

**TQM AWARENESS AMONG CIVIL SERVANTS
IN THE EDUCATION SECTOR**

**A thesis submitted to the Graduate School in partial
fulfillment of the requirements for the degree
Masters of Science (Management),
Universiti utam Malaysia**

by

LESLIE TAWAN AU. GANDIL



**Sekolah Siswazah
(Graduate School)
Universiti Utara Malaysia**

**PERAKUAN KERJA TESIS
(Certification Of Thesis Work)**

Kami, yang bertandatangan, memperakukan bahawa
(We, the undersigned, certify that)

LESLIE TAWAN AK. GANDIL

calon untuk ijazah

(candidate for the degree of) Master of Science (Management)

telah mengemukakan tesisnya yang bertajuk

(has presented his/her thesis of the following title)

TOM AWARENESS AMONG CIVIL SERVANTS IN EDUCATION SECTOR.

seperti yang tercatat di muka surat tajuk dan kulit **tesis**
(as it appears on the title **page** and front cover of thesis)

bahawa tesis **tersebut** boleh diterima dari segi bentuk serta kandungan, dan meliputi bidang ilmu dengan memuaskan.

(that the thesis **is** acceptable in form and content, and that a satisfactory knowledge of the field is **covered** by the thesis).

AJK Tesis
(Thesis Committee)

Nama
(Name) Assoc. Prof. Dr. Rushaimi Zien Yusoff
(Penyelia Utama/Principal Supervisor)

Tandatangan
(Signature)

Nama
(Name) Prof. Dr. Peter Wyer

Tandatangan
(Signature) P. Wyer.

Nama
(Name) _____

Tandatangan
(Signature) _____

Tarikh
(Date)

11/12/96

PERMISSION TO USE

In presenting this **thesis in partial fulfillment** of the requirements for a Post Graduate degree from the Universiti Utara Malaysia, I agree that the Library of this University may make it freely available for inspection. I **further** agree that permission for copying of this thesis in any manner, in whole or part, for scholarly purposes may be granted by my supervisor(s) or, in their absence, by the Dean of the Graduate School where I did my thesis. It **is understood** that any copying or publication or use of this thesis or parts thereof for **financial** gain shall not be allowed without my written permission. It is also understood that due to recognition shall be given to me and to the Universiti Utara Malaysia in any scholarly use which may be made of any material in my thesis.

Requests for permission to copy or to make other use of material in **this thesis** in whole or in part should be addressed to:

Dean of Graduate School

Universiti Utara Malaysia

06010 Sintok

Kedah Darul Aman

ABSTRAK

Kajian ini cuba mengenal pasti korelasi mengenai kesedaran Pengurusan Kualiti Menyeluruh (PKM) di kalangan kakitangan awam di Ibu Pejabat Pendidikan Negeri di Kuching, Sarawak. Secara khususnya, kajian hi cuba mencari hubungan di antara kesedaran PKM dengan: jantina, umur, keturunan, status perkahwinan, kelayakan pendidikan, tahap jawatan, tempoh perkhidmatan dan sektor atau bahagian dalam jabatan untuk responden. Unit-unit analisa i&h terdiri daripada kakitangan jabatan pendidikan daripada kelapan-lapan sektor/bahagian, lelaki dan perempuan. Metodologi kajian menggunakan soal selidik yang menggunakan skala Likert. Ianya diedarkan sendiri kepada responden. Mathumat yang terdapat dianalisis menggunakan alat dan cam statistik termasuk alat seperti 't-Test', 'one-way ANOVA', 'Pearson Correlation Analysis' dan 'Multiple Regression' untuk menentukan signifikannya perhubungan di antara perkara yang dikenal pasti dengan kesedaran PKM.

Ini adalah merupakan dorongan oleh minat penyelidik untuk menjalankan kajian ini berikutan dengan PKM yang diperkenalkan ke dalam perkhidmatan awam sejak tahun 1992. Prinsip-prinsip PKM yang diberi penekanan dalam perkeliing awam itu adalah: (1) Sokongan pengurusan atasan, (2) Perancangan strategik kualiti, (3) Mengutamakan pelanggan, (4) Latihan dan pengiktirafan, (5) Semangat berpasukan, (6) Pengukuran prestasi, dan (7) Kepastian kualiti.

