

IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT IN SCHOOL EDUCATION SYSTEM USING AHP TECHNIQUE, A CASE STUDY

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Abstract- In present scenario of everyone wants best quality and providing best quality of service is an important issue for industries. The term "Total Quality Management" also used in increasing the quality of service for organization from its starting stage to service after sales. Continuous improvement in quality can be done only after accepting quality culture in process.

As JIT is applicable in every culture, TQM is also applicable in every sphere of human activities. TQM is a part of JIT. It includes maintenance, retail and service industries. Like as JIT those industries already implemented TQM have begun to take the benefits of TQM and transform themselves. Just in Time is now in every sector like banking, financial, education, retail, hospital, hotels, BPO and software services.

This paper work is mainly focused on improving existing quality of education in Indian schools with the help of TQM tools using MADM techniques like AHP and TOPSIS. The present paper work is focused on the increasing the existing quality of education in schools with the help of by implementing TQM tools along with technique AHP, to find out the school with better education system using various factors. In this work TQM techniques are used in form of questionnaire for collecting required data from selected schools in Jhajjar, Haryana, India for calculation purpose. This data is further analyzed by AHP technique.

AHP technique gives the result which decide the ranking of school, through that ranking school with better education can be selected easily under selected factors.

The results from the calculation tells that school with 'P' grade is best according to quality of education as it has the higher value of weightage as 0.45 in AHP technique. A matrix for AHP method has been discussed and provided too.

Keywords – Just-in-Time (JIT), quality, Total Quality Management (TQM), Implementation, Analytical Hierarchy Process (AHP), Technique, MADM (Multiple Attribute Decision Making)

INTRODUCTION

India is a developing country and economy of is a mixed economy. India's ranking is Sixth according to Gross Domestic Product (GDP) and Third according to Purchasing power Parity. Indian economy's long- term growth prospective are positive because of young large population, high savings and investments, low dependency. Service sectors of India are the rapidly growing sectors in the globe from 2001 till now with rate of 9.25% which is the highest contribution in Indian economy nearly 57% according to 2013-2014. According to collected data India is now the seller of services specially Information Technology (IT), BPO and other services, which are the fastest- growing part of Indian economy. A large population is employed by Information Technology (IT) in world where India stands Third position in the globe having 3,100 start-ups in 2014-2015. In India a huge population also depend on agriculture industry which is the primary sector but this contributes only 17% of GDP. Manufacturing Industry held 26% of GDP. In 2013 yearly manufacturing of vehicles was 21.48 million in India, which is again one of biggest achievement in Automobile Sector. The Indian economy is a mixed economy- mixture of traditional and modern sector. Traditional sector includes: Agriculture (farming and fishing) and Handicrafts.

Modern sector includes: Telecommunication, information Technology, Automobile Industry and tourism. Indian Economy mainly divided in three important sectors, sometimes fourth sector also counted. These important sectors are:

- ❖ Primary Sector
- ❖ Secondary Sector
- ❖ Tertiary Sector

Figure given below shows the contribution of these sectors in Indian economy.

