
The role of tourism and hotel education and training institutions in creating human resources according to the requirements of total quality management. An econometric study on schools and institutes (Algiers, Tizi Ouzou, Chlef)

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Abstract:

The study aims to determine the development taking place in the concept of tourism and hospitality, and seriously shifting thinking to rehabilitate institutions to make them at the required level to provide services that live up to the aspirations of tourists according to the requirements of total quality management. The results of the study test showed that the tourism and hotel education and training institutions under study did not meet the basic requirements of total quality management at a significant level of 0.05. There is no statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study. Attributable to the personal variables of the study sample: gender, academic degree, academic position, number of teaching years, and completed studies and research, at a significant level of 0.05.

Keywords: tourism and hotel, quality management and education, training, the human element, institutions and institutes of tourism and hotel education and training

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1. Introduction:

The prosperity of global and local tourism has led to the need for the private sector to participate in the provision of tourism education and training services in response to the requirements of the local and international tourism market, which contributed to its establishment as an industry in itself, "the education and tourism and hotel training industry". Since the success of any production or service industry depends on the efficiency of its management, total quality management has become an integrated approach for the development of the tourism and hotel education and training industry, because it is based on working in a correct and exemplary manner that satisfies the provider and receiver of the service and supports creativity and innovation

The issue of total quality management during recent decades has received great attention from researchers due to what it represents of an indication of excellence and optimization that institutions seek to achieve, especially in the education industry and tourism and hotel training in Algeria. We do not mean making the latter a business that seeks to increase its profits by improving its services only, but rather we should strive to provide the requirements of total quality management as an entry point to make a qualitative leap in education and tourism and hotel training in Algeria and contribute to enhancing the quality of its outputs .

1.1. Study problem: The tourism education and training structures in Algeria face a number of obstacles that have negatively affected the development of its tourism sector compared to neighboring countries (Tunisia and Morocco), for example, which have the same tourism potential, but with high-end tourism education and training structures, which requires us to establish academic and administrative systems for these structures according to a modern administrative approach that is in line with the current changes. Therefore, we will try through this study to answer the following fundamental question:

To what extent can the basic requirements for total quality management be available in tourism and hotel education and training at the level of the Higher School of Eurassi Tourism, the National Institute of Hotel and Tourism in Tizi Ouzou, and the National Institute specialized in vocational training for management in Chlef?

In order to answer this main question, we will try to answer the following sub-questions:

- Do the Higher School of Tourism, the National Institute of Hotel and Tourism Tizi Ouzou, and the National Institute specialized in vocational training for management in Chlef fulfill the basic requirements of total quality management at a significant level of 0.05 ?
- Is there a statistically significant effect on the availability of the basic requirements for total quality management in the Higher National School of Tourism, the National Institute of Hotel and Tourism Tizi

Ouzou, and the National Institute specialized in vocational training for management in Chlef attributed to the personal variables of the study sample at a significant level of 0.05?

1.2. Study hypotheses:

Based on the previous questions, this study is based on the following hypotheses:

- The National Higher School of Tourism, Al-Aurassi, the National Institute of Hotel and Tourism Tizi Ouzou, and the National Institute specialized in vocational training for management, Hotel Management Division - Chlef, meet the basic requirements for total quality management at the level of 0.05.
- There is a statistically significant effect on the provision of the basic requirements for total quality management in the Higher National School of Tourism, Al-Aurassi, the National Institute of Hotel and Tourism Tizi Ouzou, and the National Institute specialized in vocational training for management, Hotel Management Division - Chlef, attributed to the personal variables of the study sample at a significant level of 0.05.

1.3. Study methodology: The methodology of the study is based on presenting and defining the surveyed sample, and the nature of the tool used in polling the surveyed sample, as well as ensuring the validity and reliability of the study tool.

▪ **Study sample: The study sample represents**

- **First - an experimental sample:** Before proceeding with distributing the study tool, we tested a random sample comprising four professors from the Higher National School of Eurassi Tourism, and this was to ensure that:
 - The degree of clarity and understanding of the study tool by the survey sample.
 - Measure the time required to answer the study tool.
 - Identify the difficulties and obstacles mentioned in the study tool.
- **Second - the study sample:** The study included the distribution of questionnaires to the professors of the National Higher School of Tourism (Eurassi), the National Institute of Tourism and Hotel Technologies (Tizi Ouzou), and the National Institute specialized in vocational training for management, Hotel Management Division. (Chlef).

We counted lost (non-retrievable) forms, as well as retrieved forms unfit for analysis.

- **Study tool:** We relied on the questionnaire as a data collection tool to measure the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study, as we divided the study tool into three main sections.

Statistical treatment methods: To answer the problem of the study, and to prove the validity of the hypotheses, we used the following statistical methods, and this is based on the outputs of SPSS21 .:

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Frequency and percentages, Cronbach's alpha coefficient to determine the stability of the study tool, arithmetic means and standard deviations, One Sample TEST, One-way analysis of variance (ANOVA), and Fisher's test.

