

ANALYSIS OF THE ICT ROLE IN THE TOURISM INDUSTRY TO IMPROVE AND PROMOTE THE QUALITY OF LIFE IN LOCAL COMMUNITIES (CACE STUDY OF Dehradun/Mussourie)**ARIAN DOKHT FARNAD POUR***PhD (scholar), Faculty of Management
Studies and Research AMU-ALIGARH***Abstract**

This paper introduces information and communication technologies as an innovative approach to managing sustainable tourism development from a destination management perspective by Comparative analysis of quality of life between those who use ICT services and those who are unfamiliar with these services in tourism-related jobs. Once a community becomes a destination, the lives of residents in the community are affected by tourism, and the support of the residents is essential for the development, planning, successful operation and sustainability of tourism. Therefore, the quality of life of the residents should be a major concern for community leaders. Numerous studies have examined local residents' perceptions of the economic, social, cultural and environmental impacts of tourism. This research objective is to determine the role of the use of information and communication technology on upgrade barometers quality of life in the social, economic and Healthcare domain in tourism industry.

Keywords

ICT , sustainable tourism, quality of life, destination management.

Introduction

Tourism is often viewed as an expression of human behavior (Kim, 2002). Harrill & Potts (2003, p. 233) believed that "tourism is an invisible industry, encompassing transportation, loading, and entertainment. Tourism is the set of ideas, theories, or ideologies for being a tourist, and that it is the behavior of people in tourist roles, when these ideas are put into practice (Przeclawski, 1986). Once a community becomes a destination, the lives of residents in the community are affected by tourism, and the support of the residents is essential for the development, planning, successful operation and sustainability of tourism (Kim, 2002). Therefore, the quality of life of the residents should be a major concern for community leaders. Numerous studies have examined local residents' perceptions of the economic, social, cultural and environmental impacts of tourism (Aref, 2010). Although to date, there is a little studies about the effect of tourism on the quality of life of residents in communities (Kim, 2002). Thus, there is limited understanding of residents 'perceptions of the effect of tourism on quality of life of residents in India. Hence, measuring the effect of tourism on quality of life of residents can help the planners and community developers for to achieving the tourism development goals in communities.

This paper the objective is to determine the role of the use of information and communication technology on upgrade barometers quality of life in the social domain and also determine the role of the use of information and communication technology on upgrade barometers quality of life in the economic and Healthcare realm in tourism industry, by Comparative analysis of quality of life between those who use ICT services and those who are unfamiliar with these services in tourism-related jobs. To achieve those objectives, one hypothesis and two sub- hypothesis were made which were.

1. Comparative analysis of quality of life between those who use ICT services and those who are unfamiliar with these services in tourism-related jobs.

1.1 Determine the role of the use of information and communication technology on upgrade barometers quality of life in the social domain

1.2 Determine the role of the use of information and communication technology on upgrade barometers quality of life in the economic and Healthcare realm.

Research Methods

The nature of research in this season, is applied research and the method is descriptive-analytic and of survey. Statistical population, includes those in tourism-related jobs using ICT and people working in not familiar to ICT tourism related jobs. In the tourism region of Dehradun/Mussouriethe statistical sample was determined as 114 samples for group one and 108 samples for group two, using Cochran logical formula and to select the statistical samples we used the Regular random sampling method.

Data were gathered using a standardized questionnaire through field study and Referring to people with jobs related to tourism in the region of Dehradun/Mussourie . A set of components have been used in four groups of indicators of economic, social, health and the environment. Independent t-test was used to compare the economic situation of indigenous people.

Mann-Whitney test was used to compare the quality of life in the social, cultural health and environment aspects the results of which showed a significant difference in relation to those aspects in the studied local Communities also used Chi-square test to determine the role of ICT in promoting economic indicators.

Results and Discussion

Validity and Reliability

For the content validity assessment of questionnaire, specialized statements of experts have been used in a way that before conducting the questionnaire, it was handed over to several concerned experts for correction and evaluation. The questions were then reviewed and corrected after experts' comments and statements on them. And the reliability of the measurement instrument has been confirmed using Cronbach's alpha ($\alpha = 0.879$) coefficient in a satisfactory condition.