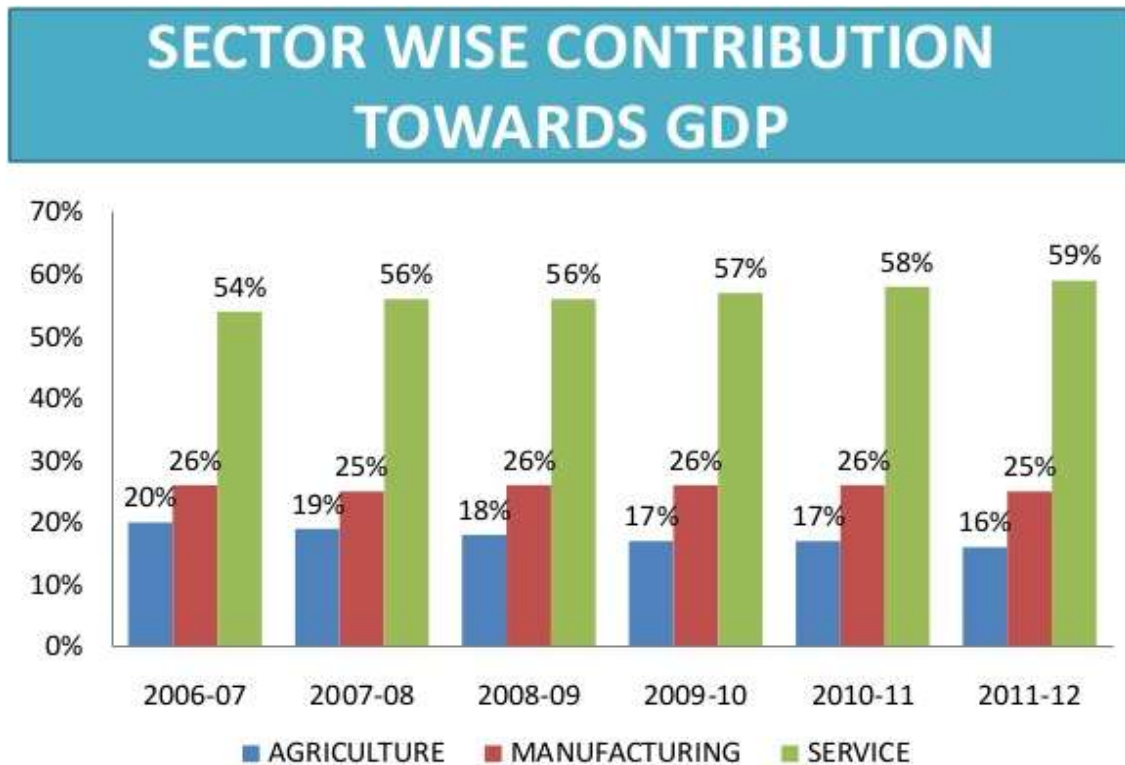


Figure 1: Various Sectors Contribution towards GDP

Sectors mentioned in the graph enables the services to fulfill human requirements. An Introduction to service and its organizations and current scenario of different service industries on behalf of Indian context will be discussed here.

What is Service Sector?

In above mentioned three sectors, one is service sector which is tertiary sector. Other two are:

- 1) primary Sector (includes raw material)
- 2) Secondary Sector (includes manufacturing industry).

Service Sector is the for providing various kind of services to the customers, which can't be held in hand. These service activities include like banking, hotel services, telecommunication, mass media, IT industry, marketing services, landed estate, pedagogy etc. This sector is the chief fragment of GDP. Service sector is the fastest growing sector all over the globe.

This Sector is the salvation for communal commercial development of a country. Today, highly and rapidly growing sector is Service sector, which employ huge man power and thus contributing more than various other sectors globally. Urbanization, privatization and increase in demand for final consumer are the real reason behind the growth of service sector.

Sometimes another sector also discussed which is known as quaternary sector. Quaternary sector is considered as a part of tertiary. Quaternary sector seen in highly developed countries because this area requires more. Countries where quaternary term used their primary and secondary sectors contribution negligible in GDP. This sector shows the educated man force of that country where technical services media, research & development, consultation, education, financial planning, blogging & designing.