Hasil kajian utama menunjukkan bahawa tidak a& wujud perbezaan di antara kakitangan lelaki dan kakitangan perempuan mengenai persepsi kesedaran PKM. Didapati juga semua kakitangan mempunyai persepsi yang sama mengenai kesedaran PKM walaupun umur, keturunan, taraf perkahwinan, tempoh perkhidmatan dan sektor/bahagian jabatan mereka berbeza. Walau bagaimanapun, kelayakan pendidikan dan tahap jawatan responden telah menunjukkan hubungan yang positif dan signifikan dengan kesedaran PKM. Petunjuk utama mengenai kesedaran PKM ialah Semangat berpasukan, diikuti (mengikut susunan) oleh Mengutamakan pelanggan, Kepastian kualiti, Latihan dan pengiktirafan, Perancangan strategik kualiti, Pengukuran prestasi, dan Sokongan pengurusan atasan.

Daripada hasil kajian ini suatu kesimpulan y a n g dapat dibuat ialah: kelayakan pendidikan dan tahap perkhidmatan staf ada kaitannya dengan kesedaran PKM secara positif dan signifikan. Secara umumnya, kakitangan y a n g berkelulusan ijazah memegang jawatan sekurang-kurangnya pengurusan pada tahap rendah. Faktor pendidikan tinggi dan tahap jawatan inilah yang menunjukkan bahawa kesedaran PKM mereka yang positif.

ABSTRACT

This study attempts to investigate the correlation of TQM awareness among the civil servants in the State Education Headquarters in Kuching, Sarawak. Specifically, the study attempted to find out the relationship between the TQM awareness with the: gender, age, ethnic group, marital status, education qualification, job position, length of service and department sector/section of the respondents. The units of analysis were the staff of the education department from all eight sectors and sections, male and female. The research methodology utilised was a survey based on a personally distributed questionnaire which incorporates Likert Scales. The resultant information was analysed by applying the statistical tools and techniques including t-Test, one-way ANOVA, Pearson Correlation Analysis and Multiple Regression to determine the significance of the relationship of the items under investigation with TQM awareness.

The study was motivated by the interest of the researcher following the introduction of TQM in the civil service since 1992. The TQM principles emphasized in the circular were: (1) Top management support, (2) Strategic quality planning, (3) Customer focus, (4) Team work, (5) Training and recognition, (6) Performance measurement, and (7) Quality assurance.

The major findings of the study revealed that there was no difference in the TQM awareness perceived by male and female staff. The findings further showed that the staff perceived equal TQM awareness irrespective of their age-, ethnic group, marital status, length of service and departmental sectors/sections they belonged to. However, the educational qualification and job position of the respondents did indicate a positive and significant relationship with the TQM awareness. The findings further elaborated that all the seven TQM principles had shown positive and significant correlation with the TQM awareness. The best predictor of TQM awareness was team work followed by (in order) customer focus, quality assurance, training & recognition, strategic quality planning, performance measurement and top management support.

The findings concluded that educational qualification and job position were inter-related. Those who were graduates held the post of at least lower management. Generally, it was this management group that showed positive TQM awareness with respect to their educational qualification and job position in the department.

ACKNOWLEDGEMENT

The writer wishes to acknowledge and special thank to those who had made this thesis possible.

1. To INSTITUTE of AMINUDDIN BAKI (IAB) especially Dr. Ibrahim Ahmad Bajunid, *Director* of IAB and Encik Dzulkifli Bahari, - of I A . 8 (Northern Branch) for their moral and financial support for making this course possible;
2. To the *Graduate School* of UNIVERSITI UTARA MALAYSIA for the opportunities opened up for scholarly and academic training;
3. To *Associate Professor* Dr. Ibrahim Abdul Hamid, *Dean* of the Graduate School, for his continuous encouragement and support;
4. To *Associate Professor Dr. Rushaini Zhen Yusoff, Director* of Institute of Quality Management, UUM and *Professor Dr. Peter Wyer, British Aerospace Professor*, for their guidance and commitment for the completion of this study;
5. To the *Directors* and staff of the State Education Headquarters of Sarawak and Perlis for making this study possible;
6. To *brother* Tan Wee Guan for unconditionally and sacrificially lending me his only brand new car to use in the campus throughout my one year Masters Degree study programme.

