is seen as a broad collection of formal and informal experiences that can develop and enhance a manager's skills (Telechy Consulting in Karpin, 1995). According to many scholars the key to enhancing the managerial experience is through work based learning experiences either on or off the job. Learning should involve a number of pathways including the work role, training and development, work relationships and formal management education (Telechy Consulting in Karpin, 1995). A major issue for many researchers in tourism and hospitality management education is the role and benefit of experiential learning or practical work experience. There is consensus that practical work experience or internship is one of the most effective ways that students can apply the theory learnt in the classroom environment (Ford and LeBruto, 1995). Thus internship may be fundamental in developing key management competencies in students.

Experiential learning is not new and for many years has been a central inclusion in such disciplines like teaching, hotel management, business administration, nursing, agriculture and medicine (Ford and LeBruto, 1995). A study of the educational value of captive hotels identified a number of essential competencies that can be learned only in a 'practical setting' (LeBruto and Murray, 1994).

Other tourism and hospitality researchers have clearly identified the relationship between practical work experience and the development of skills and management competencies (Knight, 1984; Tas, 1988; Pauze et al., 1989; Ford and Le Bruto, 1995; Bell and Schmidt 1996; Ju et al. 1998, Petrillose and Montgomery, 1998). DiMicelli (1998) states that a 'hands-on' approach to educating hospitality managers not only supports management principles learnt in theory but also provides students with the opportunity to practice and review their competence and skills within the real world environment.

It appears there is substantial agreement between all stakeholders –employers, educators and students- that practical work experience is vital for the future success of tourism and hospitality management graduates (Breiter, 1991). If tourism and hospitality industries need to grow, strengthen and maintain a high profile, the research into management competencies, role of practical experience (industrial training) and training effectiveness will play a crucial role in this development. This study will make an important contribution by providing empirical data on all these issues.

Thus, the paper attempts to evaluate the role of industrial training towards enhancing competencies among the trainees and to measure the effectiveness of industrial training offered by the tourism organizations.

The study provides following two hypotheses:

1. There exists a positive relation between effective training and enhancement of competencies.

2. There exist significant differences in competencies enhancement; and industrial training effectiveness experienced by students on the basis of the type of tourism & hospitality education institution.

Research Methodology

The universe of the study includes all the education institutes of the Jammu region offering courses in tourism and hospitality as well as rendering industrial training as part of the curricula. There are total 8 such institutes. Out of these all of them have industrial training as part of curricula. However, at present there are only three institutes namely Center for hospitality and tourism management (University of Jammu), Satyam Institute of Hotel Management & Tourism (affiliated to Punjab Technical University) and Travel & Tourism branch of Government Polytechnic College Jammu in which students have experienced industrial training. Rest of the institutes have either started such courses recently that their enrolled students have not yet gone for the industrial training or their batches which underwent the industrial training have passed out and the current batches have not gone for the industrial training. As such the study area comprises of only the three institutes. 20 students each from these three institutes have been approached for filling the questionnaire. The CHTM has total students enrolled in the senior batch are 20; In polytechnic, the total students enrolled are also 20; In Satyam the total students enrolled are more than 20 but the response rate was by chance 20. So the sample size for the study is 60.

The study makes use of the self administered quantitative questionnaire divided in to three parts. The first part comprises of questions related to the nature of industrial training and the nature of the organization. The second part comprises of six parameters namely communication, information technology, time management, tourism product knowledge, tourism operations knowledge and overall competence. Information is collected against these parameters with the help of five point likert scale having scores ranging from 1 to 5, where score 1 represents “not at all competent” , 2 represents “somewhat competent” , 3 represents “average” , 4 represents “competent” and 5 represents “ very competent”. This part of the questionnaire has been designed to do competence level assessment before and after the industrial training of the students. The third part of the questionnaire comprises of 5 parameters related to the effectiveness of the industrial training. These parameters namely pace, length, relevance with respect to course, overall preparedness of organization , and overall effectiveness have been assigned scores over 5 point likert scale where score 1 represent “not at all effective” , 2 represents “somewhat effective”, 3 represents “average” , 4 represents “effective” and 5 represents “very effective”.

The statistical tools applied for data analysis include paired t- test, analysis of variance (ANOVA), Post-hoc test, correlation, mean and standard deviation. Paired t- test has been applied to find the significance difference in competence level before and after the industrial training experience. The analysis of variance (ANOVA) has been applied to

find the variance existing in the mean values of the three institutes so as to find whether there exist some significant differences or not among the results from the three institutes under study. To find the existence of the significant difference in detailed manner, the Post-hoc test has also been carried in addition to ANOVA. The tests of hypotheses have been done at 0.05 level of significance. The statistical tools of co-relation and regression have been applied to find the relationship between the training effectiveness and the enhancement of competency.