2. definition of terminology and institutions of the study:

2.1. Tourism and hoteleducation:

The concept of tourism and hotel education: Tourism and hotel education is one of the branches of technical and vocational education, as stipulated in the Technical and Vocational Education Convention of UNESCO in 1989 and is defined as "all forms and levels of the educational process that guarantee quality education in addition to general knowledge and the study of technologies and related sciences, and acquiring scientific and practical skills, attitudes and perceptions related to professional practices in all branches of tourism and hotel education."

The training process is also defined as: "a set of procedures that begins with identifying training needs, passing through the plan, curriculum, training program, and multiple evaluation processes"(hasaan & abn syarud, 2017, p. 90).

2.1.1. Objectives of tourism and hotel education and training:

Tourism and hotel education and training are of great importance in the process of forming and supervising a manpower with professional experience that works to meet the needs of the community of professional workers in the tourism and hotel field in a timely manner, and this is through the following (Buzyan & Abn Sayarud, 2017, p. 90):

- Work on the linkage between theory and practice and provide practical skills in the formation of human cadres;
- Work to provide the student with the necessary practical skills in accordance with the full framework, laws and standards thereof, and to develop his abilities in research and decision-making related to the hotel field;
- Training students to use the equipment used in the field of hotel work;
- Focusing on the ethics of the hotel profession and the positive values and attitudes associated with it, such as respecting and appreciating work.

2.2 Definition of total quality management in higher education institutions:

Total quality management in higher education institutions is defined as: "It is the ability of the sum of the characteristics and advantages of the educational product to meet the requirements of the student, the labor market, society and all internal and external beneficiaries, and achieving quality education requires

directing all human resources and policies, systems, curricula, processes and infrastructure in order to create favorable conditions for innovation and creativity in ensuring that the educational product meets the requirements that prepare the student to reach the level that everyone can reach" (Bachiwa, 2015-2016, p. 75).

Rhodes defined it as: "an administrative process based on several values and information through which the talents and capabilities of faculty members are employed in various fields to achieve continuous improvement of the university's goals." As for Al-Moussawi, he defined it as: "a comprehensive philosophy of life and work in educational institutions that defines a method in administrative practice with the aim of achieving continuous improvement of education processes and developing its outputs on the basis of teamwork in a way that guarantees the satisfaction of teachers, students and parents" (Sarayrah & Al Assaf, 2008, p. 09).

It is also known as "an integrated management system and a method for developing student quality, developing the quality of goals, the content of the approach and its processes, the quality of workers in educational institutions, including administrators and teachers, and ensuring a process of continuous improvement based on planning and participation of all workers, students, management and teachers in assuming responsibilities and achieving comprehensive quality in education" (Attia, 2009, p. 113).

2.2.3. The importance of total quality management:

It is represented in the following points (Yahyaoui & Mishnan, 2014, p. 168):

- Total quality management relates to productivity, its continuity, and improving the outputs of the educational process to include all fields;
- Supporting continuous improvement in higher education and working on developing administrative leaders for the future;
- Making further improvements and continuous development in the educational process based on the aspirations of the beneficiaries of the services of these institutions;
- Improving the efficiency of the management of higher education institutions and raising the level of performance of faculty members;
- Mastering professional competencies and improving the use of educational technologies.

3. applied study:

3.1. the study sample:

The study included the distribution of questionnaires to the teachers of the National Higher School of Tourism (Eurassi), the National Institute of Tourism and Hotel Technologies (Tizi Ouzou), and the National Institute specialized in vocational training for management, Hotel Management Division. (Chlef). Where we

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enumerated lost (non-retrieved) forms, as well as retrieved forms that are not valid for analysis, and the following table shows the numbers of distributed, retrieved, excluded, and final (valid for analysis) forms.

Table No1: Enumeration of distributed, recalled, excluded and final extracts

The studyspace	formsexcluded			
	distributed	retrieved	excluded	final
Higher National School of Tourism (Eurassi)	70	37	19	18
National Institute of Hotel and Tourism in Tizi Ouzou	60	24	08	16
National Institute specialized in vocational training for management, Hotel Management Division (Chlef)	45	33	12	21
the total	175	94	39	55

Source: Prepared by the researcher based on distributed and retrieved questionnaires

3.2. Testing the validity and reliability of the study tool:

based on the five-point Likert scale, corresponding to the five points from 1 to 5, and a response range of 0.8.

3.2.1. Validity of the study tool:

To ensure the apparent stability of the study tool, we presented the questionnaire to a group of professors with specialization in the field of business administration, and the field of tourism and hotel education.

•**Validity coefficient:** The validity coefficient represents the square root of the stability coefficient, and it assures us of the degree of validity of the study tool. While the validity coefficient of the study is 9.61, and thus the scale is true to what was set to measure it.

•**Stability of the study tool:** In order to ensure the internal consistency of the axes of the study tool, we use Cronbach's alpha coefficient, the results of which are distributed according to the following table:

Table No.2: Cronbach's alpha values according to the axes of the study tool

The studyspac	forms			
	distributed	retrieved	excluded	final
Higher National School of Tourism (Eurassi)	70	37	19	18
National Institute of Hotel and Tourism in Tizi Ouzou	60	24	08	16
National Institute specialized in vocational training for management, Hotel Management	45	33	12	21

Division (Chlef)				
the total	175	94	39	55

Source: prepared by the researcher based on the outputs of SPSS21

The values in the previous table indicate that the axes of the questionnaire have an appropriate degree of stability, and the total alpha Cronbach coefficient for the study was 0.924, which explains that the questionnaire fulfills the purpose of the study.