DEDICATION

Salute to my

late beloved father,

Gandil ak. Mambai

who has gone forever since Wednesday, 27th. November, 1996 @

11.00 a.m. while I was waiting for this thesis to be approved at

UUM.

My fond memory of him is his gentleness, slow to anger, caring, loving and committed father.

TABLE OF CONTENTS

	Page
Permission to use	i
Abstrak (Abstract in Bahasa Melayu)	ii
Abstract	iii
Acknowledgement	iv
Dedication	v
Table of Contents	vi
list of Tables	xi
List of Figures	xiii
List of Abbreviations	xv
CHAPTER	
1 INTRODUCTION	1
1.1 Context of The Study	1
1.2 Research Objectives	4
1.3 Research Questions	
1.4 Research Hypotheses	5
1.5 Significance of The Study	6
1.6 Delimitations of The Study	7
1.7 Plan of study	8
2 REVIEW OF THE LITERATURE TOTAL QUALITY MANAGEMENT	9
2.1 Development of TQM	9
2.2 what is Quality?	11

2.3 Approach to Quality	12
2.3.1 Quality Control	12
2.3.2 Quality Assurance	13
2.3.3 Total Quality	13
2.3.4 Differences Between Quality Control, Quality Assurance and TQM	14
2.3.5 The Differences Between An “Emphasis on Quality ” and TQM	14
2.4 Total Quality Management	15
2.5 Key Concepts of Total Quality Management	17
2.6 Implementing TQM in An Organisation	27
2.7 Barriers to The Implementation of TQM	28
2.8 Why TQM Often Fails	29
2.9 Advantages of Implementing TQM	29
2.10 The implementation of TQM in Education	31
2.11 Critical Success Factors of TQM	34
3 CONCEPTUAL FRAMEWORK	35
3.1 Review of Related Literature	35
3.1.1 Total Quality Management Principles	36
3.1.2 Awareness	43
(A) Conceptual Definitions of ‘Awareness’	47
(B) Importance of Top Management Awareness Towards TQM	49
(C) Awareness of TQM	51
3.2 Research Model / Paradigm	63

4 RESEARCH DESIGN AND METHODOLOGY	64
4.1 Type of Study	64
4.2 Sources of Data	64
4.2.1 Unit of Analysis	64
4.2.2 Population Frame	
4.2.3 Sample, Pilot Testing and Sampling Technique	65
4.3 Data Collection Techniques	71
4.3.1 The Instrument	72
4.3.2 Data Collection	74
4.3.3 The Pilot Study	75
4.4 Data Analysis Technique	76
5 PRESENTATION AND DISCUSSION OF THE FINDINGS	77
5.1 Presentation of The Findings	78
5.1.1 Highest Education Qualification, Present Job Position and TQM Awareness	81
5.1.2 Hypotheses of Difference	81
5.1.3 Inferential Statistics: Pearson Correlation on TQM Awareness, (1) Top Management Support, (2) Strategic Quality Planning, (3) Customer Focus, (4) Team Work, (5) Training and Recognition, (6) Performance Measurement, (7) Quality Assurance	84
5.1.4 Relationship Between TQM Awareness with: (1) Top Management Support, (2) Strategic Quality Planning, (3) Customer Focus, (4) Team Work, (5) Training and Recognition, (6) Performance Measurement, and (7) Quality Assurance (By Regression Analysis)	90