Data Analysis and Findings

Hypothesis1. Significance difference exists in the competencies of the students before and after the industrial training.

The table (1) represents the results of paired t- test on the total responses with respect to all the three institutes. The paired- t is employed when our concern is with the change in a single variable observed at two points of time. Here in this study the test helps to know about the significance of the difference in the means of responses before and after the experience of industrial training. The t-values greater than 1.96 determined at level of significance 0.05 in the table clearly show that there exists a significant difference before and after the industrial training in case of all the six variables.

Table1:-Results for competence enhancement

S.No.	Attributes	Mean before	Mean after	t- value
1	Communication	2.5167	3.6	9.653*
2	IT	2.4667	3.5833	11.711 *
3	Time management	2.7333	3.8167	11.655 *
4	Tourism product knowledge	2.8167	4.1	12.045 *
5	Tourism operations knowledge	2.6667	3.9500	11.487 *
6	Overall competence	2.8333	4.0667	10.105 *

Table2 Results of competence enhancement institution wise

	Attributes	Univesity polytechnic Satyam								
		Mean before	Meant-after	t-value	Mean before	Meant-after	t-value	Mean before	Meant-after	t-value
1	Communication	3.05	3.75	4.76	2.2	3.7	8.81	2.45	3.35	5.60
2	IT	2.80	3.50	5.48	2.7	4.3	9.49	1.9	2.95	7.76
3	Time management	2.85	3.90	9.20	2.95	4.2	6.57	2.4	3.35	5.59
4	Tourism product knowledge	2.85	4.05	6.43	3.35	4.75	7.62	2.25	3.50	6.57
5	Tourism operations knowledge	2.35	3.85	7.09	3.65	4.55	6.28	2.0	3.45	7.85
6	Overall competence	3.00	4.00	7.95	3.05	4.5	4.92	2.45	3.70	7.10

In order to determine the significance of difference before and after the industrial training in case of each institute, paired t-test has been applied on the before and after responses from each institute. The table 2 shows the results of University, Satyam and Polytechnic. The t-values in the table are all greater than 1.96 (table value of p- value). These values show existence of significant difference in competence of the students before and after the industrial training. Thus the results of the paired t-test leads to the acceptance of the hypothesis 1 that significant difference exists in the competencies of the students before and after the industrial training.

In order to either accept or reject the hypothesis 2, one way ANOVA has been applied in three different cases and with respect to only two variables namely overall competence and overall effectiveness of industrial training underwent.

Hypothesis 2: There exist significant differences in competencies enhancement; and industrial training effectiveness experienced by students on the basis of the type of tourism & hospitality education institution.

Table3: ANOVA results for overall competence of students of the three institutes before the industrial training.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.433	2	2.217	2.532	.088

Within Groups	49.900	57	.875		
Total	54.333	59			

In the first case it has been applied to determine significant difference in means of the three institutes (University, Polytechnic and Satyam) before the industrial training. The table 3 gives ANOVA results. In this table the test statistic (F) equals 2.532 with corresponding P-value of .088. Thus revealing, there exists no significant difference in the mean values of the institutes before the industrial training.

Table 3(a) ANOVA results for overall competence of the three institutes after the industrial training of the students.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.433	2	3.217	6.573	.003
Within Groups	28.150	57	.494		
Total	34.583	59			

In the second case, the ANOVA has been applied to determine the significant difference in the means of the three institutes after the industrial training. In the table 3(a) the test statistic (F) equals 6.573 with corresponding P-value of .003. These data provide substantial evidence of a least one significant difference in mean of the overall competence among the three groups of the institutes.

After performing one-factor independent measures ANOVA and finding out that the results are significant, we know that the means are not all the same. This relatively simple conclusion, however, actually raises more questions: Is μ_1 different than μ_2 ? Is μ_1 different than μ_3 ? Is μ_2 different than μ_3 ? The post-hoc tests provide answers to these questions whenever we have a significant ANOVA results. There are many different kinds of post-hoc tests, that examine which means are different from each other. One commonly used procedure is the Tukey test. The Tukey test compares all pairs or group means with out increasing the risk of making a type1 error.

	N	Mean	Std. Deviation
polytechnic	20	3.8500	.67082
university	20	3.9000	.78807
satyam	20	4.5500	.51042
Total	60	4.1000	.72952

Table 3 (b) Descriptive results of the three institutes.