According to dimensions and scope of quality of life and to achieve a correct judgment about the role of ICT in the tourism industry to improve the quality of life in the studied area set of components have been used in three groups of social, economic and health and the environment indicators. At first, to analyze the role of ICT in promoting social indicators of indigenous of peoples living in this area the researcher used Spearman correlation coefficient and the following results were obtained.

Table 1: The results Spearman correlation coefficient test for analyzing the role of ICT in promoting social indicators lives of local people

	Variable	N	correlation coefficient	Significant Level
1	Change customs social to positive	114	.496	**0.001
2	Increase the level of awareness and literacy	114	.602	**0.001
3	Reduce problems related to transport and traffic	114	.091	0.530 NS
4	Increased levels of hygiene and garbage collection in the region	114	.137	0.380 NS
5	Increased rates of participation among local people	114	.524	**0.000

Source: Developed by researcher ** 99% sig *95% sig

The Information given in Table 1 shows a meaningful relationship to the level of 99% for most elements. There exists a significant relationship between the use of ICT and the components of Change customs social to positive increase the level of awareness and literacy and increased rates of participation among local people, shows the impact of facilities of ICT training on the components listed. Also the obtained significance coefficient for components of reduce problems related to transport and traffic and Increased levels of hygiene and garbage collection in the region shows no significant relationship between the components mentioned. In fact, the levels of facilities and information technology education in the area of Dehradun/Mussourie did not have a important role introduce problems related to transport and traffic and increased level of locals' health.

-----Moreover, to compare the economic situation of local people familiar with ICT and people unfamiliar with ICT the independent t-test was used.

Table 2: compare the economic situation of local people familiar with ICT and people unfamiliar with ICT the independent t-test were used.

Variable	Local People	Standard Deviation	Mean	Significant Level
Earnings	Benefit from the facilities ICT	1.575	614000	**0.002
	Without any of the facilities ICT	1.513	405000	

Source: Developed by researcher ** 99% sig *95% sig

As can be observed there is a significant difference in the level of 99% between the income of local people familiar with ICT and individuals unfamiliar to ITC. The averages obtained show that Incomes of locals who use information technology to promote their jobs are more than local people in similar activities not using information and communication technologies.

The Whitney test was used to compare the level of satisfaction between those who use information and communications technology to promote and boost business in the field of tourism and those in similar jobs to the first group don't make use of ICT to do so, we used the nine components of economic using Mann-Whitney test.

Table 3 : Compare the economic situation Mann-Whitney test

	Variable	Local people	Sample size	Average Rating	coefficient Mann-Whitney	Significant level
1	Job opportunities	Benefit from the facility ICT	114	4.12	924.000	0.017
		Without any of the facilities ICT	108	3.50		
2	Investment in the manufacturing sector	Benefit from the facilities ICT	114	3.76	663.000	0.000
		Without any of the facilities ICT	108	2.94		
3	Purchasing power and supplying the necessities of life	Benefit from the facilities ICT	114	4.02	548.500	0.000
		Without any of the facilities ICT	108	3.24		
4	Fair distribution, income towards capital and activities	Benefit from the facilities ICT	114	3.50	1250.000	0.936
		Without any of the facilities ICT	108	3.50		
5	Promote tourism in the region	Benefit from the facilities ICT	114	3.70	770.500	0.001
		Without any of the facilities ICT	108	2.94		
6	Increasing women's participation in productive activities (crafts)	Benefit from the facilities ICT	114	3.88	1018.500	0.099
		Without any of the facilities ICT	108	3.38		
7	Participation in activities related to tourism	Benefit from the facilities ICT	114	3.52	406.500	0.000
		Without any of the facilities ICT	108	2.08		
8	Improvement of the level of health in the family	Benefit from the facilities ICT	114	3.88	704.500	0.000
		Without any of the facilities ICT	108	2.98		
9	Percentage of local people in nonfarm employment.	Benefit from the facilities ICT	114	3.84	429.000	0.000
		Without any of the facilities ICT	108	2.52		

Source: Developed by researcher

As can be observed (Table 3), for many of the components a significant relationship at the level of 99% was obtained which represents the difference in the satisfaction of individuals who make use of ICT to promote and boost business in the field of tourism and people who do not make use of ICT in similar jobs to the first group. The average obtained represents the satisfaction of individuals who make use of

ICT to promote and boost business in the field of tourism compared to people who do not make use of ICT in similar jobs to the first group. Simply in relation to two factors: fair distribution, income towards capital and activities and the increasing women's participation in productive activities (crafts) there is no significant difference in the level of Satisfaction between the two groups. In fact, the peoples' satisfaction of the last components is the same investment in sectors improvement in health promotion of tourism, marking of agricultural products, marketing of livestock products and non-farm employment generation.