5.2 Analysis and Interpretation of Detailed Findings	93
5.2.1 Highest Education Qualification, Present Job Position and TQM Awareness of The Staff	93
5.2.2 Hypotheses of Differences	105
5.2.3 Inferential Statistics: Pearson Correlation on TQM Awareness, (1) Top Management Support, (2) Strategic Quality Planning , (3) Customer Focus, (4) Team Work, (5) Training and Recognition , (6) Performance Measurement, (7) Quality Assurance	120
5.2.4 Relationship Between TQM Awareness with Top Management Support, Strategic Quality Planning , Customer Focus, Team Work, Training and Recognition, Performance Measurement and Quality Assurance (Multiple Regression Analysis)	127
6 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	136
6.1 Summary	136
6.1.1 Gender, Age, Ethnic Group, Marital Status, Education Qualification , Present Job Position , Length of Service and Department Sector/ Section	138
6.1.2 Hypotheses of Differences	138
6.1.3 Inferential Statistics: Pearson Correlation on TQM Awareness, (1) Top Management Support, (2) Strategic Quality, (3) Customer Focus, (4) Team Work, (5) Training and Recognition, (6) Performance Measurament , and (7) Quality Assurance	141
6.1.4 Relationship Between TQM Awareness with: (1) Top Management Support, (2) Strategic Quality Planning , (3) Customer Focus, (4) Team Work, (6) Training and Recognition, (6) Performance Measurement, and (7) Quality Assurance	144

6.2	Conclusions	147
6.3	Recommendations	148
	<i>BIBLIOGRAPHY</i>	153
	<i>APPENDICES</i>	161
Appendix A	Organisational Charts of Sarawak State Education Headquarters	161
Appendix B	Distribution of Respondents According to Their Background	164
Appendix C	Reliability Test	173
Appendix D	Hypotheses of Differences by t-Test and one-way ANOVA	174
Appendix E	Pearson Correlation Coefficients	210
Appendix F	Multiple Regression (including Linear and Stepwise)	220
Appendix G	Mean and Standard Deviation Scores of The Responses on TQM Awareness Variables	232
Appendix H	Questionnaire	239
Appendix I	Letters of Approval	247

LIST OF TABLES

<u>Table</u>	<u>Description of Table</u>	<u>Page</u>
Table 4-1	Level of Service of the respondents	67
Table 4-2	Departmental sector/section of the respondents	68
Table 4-3	Gender of the respondents	68
Table 4-4	Age groups of the respondents	69
Table 4-5	Ethnic groups of the respondents	69
Table 4-6	Marital status	70
Table 4-7	Highest educational qualification of the respondents	70
Table 4-8	Length of service of the respondents	71
Table 4-9	Likert scale as used in the questionnaires	72
Table 4-10	The sample instrument consists of demographic survey and independent variables	73
Table 4-11	Data analysis technique	76
Table 5-1	Summary 1 of the findings	78
Table 5-2	Summary 2 of the findings	79
Table 5-3	Summary 3 of the findings	80
Table 5-4	TQM awareness (aware49) of the staff according to the highest educational qualification	95
Table 5-5	TQM awareness (aware50) of the staff according to highest educational qualification	96
Table 5-6	TQM awareness (aware51) of the staff according to highest educational qualification	97
Table 5-7	TQM awareness (aware52) of the staff according to highest educational qualification	98

Table 5-8	TQM awareness (aware54) of the staff according to highest educational qualification	99
Table 5-9	TQM awareness (aware49) of the staff according to present job position	100
Table 5-10	TQM awareness (aware50) of the staff according to present job position	101
Table 5-11	TQM awareness (aware51) of the staff according to present job position	102
Table 5-12	TQM awareness (aware52) of the staff according to present job position	103
Table 5-13	TQM awareness (aware54) of the staff according to present job position	104

LIST OF FIGURES

<u>Figure</u>	<u>Description of Figure</u>	<u>Page</u>
Figure 1-1	An overview of the research process	8
Figure 3-1	The principles (P) of the concept (C) of the importance of TQM principles. Actions (A) taken.	58-62
Figure 3-2	A schematic diagram showing the correlates of the awareness of TQM	63
Figure 4-1	Data collection process	74
Figure 5-1	t-Test for male and female staff on TQM Awareness	105
Figure 5-2	One way ANOVA for age and TQM awareness of the staff	107
Figure 5-3	One way ANOVA for ethnic group and TQM awareness of the staff	109
Figure 5-4	t-Test for marital status and TQM awareness of the staff	111
Figure 5-5	One way ANOVA for highest educational qualification and TQM awareness of the staff	113
Figure 5-6	One way ANOVA for present job position and TQM awareness of the staff	115
Figure 5-7	One way ANOVA for length of service and TQM awareness	117
Figure S-8	One way ANOVA for departmental sector/section of the respondents	119
A-1 to A-2	Organisational charts of Sarawak State Education Headquarters	161
B-1 to B-8	Distribution of respondents according to their background	164
C	Reliability test	173