3.2.2. presenting and analyzing the results of the study and testing the hypotheses:

After we collected the data related to the study, we extracted and processed it using the statistical package for social sciences SPSS21, which gave us the following outputs:

- **Viewing and analyzing the personal information of the study sample:**By analyzing the personal information of the study sample, the following variables were identified:

Gender: The distribution of the study sample according to the gender variable gave the values shown in the figure below.

Figure No.1: Distribution of the study sample according to the gender variable



Source: prepared by the researcher based on the outputs of SPSS21

Figure No. 01 shows that the study sample contains 32 individuals from the male category, i.e. 58% of the total study sample, which represents the majority compared to the female category at 41%, which includes 23 of the total study sample. The reason for this discrepancy in the proportions of the sex factor is due to Random distribution of the study tool.

- **Academic degree, academic position, and number of years of teaching:** The distribution of study sample members according to: academic degree, academic position, and number of years of teaching gave the values shown in the table below.

Table No.3: Distribution of the study sample according to: academic degree, academic position, and number of years of teaching.

variable		Repetition	The ratio	Academic position	variable	repetition	The ratio
The scientific Degree	Bachelor's degree	24	43.64		Associate Professor	00	00
	Master	04	12.73		Temporary professor	00	00
	State Engineer	0	14.55		Assistant professor	09	16.36
	M.A	13	23.63		Lecturer professor	04	7.27
	Ph.d	06	10.91		Professor of higher	02	3.64

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				education		
Number of years of teaching	The total	55	100%	Contracted professor of vocational training	14	25.45
	Less than 05	41	74.55	Professor of vocational training, rank 1	18	32.72
	From 6 to 10	08	14.55	Professor of vocational training, rank 2	08	14.54
	More than 10	06	10.91	The total	55	100%
	The total	55	100%			

Source: prepared by the researcher based on the outputs of SPSS21

The results presented in Table No. 3 indicate the distribution of the study sample according to the variables of academic degree, academic position, number of years of teaching and training: 43.64% of the study sample hold a bachelor's degree. The results also indicate that 16.36% of the respondents are holders of M. A. degree. As for the master's degree and state engineer, their distribution percentage is almost equal to 12.73% and 14.55%, respectively, while the category of PhD holders came with the lowest rate at 10.91%, and the percentages obtained in relation to the distribution of the category of PhD holders are very small. This reflects the scarcity of human cadres with a high scientific and academic level in the tourism and hotel education and training institutions under study.

3.4. Presentation and analysis of the results of the axes of the responses of the study sample:

3.4.1 Availability of senior management commitment, administrative leadership: The results of the statistical treatment of the first axis phrases revealed the values contained in the following table:

Table No. 4: The extent to which senior management is committed to implementing total quality management in tourism and hotel education and training

phrase	percentageresponses					Statisticalindicators		rank	The degree of response
	Toutally disagree	dsagree	neutral	agree	Totally agree	Arithmetic average	Standard deviation		
A1	16.36	56.36	21.82	3.64	1.82	2.18	0.81	9	disagree
A2	1.82	32.73	29.09	21.82	14.55	3.14	1.1	3	neutral
A3	3.64	9.09	47.27	27.27	12.73	3.36	0.95	2	Neutral
A4	16.36	27.27	27.27	21.82	7.27	2.76	1.18	5	neutral
A5	18.18	54.55	14.55	12.73	0.00	2.21	0.9	8	disagree
A6	10.91	60.00	12.73	12.73	3.64	2.38	0.97	7	disagree

A7	7.27	60.00	18.18	10.91	3.64	2.43	0.92	6	disagree
A8	5.45	14.55	60.00	16.36	3.64	2.98	0.82	4	Neutral
A9	5.45	18.18	16.36	32.73	27.27	3.42	1.22	1	Agree
The general average of the extent to which senior management is committed to the application of total quality management in the tourism and hotel education and training institutions under study						2.76	0.62		neutral

Source: prepared by the researcher based on the outputs of SPSS21

Through the results, Table No. (04), we notice a difference in the opinions of the study sample members, about the availability of senior management’s commitment to applying total quality management in the tourism and hotel education and training institutions under study, so we will rely on arranging the first axis phrases according to the arithmetic mean values to analyze the results of the individuals’ responses The study sample:

We note that the phrase A9 ranks first with an arithmetic mean of 3.42 out of 5, which is higher in the first axis. This value is contained in the range from 3.41 to 4.20 out of 5 according to the five-point Likert scale. This explains that 32.73% of the study sample agree that the tourism and hotel education and training institutions under study pursue a well-studied future vision when defining their strategic goals and setting their priorities. A4 and A8 are consecutive ranks from rank 2 to rank 5, with arithmetic averages confined within the range from 2.61 to 3.4, which expresses the opinion of the study sample, which is neutral for the expressions:

- The senior management is keen to spread the culture of total quality among all individuals within the tourism and hotel education and training institutions under study, as the neutral opinion reached 29.09% of the sample.
- The administration of education and tourism and hotel training institutions under study allocates a sufficient budget for the application of total quality management, as the percentage of neutrals among the study sample was 47.27%.
- Reliance on current and future strategic plans in the light of the requirements of total quality management at the level of education and tourism and hotel training institutions under study, so that 60.00% of the members of the study sample are neutral.