(I) institute type	(J) institute type	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
polytechnic	university	-.3500	.22223	.265	-.8848	.1848
	satyam	-.8000(*)	.22223	.002	-1.3348	-.2652
University	polytechnic	.3500	.22223	.265	-.1848	.8848
	satyam	-.4500	.22223	.115	-.9848	.0848
Satyam	polytechnic	.8000(*)	.22223	.002	.2652	1.3348
	university	.4500	.22223	.115	-.0848	.9848

Table 3 (C) Post hoc test result showing multiple comparisons

The table3(b) is descriptive and shows the group means of the three institutes with respect to overall competence of the industrial training and it is 3.85, 3.9 and 4.55 for Polytechnic, University and Satyam respectively. The table 3(c) shows the post hoc results. These clearly show that there exist a significant difference in means in case of Polytechnic and Satyam; and not in case of Polytechnic and University; University and Satyam.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.100	2	3.050	6.872	.002

Within Groups	25.300	57	.444		
Total	31.400	59			

Table 4 (a) ANOVA results for overall effectiveness of the industrial training underwent by the students of the three institutes.

	N	Mean	Std. Deviation
polytechnic	20	3.8500	.67082
university	20	3.9000	.78807
satyam	20	4.5500	.51042
Total	60	4.1000	.72952

Table 4 (b) Descriptive results of the three institutes.

(I) institute type	(J) institute type	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
polytechnic	university	-.0500	.21068	.969	-.5570	.4570
	satyam	-.7000(*)	.21068	.004	-1.2070	-.1930
university	polytechnic	.0500	.21068	.969	-.4570	.5570
	satyam	-.6500(*)	.21068	.009	-1.1570	-.1430
satyam	polytechnic	.7000(*)	.21068	.004	.1930	1.2070
	university	.6500(*)	.21068	.009	.1430	1.1570

Table 4 (c) Post hoc test result showing multiple comparisons.

In the third case, ANOVA has been applied to determine the significance of difference in

the mean of the overall effectiveness of the three institutes. In the table 4(a) the test statistic (F) equals 6.872 with corresponding P value of .002. Thus giving evidence of a least one significant difference in mean of the overall effectiveness among the three groups of the institutes. The table 4(b) is descriptive and shows the group means of the three institutes with respect to the overall effectiveness and it is 3.85, 3.90 and 4.55 for Polytechnic, University and Satyam respectively. Table 4 (c) shows the post-hoc results. These clearly show that there exist significant difference in means in case of University and Satyam; Satyam and Polytechnic. There is no difference in means in case of the University and Polytechnic.

Discussion of findings

The results from the first hypothesis testing indicate that the mean values before the industrial training for all the variables are more than 2 but below 3 indicating that students were somewhat competent before the industrial training. However, after the industrial training their competence level was either average or competent only and not in any case very competent. Thus suggesting industrial training interventions are required to be made to make the students take full benefit of the industrial training so as to become very competent after the industrial training.

The mean values before and after in case of individual institutes reveal very interesting findings. In case of the CHTM students of University, mean values before the industrial training shows that students are somewhat competent in Information technology, time management, tourism operations knowledge and tourism product knowledge. Whereas they are average in case of the communication. And after undergoing the industrial training the students remained average in their communication skills though experienced only a little change in it. In case of information technology, time management and tourism operations knowledge they experienced a shift from somewhat competent to average level competent. However, in case of tourism product knowledge they felt that their earlier level enhanced to competent level. Thus the industrial training interventions in case of University students need to focus more in case of all the variables than in case of the tourism product knowledge.

In case of the Satyam institute of Hotel management & tourism, the students' competence level is average in case of tourism product knowledge and tourism operations knowledge before the industrial training and after the training the high mean values (4.75; 4.55) shows their enhancement of competence to nearly more competent level. In case of information technology, communication and time management students were average before the training but after it they changed to competent for information technology and time management and remain at average for communication. Thus, it reveals that their industrial training needs to focus more on communication than on rest of the aspects.

The competence level of the Polytechnic students before the industrial training was somewhat competent for all the variables except in case of information technology where it was not at all competent. But after the industrial training it was average for all the variables except in case of the information technology where it was somewhat competent. Thus in case of the Polytechnic the industrial training design needs to give

attention to all the aspects with special attention to information technology.

The findings with respect to the effectiveness reveal that the industrial training is effective in terms of length; relevance with respect to course needs, organizational preparedness for training but it is somewhat effective in case of pace. The order of the effectiveness of the industrial training in terms of these variables is Organizational preparedness for training > relevance with respect to course > length of the training > pace. The results show that detailed study is required to design the industrial training part of the curricula so as to make all the variables effective.

Conclusion

The industrial training and the competence enhancement of the students have a relation as overall competence enhancement has been felt after going through the industrial training. But average or competent only and not very competent results for individual variables of competence reveal that this relationship is not well utilized for the development of the students' competence.

It is appreciable that educational institutes understand the importance of the industrial training and has made it part of their curricula. But it is required on their part to make this understandable to the industry employers too at the industry- academia partnership platform so that industry employers feel themselves responsible towards designing an adequate/ effective industrial training design for their trainees.

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