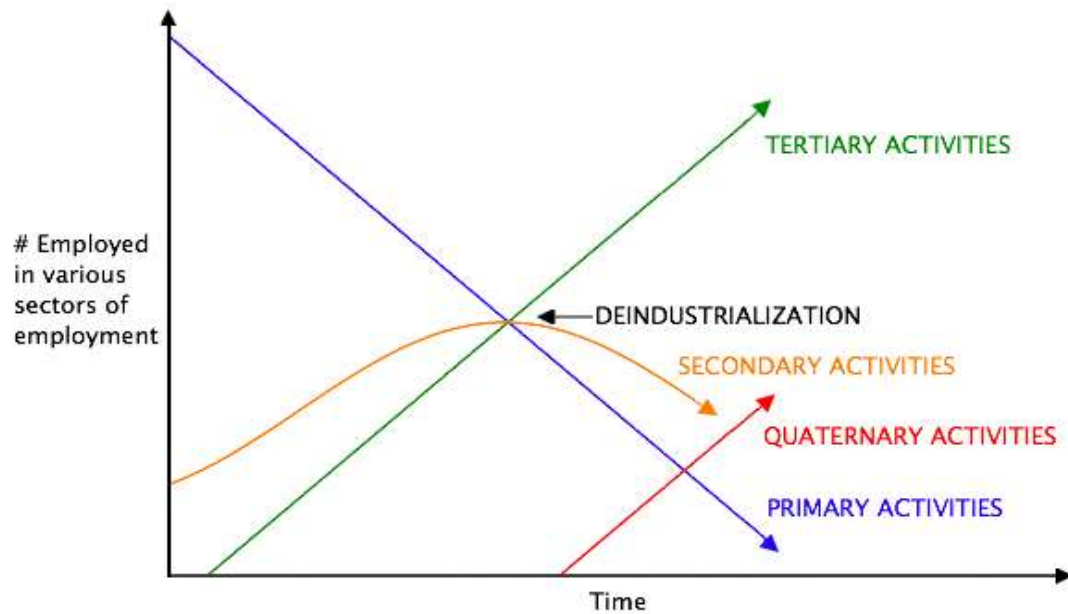


FIGURE 1.2: Clark's Sector Diagram

CURRENT SCENARIO OF SERVICE SECTOR IN INDIA

In India Service industry is main and leading contributor in Gross Domestic Product nearly 57%, which is more than half. This figure of 57% shows the importance of Service industry in Commercial growth of India. Just because of this reason foreigners are interested for investing in India, which again a good thing for economic growth. As termed above also that Service industry not only leading in GDP contribution but also a reason of huge employment recently. Service sector includes so many activities like:

1. Trading
2. Communication
3. Financial
4. Real estate
5. Education
6. Transportation
7. Business services
8. Social and Personal services
9. Community services
10. Banking

Service sector is backbone of economy. Only service sector contributes 57% in Indian economy which is more than all other sectors. Any kind of service like banking, software or any other this area is extremely proficient & gives great momentum to the Economy.

Service industry also include two major backbone area of human life that are:

- 1) Education
- 2) Health Sector.

What kind of work we want to do is depend on our education that we have. Although due to population increment people are not able to do their own decided jobs but our education is the one who helps us in being independent. Education can be gained at every age this is a lifelong process. In the world of technology where people want to live with every comfort is also a part of education. This area also has institutions, vocational training programs, teacher's training program, computer learning and many more such other programs. Institutions of education system gives training to both teachers as well as students.

After so many improvements in education system problem is still same. Dropout rates are still high and employers need highly qualified students for workplace. Calculation skills and communication skills are most important in industry. Budget of most schools is not sufficient to meet expectation of institutions. In India still, we have so many villages which are not connected to city directly. Education is difficult task for these people.

CONCEPT OF TOTAL QUALITY MANAGEMENT (TQM)

Total Quality Management (TQM) composed of great outcome attempts for establishing an unalterable environment in which an Institution to improve interruptedly. TQM has capability to convey best quality products and services to consumers. TQM was widely source of attention during 1980s & early 1990s before ISO 9000, Lean manufacturing and Six Sigma method. If TQM applied properly in an organization, outcomes are great. The main term involved in TQM is 'Quality' which covers all stages from initial to final.

WHY DO QUALITY MANAGEMENT?