As for the rest of the ranks from rank 6 to rank 9, the phrases A7, A6, A5, and A1 occupied them, respectively. These expressions have arithmetic averages in the range from 1.81 to 2.06 out of 5 according to the five-point Likert scale. What we explain is that the study sample members do not agree with the following statements from the first axis:

- The tourism and hotel education and training institutions under study have a desire to apply total quality management. A response rate of 56.36% of the study sample did not agree with this phrase.
- The aspiration of the tourism and hotel education and training institutions under study to open up and benefit from the experiences of international universities and schools in the field of total quality management.

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- The management’s participation in the opinions of the professors and taking them into consideration at the level of the education and tourism and hotel training institutions under study, with a rate of 60.00% disagreeing with the statement of the study sample.
- The senior management delegates sufficient powers to the professors in order to provide a distinguished service within the tourism and hotel education and training institutions under study. The phrase achieved a non-agreeable response rate of 60.00% for the study sample.

We can also judge the direction of the opinion of the members of the study sample towards the availability of senior management’s commitment to the application of total quality management in the tourism and hotel education and training institutions under study, through the general arithmetic mean, which was estimated at 2.76 and the standard deviation of 0.62, the value of the arithmetic mean belongs to the range of 2.61 to 3.40 out of 5 according to the five-point Likert scale, which confirms to us that most of the study sample are neutral due to the availability of the first axis: the commitment of senior management to the application of total quality management in the institutions of education and tourism and hotel training under study.

Table No 5: The extent to which customer focus is available in the tourism and hotel education and training institutions under study

phras	Percentage responses					Statistical indicators		rank	The degree of response
	Totally disagree	disagree	neutral	agree	Totally agree	Arithmetic average	Standard deviation		
B1	16.36	47.27	21.82	12.73	1.82	2.36	0.97	4	Disagree
B2	10.91	52.73	16.36	18.18	1.82	2.47	0.98	3	Disagree
B3	38.18	52.73	1.82	5.45	1.82	1.81	0.87	6	Disagree
B4	0.00	12.73	29.09	50.91	7.27	3.52	0.81	1	Agree
B5	3.64	27.27	30.91	25.45	12.73	3.21	1.1	2	Neutral
B6	14.55	61.82	18.18	5.45	0.00	2.14	0.73	5	Disagree
The overall average of customer focus availability in tourism and hotel education and training under study						2.5	0.57		Disagree

Source: prepared by the researcher based on the outputs of SPSS21

Table No 5 shows the general average of the extent to which educational, tourism and hotel training institutions, under study, focus on customers from the point of view of the study sample, as it was estimated at 2.58 out of 5, with a standard deviation of 0.57. This value corresponds to the range 1.81 to 2.60 out of 5, according to the scale. Likert of the five (disagreeable), what is explained by the lack of focus on customers on the part of the institutions under study from the point of view of the majority of the study sample. Although the trend of the general average towards the response does not agree, there are two statements that contradict the trend of the general average:

- The term B4 came in the first place with its arithmetic mean of 3.52 and a standard deviation of 0.81, the value of the arithmetic mean belongs to the range from 3.41 to 4.20 out of 5 according to the five-point Likert scale, which expresses the opinion of 50.91% of the study sample agreeing that there is A survey by senior management about students' satisfaction with the level of educational services provided by the tourism education and training institutions under study.

- Expression B5, with an arithmetic mean value of 3.21 and a standard deviation of 1.1, this arithmetic mean belongs to the range from 2.61 to 3.40 out of 5 according to the five-point Likert scale, which expresses a neutral opinion of 30.91% of the study sample for the establishment of tourism training and education institutions The hotelier conducts studies of the labor market and strives to meet its needs on an ongoing basis.

As for the rest of the ranks, from the third to the last rank, they came in succession:

- Statement B2: The management's response to the students' complaints and suggestions seriously within the tourism and hotel education and training institutions under study.
- Statement B1: The tourism and hotel education and training institutions under study focus on the quality of educational services, and put the student in their first concern.
- Statement B6: Ensuring to build good relations with the internal and external clients of the tourism and hotel education and training institutions under study.
- Statement B3: The professors' conviction that their services are a basic pillar for achieving comprehensive quality in the education and tourism and hotel training institutions under study.

These expressions recorded arithmetic averages confined to the range from 1.81 to 2.60 out of 5 according to the five-point Likert scale, which confirms to us that the study sample do not agree with the above statements, and this is due to the administration's domination and imposing its decisions on professors and students, and its lack of endeavor to create good relations with professors and the students.