D-1 to D-33	Hypotheses of differences by t-Test and one-way ANOVA	174
E-1 to E-9	Pearson Correlation Coefficients	210
F-1 to F-11	Multiple regression	220
G-1 to G-6	Mean and standard deviation scores of the responses on TQM awareness variables	232

xiv
LIST OF ABBREVIATIONS

<u>Abbreviation</u>	<u>Description of Abbreviation</u>	<u>Page</u>
ANOVA	Analysis of Variance	76
CEO	Chief Executive Officer	9
CSF	Critical Success Factor	34
DPAC	Development of Public Administration Circular	2
EPRD	Educational Planning, Research and Development	74
et. al	and others	153
IAB	Institute Aminuddin Baki	iv
LCE	Lower Certificate of Education	70
MCE	Malaysian Certificate of Education	70
Ph.D.	Doctorate of Philosophy	70
PKM	Pengurusan Kualiti Menyeluruh	ii
QA	Quality Assurance	13
QC	Quality Control	14
SRP	Sijil Rendah Pelajaran	70
SPM	Sijil Pelajaran Malaysia	70
SSB	Sistem Saraan Baru (New remuneration system)	152
STPM	Sijil Tinggi Pelajaran Malaysia	70
TQC	Total Quality Control	13
TQM	Total Quality Management	2

CHAPTER ONE

INTRODUCTION

This research is conducted for the academic purpose of the researcher to meet the partial fulfillment of the requirements for the Masters Degree Programme in Management. It is indeed not a research for any other organisations to use.

1.1 Context of The Study

Although parents, students, teachers and politicians have probably always been interested in results obtained at a school, it is only recently that the quality of education has become an issue of common concern (Stensaasen, 1995). Many in the developed countries - maybe in some developing countries too - have been worried by two disturbing trends in their education systems, i.e. a deterioration in the *quality of education* (particularly at the lower levels) and a *growing mismatch between education and employment*. These are common perceptions among educational planners and administrators, on the one hand, and recipients and users of education, on the other (Mukherjee, 1995). However, our Education Ministry may be aware of the quality of our education system and always ever ready to improve it now and then. In fact, the quality of our education is determined by the policy-makers and planners at the Ministry level. The process of implementation is carried out at various state and local education departments, and then involves schools.

The contents of
the thesis is for
internal user
only

BIBLIOGRAPHY

- Abdul Kadir M. Y. (19%). *Apa Kelebihan Pengurusan TQM*. Khidmat. April. pp. 40 - 42.
- Aguayo, R (1991). Dr. *Denning The American Who Taught The Japanese About Quality*. New York Sii & Schuster.
- Ahmad Sarji A.H.(1992). *Total Quality Management: Penerapan Budaya Kerja Cemerlang Dalam Pentadbiran Awam Malaysia*. Koleksi Ucapan-ucapan Dalam Tahun 1992. pp. 115 - 119.
- Ahmad Sarji (19%). *Civil Service Reforms: Towards Malaysia' Vision 2020*. Pelanduk Publ. (M) Sdn. Bhd.
- Alessandra, T. & Barrera, R. (1992). *Motivating to Excellence*. Security Management. Vol. 36. pp. 20 - 22.
- Atkinson, P. E. (1992). *How to Avoid TQ Failure*. Management Services. Vol. 37. No. 1 - 12. pp. 22 - 24.
- Bank, J. (1992). *The Essence of Total Quality Management*. Prentice Hall Inter. (U.K.) Ltd.
- Baumol & Blinder (1994). *Economics: Principles and Policy*. (6th. Ed.). U.S.A.: The Dryden Press, Harcourt Brace & Co.
- Benson, T. E. (1993b). *A View From The Trenches Quality Leadership Means Learning How to Work Together*. Industry Week. Vol1242. No.9 pp. 42 - 43.
- Berlin, C. (1994). *Implementation of The Total Quality Management Concept Within Space Business*. In Total Quality Management. Vd 5. No. 4.
- Bhagi, M. & Sharma, S. (1992). *Encyclopaedic Dictionary of Psychology*. New Delhi: Anmol Publ. Vol 1.
- Bossink, B.A.G. et al (1992). *Diagnosing Total Quality management - Part 1*. In Total Quality Management. Vol. 3. No.3. pp.223-231.
- Bounds, G.M.(1996). *Cases in Quality*. Irwin.
- Brelin, H.K. et al.(1995). *Focused Quality: Managing for Results*. N.Y.: John Wiley & sons, Inc.
- Brown, A. (1992). *Industrial Experience With Total Quality Management*. Total Quality Management. Vol. 3. No. 2. pp. 147 - 155.