TQM approach was derived in 1950s & continuously became famous till 1990s. Total Quality is explanation of the environment, working style and attitude of an organization that attempts to provide best quality of products or services to consumers according to their requirement. Quality is required in all fields of organization whether manufacturing, operation, service etc. TQM believes in the philosophy of being done right in first times that waste, defects and expenses reduce during processing. It also reduces processing time. Successful implementation of TQM in an organization must keep in mind eight important elements. These key elements are:

- i) Morals
- ii) Truthfulness
- iii) Faith
- iv) Training
- v) Leadership
- vi) Identification

iv) Teamwork

viii) Transmission

For continuous improvement in Quality its management is must. And for this purpose, TQM tools are used. In this paper we will discuss about methodology and AHP technique.

METHODOLOGY

The methodology follows some steps for the completion of work. These steps are:

- 1) Survey secondary schools in Jhajjar and collect data for finding out the ranking of selected schools in the region by considering various factors. The selected factors are those which affect the quality of education most. Using TQM techniques Quality based questionnaire is prepared for the improvement of education quality by collecting data and raking accordingly
- 2) In this step organize the multiple criteria, i.e. AHP technique.
- 3) Evaluate alternatives on the behalf of assessed criteria.
- 4) Analysis and discussion must be done on result obtained, ranking also can be given to alternatives.
- 5) Comparison can also be done by comparing some other MADM technique.

Result will be obtained on priority-based list of schools in this paper.

THE ANALYTICAL HIERARCHY PROCESS (AHP)

Analytical Hierarchy Process (AHP) is an organized process for arranging & examine complicated resolution. AHP is one of MADM approach. Thomas L. Saaty initially gave the idea of AHP. For a standard Decision-making process Multiple Criteria is famous, in which various reference points are linked to point out problem. The aim of AHP is collecting more alternatives, but Qualitative & quantitative approach must be same. Decision makers gives Comparison and judgement as well. Hierarchy leveling standards are given by result of AHP, where most important factor is achieving upper hierarchy level decision process.in the next level chosen criteria are specified which can be further divided into sub parts at low hierarchy level and process continue till the final conclusion. Various steps used in AHP are following:

Steps that are used in Analytical Hierarchy Process (AHP)

The process of Analytical Hierarchy consists of following steps:

- 1) Determine the problem & then describe its solution.
- 2) Arrange the problem on Ranking basis. For this, participants explore the problem aspects at different levels. Then express it in multileveled way that the AHP need.
- 3) Establish a pairwise comparison matrix to find out individual benefaction of each alternative for next level. In comparison matrix ranking of each alternative find out from their sub alternatives. In comparison of two elements people becomes judgmental as well, which represents the superiority of a whole number. In comparison matrix diagonals are taken as one, if number above diagonal is greater than one then below diagonal it must be lower than one because if above diagonal elements are chosen by us then below diagonal they are reciprocal of chosen elements & vice-versa.
- 4) All the alternatives are entered accordingly to evolve matrices. There are $m/(m-1)$ judgments are need to construct set of matrices. Complementary are automatically allocate.
- 5) Synthesis pairwise comparison of alternatives. Weightage of eigen vector can be given by further calculations.

Table 2.1: Paired Comparison of Scale for AHP Preferences.

Importance Intensity	Definition	Explanation
1	Uniformly preferred	Equal elements
2	Uniform to Moderate	Agreement is required.
3	Comparatively preferred	Experience and judgmental favor is less
4	Comparative to strong	Compromise is required
5	Highly preferred	Experience and judgmental favor is strong
6	Strong to Extremely preferred	Agreement is required
7	Extremely preferred	Experience and judgmental favor is highly recommended.
8	Extremely to especially preferred	Here again agreement is required
9	Especially preferred	Highly recommended

By calculating Eigen vectors weightage of features can be provide for the judgement matrix.

'C' Eigen vector is generated by splitting the sum of all admitted rows 'i' with 'm' no. of normalized matrices (Aw). After comparing Aw and C, calculate AC.