3.5.2. Availability of continuous improvement and performance evaluation: The results of the statistical treatment of the third axis expressions gave the values contained in the following table:

Table No 06: The availability of continuous improvement and performance evaluation in the tourism and hotel education and training institutions under study

phras	Percentage responses				Statistical indicators		rank	The degree of response	
	Totally disagree	disagree	neutral	agree	Totally agree	Arithmetic average			Standard deviation
C1	16.36	40.00	16.36	25.45	1.82	2.36	0.97	4	Disagree
C2	7.27	69.09	3.64	12.73	7.27	2.47	0.98	3	Disagree
C3	1.82	20.00	36.36	36.36	5.45	1.81	0.87	6	neutral
C4	38.18	47.27	3.64	9.09	1.2	3.52	0.81	1	Disagree
C5	29.09	54.55	3.64	10.91	1.82	3.21	1.1	2	Disagree

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C6	3.64	27.27	34.55	29.09	0.00	5.45	0.73	5	Neutral
The general average of the availability of continuous improvement and						2.5	0.57		Disagree

Source: prepared by the researcher based on the outputs of SPSS21

The results of Table 6 show us: There is a difference in the opinions of the study sample about the availability of the third axis in the institutions of education and tourism and hotel training under study, where the terms C3 and C6 came in the first and second place, and their arithmetic averages were estimated at 3.23 and 3.05, respectively, confined to the range From 2.61 to 3.4 out of 5 according to the five-point Likert scale, which is explained by the presence of neutral responses of the study sample to the two phrases:

- Availability of contemporary objective criteria for evaluating the performance of teachers and students in the tourism and hotel education and training institutions under study (expression C3, the percentage of neutrals is 36.36%).
- Senior management adopts the benchmarking method in evaluating performance within the tourism and hotel education and training institutions under study (expression C6, the percentage of neutrals is 34.55%).

The phrases C1, C2, C5, and C4 came from the third to the last rank, respectively, and their arithmetic mean values are limited to the range from 1.81 to 2.60 out of 5 according to the five-point Likert scale, which enables us to consider the study sample as not agreeing with the following statements:

- Considering continuous improvement as an effective entry point to achieving the requirements of total quality management (expression C1, the response rate is 40% unacceptable).
- The tourism and hotel education and training institutions under study are constantly keen to improve working conditions (expression C2, the response rate does not agree with 69.09%)
- Professors use modern methods and technologies in recitation, such as computers and projectors (phrase C4, the response rate does not agree with 47.27%)
- The tourism and hotel education and training institutions under study are keen to support the library with books, periodicals and electronic databases (expression C5, the response rate does not agree with 54.55%)
- In general, the general average for the third axis was 2.53 out of 5 and a standard deviation of 0.57, which indicates that the opinion of the study sample members does not agree with the availability of continuous improvement and performance evaluation in the tourism and hotel education and training institutions under study, and this is due to the backwardness of the methods and systems of education and training from on the one hand, and the lack of financial resources allocated for this.

3.5.3. Availability of teamwork: The results of the statistical treatment of the axis expressions gave the values shown in the following table:

Table No 7: The extent to which educational and tourism and hotel training institutions, under study, focus on group work

phras	Percentage responses					Statistical indicators		rank	The degree of response
	Totally disagree	disagree	neutral	agree	Totally agree	Arithmetic average	Standard deviation		
D1	47.27	3.64	16.36	32.73	32.73	3.34	1.36	4	neutral
D2	5.45	47.27	7.27	36.36	3.64	2.85	1.1	5	neutral
D3	3.64	29.09	12.73	34.55	20.00	3.38	1.2	3	neutral
D4	3.64	20.00	21.82	56.36	16.36	3.43	1.1	2	agree
D5	1.82	9.09	5.45	41.82	41.82	4.12	1	1	agree
The general average of the availability of teamwork in the tourism and hotel education and training institutions under study						4.42	0.81		agree

Source: prepared by the researcher based on the outputs of SPSS21

Table No 7: shows the extent to which educational and tourism and hotel training institutions, under study, focus on group work. The phrase D5 is keen to provide material and moral rewards for distinguished work teams, with an approval rate of 41.82%. This means the administration's focus on providing rewards to diligent professors and research teams.

The phrase D4, in which the quality teams contribute to providing studies and suggestions on improving work methods within the education and tourism and hotel training institutions under study, ranked second, with an approval rate of 56.36%. This percentage is good for the fourth axis, but we note that it contradicts the trend of the general average of the responses of the study sample on the third axis: continuous improvement and performance evaluation.

Studies and suggestions are not taken into account in practice by senior management, while the rest of the fourth axis phrases D3, D1, and D2 obtained ranks from the third to the last rank, while their arithmetic averages were confined within the range from 2.61 to 3.4 out of 5, according to the five-point Likert scale. This enables us to consider the study sample as neutral for the following statements:

- The tourism and hotel education and training institutions under study always seek to open channels of dialogue with professors through quality circles (expression D3: the percentage of neutrals is 13.36%).
- Professors and administrators focus on teamwork and team spirit within the tourism and hotel education and training institutions under study (D1: the percentage of neutrals is 34.55%).
- The tourism and hotel education and training institutions under study pay great attention to the health and safety of all their staff and learners (D2: the percentage of neutrals is 7.27%).