Then by using Chi-square test to determine the role of ICT in promoting economic indicators, seven aspects have been considered they being job opportunities have been used in this field. In fact, by investigating the relationship between the use of information technology center and promoting economic indicators the following results were obtained.

Table 4: Chi-square test results to investigate the relationship between the use of ICT and promotion of local economic life

	Variable	Test Coefficients	Degrees of Freedom	significance Level
1	Create opportunities for new job	20.60	4	**0.000
2	The investment in various productive sectors	21.00	4	**0.000
3	Improvement of the level of health in the family	11.80	4	**0.019
4	Promote tourism in the region	18.20	4	**0.001
5	Marketing of agricultural products in the region	10.96	3	**0.012
6	Marketing of livestock products in the region	21.80	4	**0.000
7	Percentage of local people in nonfarm employment non-farm employment for local people	39.40	4	**0.000

Source: Developed by researcher ** 99% sig *95% sig

Information mentioned in Table 4 illustrates that a significant relationship exists between the use of information technology and promoting economic indicators of quality of life in the studied area. In fact, it can be acknowledged that the more the use of this technology, the more the satisfaction of the economic situation of the local people.

Another important indicator affecting the discussion of the quality of life is access to services and infrastructure of small towns. This is even more important in villages and small towns than in big cities because the facilities and services are available to citizens in big cities but if these services are made available in the villages and small towns.

The next sections deals with a study of people who are familiar with ICT services and those who are unfamiliar with these services will be discussed. For this purpose, the Mann-Whitney test has been used.

Table 5: comparison of quality of life Mann-Whitney test

	Variable	Local people	Sample size	Average Rating	coefficient Mann-Whitney	Significant level
1	shopping center	Benefit from the facilities ICT	114	61.91	679.50	**0.000
		Without any of the facilities ICT	108	39.09		
2	Post Bank	Benefit from the facilities ICT	114	69.92	279.00	**0.000
		Without any of the facilities ICT	108	31.08		
3	Public transport facility	Benefit from the facilities ICT	114	59.10	785.00	**0.001
		Without any of the facilities ICT	108	41.20		
4	Training places and other places related	Benefit from the facilities ICT	114	67.27	411.50	**0.000
		Without any of the facilities ICT	108	33.73		
5	Sports centers , cultural, artistic , historical, etc.	Benefit from the facilities ICT	114	65.43	503.00	**0.000
		Without any of the facilities ICT	108	35.56		

Source: Developed by researcher ** 99% sig *95% sig

As can be observed the significant coefficient of 99% for all components is obtained. In fact, a significant difference of 99% between satisfactions of residents who use IT services compared to people who are unfamiliar with these services reflects the immense impact of the creation and operation of ICT facilities and training in rural and urban infrastructure.

Tending toward the stability and the not migrating of local people is another variable that is considered in the studied area which is investigated by Mann Whitney test. Table 6 shows the desire to stay and not to migrate in the studied area. According to the information provided in this table, a significant coefficient of 95% is achieved which show a significant difference between the desire to stay of local people in the studied region.

Table 6: Tend to lack immigration Mann-Whitney test

Variable	Local people	Sample size	Average Rating	coefficient Mann-Whitney	Significant level
Tend to lack immigration	Benefit from the facilities ICT	114	55.52	999.000	*0.071
	Without any of the facilities ICT	108	45.48		

Source: Developed by researcher ** 99% sig *95% sig

The average obtained from the Mann-Whitney test shows that there is a tendency of people to compare to stay and not migrate if they take advantage of the ICT as those who cannot afford or take advantage of ICT. In fact, when the infrastructure is provided in the region and the proper knowledge and necessary training is given to individuals, people are more willing to stay and not migrate.