Here, C = Eigen vector, j = column, Aw= Yield normalized matrix, i = Row, m = Number of elements of normalized matrix

$$Aw = \begin{bmatrix} \frac{a_{11}}{\sum a_{i1}} & \frac{a_{12}}{\sum a_{i2}} & \dots & \frac{a_{1m}}{\sum a_{im}} \\ \dots & \dots & \dots & \dots \\ \dots & \dots & \dots & \dots \\ \frac{a_{m1}}{\sum a_{i1}} & \frac{a_{m2}}{\sum a_{i2}} & \dots & \frac{a_{mm}}{\sum a_{im}} \end{bmatrix} \tag{1}$$

$$c = \begin{bmatrix} c_1 \\ c_2 \\ \dots \\ \dots \\ \dots \\ \dots \\ c_m \end{bmatrix} = \begin{bmatrix} \frac{\frac{a_{11}}{\sum a_{i1}} + \frac{a_{12}}{\sum a_{i2}} + \dots + \frac{a_{1m}}{\sum a_{im}}}{m} \\ \dots \\ \dots \\ \dots \\ \frac{\frac{a_{11}}{\sum a_{i1}} + \frac{a_{12}}{\sum a_{i2}} + \dots + \frac{a_{1m}}{\sum a_{im}}}{m} \end{bmatrix} \tag{2}$$

6) In this step consistency is resolved by applying the Eigen value λ_{max} .

$$Ac = \begin{bmatrix} a_{11} & a_{12} & \dots & a_{1m} \\ a_{21} & a_{22} & \dots & a_{2m} \\ \dots & \dots & \dots & \dots \\ \dots & \dots & \dots & \dots \\ a_{m1} & a_{m2} & \dots & a_{mm} \end{bmatrix} \times \begin{bmatrix} c_1 \\ c_2 \\ \dots \\ \dots \\ c_m \end{bmatrix} = \begin{bmatrix} x_1 \\ x_2 \\ \dots \\ \dots \\ x_m \end{bmatrix} \tag{3}$$

Consistency index (CI) can be determined as:

$$CI = \left(\frac{\lambda_{max} - m}{m - 1} \right) \tag{4}$$

Where, m = Size of matrix

$$\lambda_{max} = \frac{1}{m} \frac{\sum \text{ithentryin } AC}{\text{ithentryin } AC} \tag{5}$$

$$\lambda_{max} = \frac{1 \sum X_i}{m C_i}$$

Consistency Ratio (CR) can be calculated as

$$CR = \frac{CI}{RCI} \tag{6}$$

Usually the value of CR is below then 10%, if value of CR is above 10% or 0.1, the given judgment matrix is unacceptable and inconsistent and if it is less, then judgment matrix is consistent and acceptable.

7) Repeat 3-6 steps for every evaluation of hierarchy.

Saaty developed AHP concept in (1980), hierarchy problems can be solved manually or automatically with the help of AHP software depends on user's choice.

Steps involved in AHP software:

- 1) Arrange pair-wise comparison and then calculate Eigen vector for a criterion.
- 2) Then calculate Consistency Ratio (CR), λ_{max} and Consistency Index (CI)
- 3) Select proper value of Random Consistency Index (RCI)
- 4) Scan the consistency of comparison matrix for checking the decision makers comparisons are consistent or not.

Data collection & calculation using AHP:

While analyzing data hierarchical nature of educational data shall be taken in consideration as well. Education sector gives different data level for students, classrooms and schools. For approximate influence of countable educational policies on student's outcome. For finding the ranking of schools, data and information required for different factors which affect the study in schools. Data is collected from different schools are defined in form of grades as shown in Table 2.3. These grades are very helpful in finding out the rank of schools.