In general, the general arithmetic mean for the fourth axis was estimated at 4.42 out of 5 and the standard deviation 0.81, as it belongs to the fourth category for the response range from 4.41 to 5 out of 5 according to the five-point Likert scale (the degree of response is OK), which indicates that the study sample has a clear vision

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about the availability of focus This is due to the specificity of the standards taught by the members of the study sample, as the latter requires integration between them and the theoretical and practical aspects that frame them.

3.5.4. Availability of training and education:

The results of the statistical treatment of the fifth axis expressions gave the values shown in the following table:

Table No 8: The availability of training and education requirements in the tourism and hotel education and training institutions under study

phras	Percentage responses					Statistical indicators		rank	The degree of response
	Totally disagree	disagree	neutral	agree	Totally agree	Arithmetic average	Standard deviation		
E1	5.45	27.27	21.82	38.18	7.27	3.14	1.36	2	neutral
E2	14.55	32.73	7.27	36.36	9.09	2.92	1.1	4	neutral
E3	3.64	25.45	27.27	38.15	5.45	3.16	1.2	1	neutral
E4	5.45	23.64	30.36	36.36	3.64	3.09	1.1	3	neutral
The general average of the availability of teamwork in the tourism and hotel education and training institutions under study						3.08	0.81		neutral

Source: prepared by the researcher based on the outputs of SPSS21

The results of Table No.8 indicate frequency distributions, arithmetic means and standard deviations for the fifth axis, where the general arithmetic mean for the axis was 3.08 out of 5 and a standard deviation of 0.76 confined within the range from 2.61 to 3.4 out of 5 according to the five-point Likert scale (neutral). This means that The study sample finds it difficult to define a clear vision about the availability of the fifth axis, and therefore we can explain this as most of the study sample are neutral to the availability of training and education requirements in the tourism and hotel education and training institutions under study.

•**Availability of decision-making based on facts and scientific facts:** The treatment results for the sixth axis expressions gave the values shown in the following table:

Table No 9: Extent of keenness to make decisions based on facts and scientific facts in the tourism and hotel education and training institutions under study

phras	Percentage responses	Statistical indicators	rank	The
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	Totally disagree	disagree	neutral	agree	Totally agree	Arithmetic average	Standard deviation		degree of response
F1	3.64	18.18	18.18	25.45	34.55	3.69	1.23	1	agree
F2	3.64	23.64	16.36	27.27	29.09	3.54	1.24	2	agree
F3	3.64	23.64	18.18	29.09	25.45	3.49	1.21	3	agree
F4	7.27	18.18	25.45	40.00	9.09	3.25	1.09	4	agree
The general average of the extent to which decisions are made based on facts and scientific facts in the tourism and hotel education and training institutions under study						3.49	0.78		agree

Source: prepared by the researcher based on the outputs of SPSS21

The above table shows each of the frequencies of the arithmetic averages and standard deviations of the expressions of the sixth axis: availability of keenness to make decisions based on facts and scientific facts in the institutions of education and tourism and hotel training under study, where the first place was topped by the phrase F1: all data and information within the institutions of education and tourism and hotel training are subject to The study is for processing and analysis in order to provide accurate conclusions, with an arithmetic mean of 3.69 and a standard deviation of 1.31. The value of the arithmetic mean belongs to the range from 3.41 to 4.20 out of 5 according to the five-point Likert scale, which expresses the opinion of 25.45% of the study sample agreeing with the statement F1.

While the last rank was for the expression F4: The educational and hotel training and tourism institutions under study have an electronic archive system to store reports and files with an arithmetic mean of 3.25 and a standard deviation of 1.09. We note that the value of the arithmetic mean belongs to the range from 2.61 to 3.40 out of 5, according to the five-point Likert scale, which expresses a neutral opinion of 40.00% of the study sample for the phrase F1.

In general, the table indicates the value of the general mean of 3.49 and a standard deviation of 0.78. It is contained in the range from 3.41 to 4.20 out of 5 according to the five-point Likert scale, and this indicates that the study sample agree on the availability of care in making decisions based on facts and scientific facts in the institutions of education and tourism and hotel training under study, and this is due to the great concern of the senior management By analyzing data and using them properly in decision-making, in addition to realizing the importance of preventing errors before they occur.

3.5.5. Test hypotheses:

3.5.5.1. Testing the validity or denial of the hypothesis:

- Hypothesis formulation:

- H0: The tourism and hotel education and training institutions under study do not meet the basic requirements for total quality management at a significant level of 0.05.

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- H1: The tourism and hotel education and training institutions under study meet the basic requirements of total quality management at a significant level of 0.05.