Another important indicator of measuring the quality of life, is cheap and easy access of residents to information technology and communication services. This section compares the satisfaction of people who in their residential location have easy and cheap access to information and communication technologies and those who lack these facilities, by Mann Whitney test was.

Table 7: Compare the satisfaction of internet services Mann-Whitney Test

Variable	Local people	Sample size	Average Rating	coefficient Mann-Whitney	Significant level
Cheap and easy access of residents to ICT services.	Benefit from the facilities ICT	114	57.83	883.500	**0.008
	Without any of the facilities ICT	108	43.17		

Source: Developed by researcher ** 99% sig *95% sig

As can be seen, significant factor in satisfaction with cheap and easy access to ICT location is obtained as 99%. In fact, there is a significant difference between the satisfaction of local people who have cheap and easy access to information and communication technology and those without this facility and the degree of satisfaction with the first group is more than the second group.

Also, the results of the Mann-Whitney test for determining the comparison of satisfaction of local people from the quality of life in the study area (according to Table 8) shows a significant difference for quality of life equal to 95% between the satisfaction of people who have been trained in information technology and communication field, and people who have not been trained in this field.

Table :8 Satisfaction with quality of life Mann-Whitney test

Variable	Local people	Sample size	Average Rating	coefficient Mann-Whitney	Significant level
Satisfaction with quality of life	Benefit from the facilities ICT	114	57.64	893.000	*0.011
	Without any of the facilities ICT	108	43.36		

Source: Developed by researcher ** 99% sig *95% sig

The table shows that, there is great difference between the satisfaction of natives who have been trained in ICT and those who have not been trained in this field. The obtained averages show that the satisfaction of people who have been trained in the field of information and communication technology is more than those who have not been trained in this field.

Conclusions

The first hypothesis which is needed for measuring quality of life and its relation to information and communication technology facilities and training in the tourism industry is related to social indicators of in the study population. This means that there is a significant relationship between using information and communication technology and promotion of quality of life in the social domains. Findings indicate a significant relationship of 99% for many components. This means there is a direct relationship between using ICT facilities and training and improving social indicators. In fact, the increased use of these facilities and training will increase the social life indicators of local people.

The second hypothesis arises for measuring quality of life is the impact of ICT facilities and training on the economic situation of the local Communities So that there is a significant relationship between using information and communication technology and promotion of quality of life in the economic realm.

This hypothesis was measured using seven variables and through chi-square test. The findings represent a significant relationship between the use of ICT facilities and training and promotion of economic indicators in the local Communities.

Therefore, it can be concluded that, promoting economic indicators in the local Communities largely depends on using ICT facilities and training that enhance employment opportunities, marketing of agricultural and livestock products and promotion of production cooperative centers in local Communities.

To strengthen above hypothesis, the study compare the economic level in individuals who make use of ICT to promote and boost business in the field of tourism comparing people who do not make use of ICT. For this purpose, first independent t test is used to compare the level of income and cost and the Mann-Whitney test is used to compare the level of satisfaction of the economic factors.

The analysis of the findings show a significant difference to the level of 99% between the income of local people familiar with ICT and individuals unfamiliar to ITC. The averages obtained show that income of

locals people who use information technology to promote their jobs are more than local people in similar activities not using information and communication technologies.

The third hypothesis of this study was to compare local people the quality of life indicators between people who benefit from the ITC center and those without this facility. To assess this hypothesis, the essential factors in social and economic fields have been used. Analytical results obtained show that there is much difference between the satisfaction of local people benefiting from ITC facilities and people without these facilities and training. Then the third hypothesis is accepted.

Recommendations

According to the findings of testing research hypotheses, following recommendations are made:

1. Establishment of Information Technology Center for access to rural infrastructure such as shopping centers and cultural and educational centers.
2. Establishment of IT infrastructure for marketing agricultural and livestock products, increasing in non-agricultural employment, increasing purchasing power of villagers and improving the economic situation of villagers in the local community.
3. Cultural infrastructure is undoubtedly an important part of the development of information and shows the necessity of awareness about the capabilities and facilities of information networks.
4. The private sector to should be invest in IT and create a competitive field for providing more services
5. The end users, farmers and villagers should use information and communication technology to meet their needs.

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