Table 2.3: Evaluation of the Criteria of Quality Education System

Symbol for Factors	Criteria	Sub- Factors
a	Administration Services (AS)	a1) Availability of technical support for e-services a2) Sufficient working hours a3) Availability of services at school website a4) Effective and accurate services a5) Clear guidelines and vision
b	Academic Staff (AcS)	b1) Academic Qualifications b2) Professional Experience b3) Staff's Behavior b4) Communication skills b5) Availability of Staff
c	Library Services (LS)	c1) Availability of books and newspaper c2) E-books service c3) Sufficient place to sit and read c4) Librarians must be of cooperative nature c5) Working hours of library c6) Arrangement of books
d	Curriculum Structure (CS)	d1) Tools for enhancing student skills and capability d2) Proper schedule d3) Scientific topic encouragement d4) Various modules on specialization area d5) Material of study
e	Extra Curriculum Activities (ECA)	e1) Special facilities for girl students e2) Personal development program e3) Sports facilities whether indoor or outdoor e4) NCC or NSS facility e5) Cultural Activities
f	Location (L)	f1) Safe and Secure place f2) Cost of transport f3) Availability of parking place f4) Not select crowded area f5) Away from railway station and factory area, as it causes so much inconvenience in study
g	Infrastructure (In)	g1) Appropriate labs/class g2) Catering service g3) Accommodation for outsiders g4) Medical facilities g5) High quality Building
h	Bus service	h1) Proper bus service h2) Fare charges should be low h3) Proper timings h4) Bus shall be in appropriate number so that students must wait for minimum time h5) Discipline also matters.

CALCULATION FOR THE RANKING OF THE FACTORS BY APPLYING THE ANALYTICAL HIERARCHY PROCESS (AHP) METHOD

After collecting and analyzing data provide grades for all factors and sub factors. Now calculation part is done to provide ranking to each factor like academic staff, Administration services, curriculum structure, infrastructure, library services, location, extra curriculum activities, other activities, bus service. Calculations are given below:

Arrange paired comparison of matrix by splitting every element of matrix by the column of total matrix.

Table 2.4: Paired Comparison of Matrix for Administrative Services

a	a1	a2	a3	a4	a5
a1	1	3	2	6	6
a2	.33	1	3	2	4
a3	.5	.33	1	1	3
a4	.166	.5	1	1	6
a5	.166	.25	.33	.166	1

Now eigen vector can be calculated by average of row in given matrix The Eigen vector in Table:

Table 2.5: Incorporated Matrix for Administrative Services

a	a1	a2	a3	a4	a5
a1	0.463	0.591	0.273	0.590	0.3
a2	0.153	0.197	0.409	0.197	0.2
a3	0.231	0.064	0.136	0.098	0.15
a4	0.077	0.098	0.136	0.098	0.3
a5	0.077	0.049	0.045	0.016	0.05
Eigen vector	0.4632	0.2374	0.1381	0.1055	0.05573

$\lambda_{max} = 5.834, \quad RCI = 1.12$

$CI=0.05575, \quad CR= 0.049 < 0.1$, consistent & acceptable

Now calculations for λ_{max} are done below. Calculations below adopt AHP additive normalization method. Calculations are performed using pair wise comparison of factors, by which education system affected. If these factors are arranged in systematic manner they improve the quality of education in efficient and effective manner.

$\lambda_{max} = 0.4632*2.162+0.2374*5.08+0.1381*7.33+0.1055*10.166+0.05573*20 = 5.2230$

further proceed for calculation of Consistency Index (CI), as given below:

$$CI = \left(\frac{\lambda_{max} - m}{m - 1} \right) = \frac{(5.2230 - 5) / (5 - 1)}{5.834 - 5} = \frac{0.2230 / 4}{0.834} = 0.067$$

Proper value of Random consistency index, RCI, for a matrix of size 5 finds RCI = 1.12, and then calculate the consistency ratio (CR).

$$CR = \frac{CI}{RI} = \frac{0.067}{1.12} = 0.0598 < 0.1$$

Calculations shows CR value is less than 0.1 or 10%, judgements are acceptable and consistent.

Similarly, we will calculate for other factors as well. Calculation process will be same as above, now we will just put the values in next tables.