To find out the validity or denial of the hypothesis, we use the One Sample Test for an independent sample, which is shown in the following table:

Table No 10: The results of the One Sample TEST for an independent sample on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study

Examine the availability of basic requirements for total quality management	The value of the hypothetical mean = 3 The hypothetical mean = (1+2+3+4+5)/5				
	Arithmetic average	Standard deviation	tabulated value	degree of freedom df	probability value sig
	2.91	0.52	-1.22	54	0.23

Source: prepared by the researcher based on the outputs of SPSS21

Through the above table, we notice the value of the arithmetic average for all the questionnaire statements about the availability of basic requirements for total quality management in the tourism and hotel education and training institutions under study, estimated at 2.91 and a standard deviation of 0.52 compared to the hypothetical mean of the study (the hypothetical mean of the study = total response scores / number of responses) The value of the arithmetic mean is contained within the range from 2.61 to 3.40 out of 5, a neutral response according to the five-point Likert scale, which confirms to us that the study sample find it difficult to determine a clear vision of the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study.

We also note the value of the significance level, Sing = 0.227, which is greater than the level of significance of 0.05, which explains the lack of statistical significance, and therefore we reject the allowance hypothesis and accept the null hypothesis H0: the institutions of education and tourism and hotel training under study do not have the basic requirements for total quality management at the level of significance 0.05.

❖ Testing Hypotheses:

- H0: There is no statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study, due to the personal variables of the study sample at a significant level of 0.05.
- H1: There is a statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study, due to the personal variables of the study sample at a significant level of 0.05.

To find out the validity or denial of the hypothesis, we use the ANOVA test, as follows:

- Examining the effect of the gender variable on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study:

Formulating the hypothesis:

- H0: There is no statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study due to the gender variable at a significant level of 0.05.
- H1: There is a statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study, due to the gender variable at a significant level of 0.05.

Table No 11: An ANOVA test between the availability of basic requirements for total quality management in education, tourism and hotel training under study, and gender

	sum of squares	degree of freedomdf	mean of squares	f Fisher coefficient	probability value sig
Regression	0.1	1		0.135	0.852
residuals	14.755	53	0.01	0.278	
the total	14.764	54			

Source: prepared by the researcher based on the outputs of SPSS21

By looking at the values contained in Table No. (11), we note that the value of the Fisher coefficient, $F = 0.135$, and the probability value of $Sig = 0.852$, which is a value greater than the value of significance 0.05, and this indicates the absence of statistical significance, and therefore we reject the allowance hypothesis H1, and accept the null hypothesis H0: There is no statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study due to the gender variable at a significant level of 0.05.

❖ **Testing the scientific degree variable on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study:**

Formulating the test hypothesis: H0: There is no statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study. to the academic degree variable at a significant level of 0.05.

- H1: There is a statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study, due to the academic degree variable at a significant level of 0.05.

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Table No 12: An ANOVA analysis of variance test between the availability of the basic requirements for total quality management in education, tourism and hotel training under study, and the academic degree

	sum of squares	degree of freedomdf	mean of squares	f Fisher coefficient	probability value sig
Regression	1.924	4	0.481	1.873	0.13
residuals	12.841	50	0.257		
the total	14.764	54			

Source: prepared by the researcher based on the outputs of SPSS21

The values contained in Table No 12 refer to the value of the Fisher coefficient, $F = 1.873$, and the probability $Sig = 0.130$, which is a value greater than the value of significance 0.05 , which is explained by the lack of statistical significance, and therefore we reject the allowance hypothesis H_1 and accept the null hypothesis H_0 : there is no statistically significant effect on the availability of requirements. The basic principles of comprehensive quality management in the tourism and hotel education and training institutions under study are attributed to the scientific degree variable at a significant level of 0.05 .

❖ Testing the academic position variable on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study:

- Formulate the test hypothesis:

- H_0 : There is no statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study due to the academic position variable at a significant level of 0.05 .
- H_1 : There is a statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study, due to the academic position variable at a significant level of 0.05 .

Table No 13: ANOVA analysis of variance test between the availability of the basic requirements for total quality management in education and tourism and hotel training under study and the number of academic positions

	sum of squares	degree of freedomdf	mean of squares	f Fisher coefficient	probability value sig
Regression	2.572	4	0.643	2.637	0.055
residuals	12.192	50	0.224		
the total	41.764	54			

Source: prepared by the researcher based on the outputs of SPSS21

The values contained in Table (14) indicate: the value of the Fisher coefficient, $F = 2.637$, and the value of the probability $Sig = 0.055$, which is a value greater than the value of significance 0.05 , indicating that there is no statistical significance, and therefore we reject the allowance hypothesis H_1 , and accept the null hypothesis H_0 :

there is no significant effect Statistical indication of the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study, attributed to the academic position variable at a significant level of 0.05.

❖ **Examining the effect of the variable number of years of teaching on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study:**

- Formulate the test hypothesis:

- H0: There is no statistically significant effect on the availability of statistical requirements on the availability of basic requirements for management in educational and tourism and hotel training institutions under study, due to the variable number of years of teaching at a significant level of 0.05.
- H1: There is a statistically significant effect on the availability of basic statistical requirements for management in tourism and hotel education and training institutions under study, due to the variable number of teaching years at a significant level of 0.05.