Table 2.6: Paired Comparison Matrix for Academic Services

b	b1	b2	b3	b4	b5
b1	1	2	2	3	5
b2	.5	1	1	2	3
b3	.5	1	1	6	4
b4	.33	.5	.166	1	2
b5	.2	.33	.25	.5	1
Eigen vector	0.3668	0.1982	0.2812	0.0928	0.0609

$\lambda_{max}=5.203,$
 $CI= .05075,$

$RCI= 1.12$
 $CR= 0.045 < 0.1$ Consistent & Acceptable

Table 2.7: Paired Comparison Matrix for Library Services

c	c1	c2	c3	c4	c5
c1	1	5	4	6	7
c2	.2	1	1	2	4
c3	.25	1	1	2	2
c4	.166	.5	.5	1	3
c5	.147	.25	.5	.33	1
Eigen Vector	0.5515	0.157	0.142	0.096	0.053

$\lambda_{max}= 5.174,$
 $CI= .0435,$

$RCI= 1.12$
 $CR= .0389 < 0.1$ Consistent & acceptable

Table 2.8: Paired Comparison Matrix for Curriculum Structure

d	d1	d2	d3	d4	d5
d1	1	5	3	4	8
d2	.2	1	4	3	6
d3	.33	.25	1	1	2
d4	.25	.33	1	1	2
d5	.125	.166	.5	.5	1
Eigen vector	0.521	0.243	0.097	0.0923	0.0464

$\lambda_{max}= 5.321$,
CI= .08025,

RCI=1.12
CR=.0713 <0.1 Consistent & acceptable

Table 2.9: Paired Comparison Matrix for Extra Curriculum Activities

e	e1	e2	e3	e4	e5
e1	1	2	2	3	9
e2	.5	1	3	6	7
e3	.5	.33	1	2	8
e4	.33	.166	.5	1	3
e5	.111	.147	.125	.33	1
Eigen vector	0.3701	0.3394	0.172	0.0856	0.0328

$\lambda_{max}=5.256$,
CI= .064,

RCI= 1.12
CR= .0568 < 0.1 Consistent & acceptable

Table 2.10: Paired Structure Matrix for Location

f	f1	f2	f3	f4	f5
f1	1	2	5	2	9
f2	.5	1	4	6	8
f3	.2	.25	1	1	2
f4	.5	.166	1	1	5
f5	.11	.125	.5	.2	1
Eigen vector	0.397	0.361	.0843	.122	0.361

$\lambda_{max}=5.309$,
CI=.0773,

RCI=1.12
CR=.0686 < 0.1 Consistent & Acceptable,

Table 2.11: Paired Comparison Matrix for Infrastructure

g	g1	g2	g3	g4	g5
g1	1	1	3	5	9
g2	1	1	2	4	7
g3	.333	.5	1	3	8
g4	.2	.25	.33	1	3
g5	.111	.147	.125	.33	1
Eigen vector	0.3821	0.3168	0.1903	0.0774	0.0333

$\lambda_{max} = 5.1213$, RCI= 1.12
CI= .0303,

CR=.0269 < 0.1 consistent & acceptable

Table 2.12: Paired Comparison Matrix for Bus Service

h	h1	h2	h3	h4	h5
h1	1	2	5	8	9
h2	.5	1	2	9	4
h3	.2	.5	1	3	5
h4	.125	.111	.333	1	1
h5	.111	.25	.2	1	1
Eigen vector	0.4921	0.2709	0.14500	.0449	0.0471

$\lambda_{max}= 5.166$,
CI= 0.037,

RCI= 1.12
CR= .0369 < 0.1 consistent & acceptable

Now Paired Comparison is also applied for selected variants. Use same Calculations as above and compare all the Eight criteria for overall analysis of factors which affect education system.