Table No 14: ANOVA analysis of variance test between the availability of basic requirements for total quality management in tourism and hotel education and training institutions

	sum of squares	degree of freedomdf	mean of squares	f Fisher coefficient	probability value sig
Regression	2.417	2	0.209	5.091	0.061
residuals	12.347	52	0.237		
the total	14.764	54			

Source: prepared by the researcher based on the outputs of SPSS21

Through Table No 14, we note that the value of the Fisher coefficient, $F = 5.091$, and the probability value of $Sig = 0.061$, which is a value greater than the value of significance 0.05, which explains the lack of statistical significance, and therefore we reject the allowance hypothesis H1, and accept the null hypothesis H0: there is no statistically significant effect on Availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study, due to the variable number of teaching years at a significant level of 0.05.

❖ **Examining the impact of the research and studies variable on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study:**

- Formulation of the test hypothesis:

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- H0: There is no statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study, due to the variable of research and studies carried out at a significant level of 0.05.
- H1: There is a statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study, due to the variable of research and studies carried out at a significant level of 0.05.

Table No 15: An ANOVA test between the availability of basic requirements for total quality management in education and tourism and hotel training

	sum of squares	degree of freedomdf	mean of squares	f Fisher coefficient	probability value sig
Regression	3.233	5	0.647	2.747	0.029
residuals	11.532	49	0.235		
the total	14.764	54			

Source: prepared by the researcher based on the outputs of SPSS21

The values contained in Table No. (15) indicate that the value of the Fisher coefficient, $F = 2.747$, and the probability value of $Sig = 0.029$, which is greater than the value of significance 0.05, meaning that there is no statistical significance, and therefore we reject the allowance hypothesis H1 and accept the null hypothesis H1: there is no statistically significant effect. The lack of basic requirements for total quality management in the tourism and hotel education and training institutions under study is attributed to the variable number of years of teaching at a significant level of 0.05.

4. Conclusion:

Based on the presentation and analysis of the results of the above study, and testing hypotheses about the role of education and tourism and hotel training institutions in creating human resources in accordance with the requirements of total quality management from the point of view of the faculty members under study, we can conclude the following:

- ✓ The Algerian legislator enacted legal frameworks and texts to regulate the activity of education and tourism and hotel training institutions, but they do not keep pace with the current developments imposed by the tourism and hotel education and training industry, due to their stagnation and their always resorting to the central authority (guardianship) in terms of management, financing and reference in decision-making.
- ✓ The results of the study test proved the denial of the third hypothesis, that is, the tourism and hotel education and training institutions under study do not meet the basic requirements for total quality management at a significant level of 0.05, despite the response of the majority of the study sample to the availability of the fourth and sixth requirements: work teams and decision-making based on Scientific facts and facts.

- ✓ It also proved the negation of the fourth hypothesis, meaning that there is no statistically significant effect on the availability of the basic requirements for total quality management in the tourism and hotel education and training institutions under study, due to the personal variables of the study sample: gender, academic degree, academic position, number of teaching years, and the completed studies and researches, at a significant level of 0.05.

Recommendations and suggestions:

Among the recommendations and proposals that we consider appropriate to overcome the obstacles that prevent the role of education and tourism and hotel training institutions in creating human resources in accordance with the requirements of total quality management, we find:

- The need to increase the number of tourism and hotel education and training structures in Algeria to cover the domestic and foreign tourism demand;
- Coordination and cooperation between the strategic leadership of higher education and the strategic leadership of the Ministry of Tourism;
- Encouraging research and studies related to quality and related to international academic standards and in line with developments in the world;
- Enhancing the exchange of experiences with international universities and schools, especially in the field of total quality management;
- Providing the necessary financial and moral support for tourism and hotel education and training institutions;
- The need to rely on modern means to develop educational management;
- The need to adopt the principle of training individuals to keep abreast of developments in the world.

7- Bibliography List:

- 1- absayarudfatimatalzahra, buzyanhasaan .Tourism and hotel education and training in Algeria. Business and Finance Journal, Volume 1, Issue 03, September 2017, Mila University, Algeria.
- 2- Previous reference.
- 3- Bachiwa Hussein, Total Quality Management, in Higher Education Institutions and its applicability in the field of higher education, an applied study on Farhat Abbas University, Setif, a thesis submitted in order to complete the requirements for obtaining a PhD in Educational Administration, University of Setif, academic year, 2015-2016.
- 4- Khaled Ahmed Sarayrah, Laila Al-Assaf, Total Quality Management in Higher Education Institutions between Theory and Practice, The Arab Journal for Quality Assurance of University Education, Issue 01, University of Science and Technology, Yemen, 2008.
- 5- Mohsen Ali Attia, Comprehensive Quality and New Teaching, Dar Safaa for Publishing and Distribution, first edition, Amman, 2009.
- 6- Elham Yahyaoui, Baraka Mishnan, The importance of using total quality management in ensuring higher education products, Algerian Journal of Economic Development, Issue 1, December 2014, Algeria.

The role of tourism and hotel education and training institutions in creating human resources according to the requirements of total quality management. An econometric study on schools and institutes (Algiers, Tizi Ouzou, Chlef)