Table 2.13: Paired Comparison Matrix for All Variants (a, b, c, d, e, f, g & h)

	a	b	c	d	e	f	g	h
a	1	2	3	5	7	9	6	9
b	1/2	1	3	2	4	5	6	7
c	1/3	1/3	1	1	2	2	7	9
d	1/5	1/2	1	1	2	4	2	3
e	1/7	1/4	1/2	1/2	1	3	1	4
f	1/9	1/5	1/2	1/4	1/3	1	2	3
g	1/6	1/6	1/7	1/2	1	1/2	1	2
h	1/9	1/7	1/9	1/3	1/4	1/3	1/2	1
Eigen vector	0.3595	0.225	0.135	0.105	0.0663	0.0465	0.0404	0.0231

$\lambda_{max} = 8.538,$

CI= .0768, RCI=0.713,

CR= 0.0548 < 0.1 consistent & acceptable

In Next step priorities are evolve for overall ranking system. Overall Ranking can be calculated using the selected factors such as administrative services, Academic staff, library services, Curriculum services, Extra curriculum activities, location, Infrastructure, Bus service are done manually or a software can be used. Institute can be selected on the overall ranking basis through AHP method in an efficient manner. Here we first calculate the ranking of alternatives selected individually and then arrange them on priority order. Then find-out overall ranking of schools. Here we select five schools for comparison, their names are denoted by P, Q, R, S, T

Table 4.12: Priority Matrix of Schools

	a	b	c	d	e	f	g	h	Overall eigen vector
P	0.4632	0.3668	0.5515	0.5213	0.3701	0.3978	0.3821	0.4921	0.4481
Q	0.2374	0.1982	0.1570	0.2435	0.3394	0.3612	0.3168	0.2709	0.2351
R	0.1381	0.2812	0.1420	0.0972	0.1721	0.0843	0.1903	0.1452	0.1686
S	0.0155	0.0928	0.0962	0.0923	0.0856	0.1221	0.0774	0.0449	0.0647
T	0.0557	0.0609	0.0534	0.0464	0.0328	0.3615	0.0333	0.0471	0.0794

Here, A= 0.360, B= 0.225, C= 0.135, D= 0.105, E= 0.066, F= 0.047, G= 0.040 and H= 0.023 (Priority factors of the determinants)

Here we will apply a new strategy for analysis of these factors. According to this strategy we will compare schools with selected factors and finally find-out the ranking for schools. So, on the basis of priorities, we can select best school in Jhajjar by using AHP concept. Now, the overall priority of Schools is given as:

Overall Priority of School P

$$[0.36(0.4632) + 0.225(0.3668) + 0.135 (0.5515) + 0.105(0.5213) + 0.066 (0.3701) + 0.047(0.3978) + 0.04(0.3821) + 0.023(0.4921)] = 0.4481$$

Overall Priority of School Q

$$[0.36(0.2374) + 0.225(0.1982) + 0.135(0.157) + 0.105(0.2435) + 0.066(0.3394) + 0.047(0.3612) + 0.04 (0.3168) + 0.023(0.2709)] = 0.2351$$

Overall Priority of School R

$$[0.36(0.1381) + 0.225(0.2812) + 0.135(0.1420) + 0.105(0.0972) + 0.066(0.1721) + 0.047(0.0843) + 0.04 (0.1903) + 0.023(0.1452)] = 0.1686$$

Overall Priority of School S

$$[0.36(0.0155) + 0.225(0.0928) + 0.135(0.0962) + 0.105(0.0923) + 0.066(0.0856) + 0.047(0.1221) + 0.04 (0.0774) + 0.023(0.0449)] = 0.0647$$

Overall Priority of School T

$$[0.36(0.0557) + 0.225(0.0609) + 0.135(0.0534) + 0.105(0.0464) + 0.066(0.0328) + 0.047(0.3615) + 0.04 (0.333) + 0.023(0.0471)] = 0.0794$$

Conclusion:

For the purpose of best school selection, we applied the most appropriate technique using the best factors which affect the quality of education most. And then schools are ranked on the basis of overall ranking. Among selected schools named as P, Q, R, S, T overall ranking is as P>Q>R>T>S, this sequence indicates that ‘P’ is the best school under selected factors in Jhajjar and school ‘S’ is least preferred.

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