- Bull, O.(1994). *Jumping The Q: A Total Quality Perspective*. Headway: Hodder & Stoughton.
- Cambridge (1995). *International Dictionary of English*. Cambridge Univ. Press.
- Chapman & Hall (1991). *Total Quality Management: The Key to Business Improvement*. Great Britain: St. Edmundsbury Press Ltd.
- Chaudron, D. (1992). *Total Quality Management: Avoid The Pitfalls*. HR Focus. Vol 69. p. 13.
- Clark, F.A. (1992). *Public A - TQM Magazine*. Vol 4. Nos. 1-6. pp. 373-378.
- Clayton, M. (1995). *Encouraging The Kaizen Approach to Quality in A University*. Total quality Management. Vol. 6. Nos. 5 & 6.
- Cohen, S. and Brand, R.(1993). *Total Quality Management in Government: A Practical Guide for The Real World*. San Francisco: Jossey-Bass Publ.
- Conti, T.(1993). *Building Total Quality: A Guide for Management*. London: Chapman & Hall.
- Costin, H. (1994). *Readings in Total Quality Management*. The Dryden Press: Harcourt Brace College Publishers.
- Creech, B.(1994). *The Five Pillars Of TQM*. N.Y.: Truman Talley Books/ Dutton.
- Crosby, P. B. (1979). *Quality Is Free*. New York: The New American Library, Inc.
- DPAC (1992) *"Guide on Total Quality Management in The Public Services' Development of Public Administration Circular No. of 1992*. MDC Penerbit Pencetak Sdn. Bhd.
- Dahlgaard, J.J. et al. (1994). *Case Studies: An Australian Experience*. Advances in Total Quality Management.
- Dahlgaard, J.J. et al.(1995). *Total Quality Management and Education*. Total Quality Management. Vol. 6. Nos. 5 & 6.
- Dale, B. (1992). *Communal Education*. The TQM Magazine. Vol 4. Nos. 1-6. pp. 77-80.
- Dale, B.G. and Plunkett, J.J. (1990). *Epilogue*. in Dale, B.G. & Plunkett, J.J. (eds). *Managing Quality*. New York: Philip Allan. pp. 346 - 353.
- Damelio, R. & Englehaupt, W.(1995). *An Action Guide to Making Quality Happen*. N.Y.: Quality Resources.

- Delsanter, J.M. (1992). *On The Right Track*. The TQM Magazine. Vol. 4. Nos. 1-6. pp.77-80.
- Dempsey, P. A and Hesketh, M. (1988). *Total Quality Culture - Five Years on and Counting*, in Chase, Rory L (ed). Total Quality Management An JFS Executive Briefing. Bedford, England: IFS Publications, UK pp. 145 - 150.
- Dotchin, J.A. & Oakland, J.S. (1992). *Theories and Concepts in Total Quality Management*. Total Quality Management. Vol.3. No. 2. pp. 133-145.
- Drever, J. (1952). *The Penguin Dictionary of Psychology*. England: Penguin Books Ltd.
- Drummond, H.(1992). *The Quality Movement*. London: Kogan Page Ltd.
- Duffin, M. (1992). *Sowing The Seeds of Change*. The TQM Magazine. Vol. 4. Nos. 1-6. pp. 379-383.
- Feigenbaum, A.V.(1991). *Total Quality Control*. New York: MacGraw-Hill, Inc.
- Fleisher, C.S. & Nickel, J.R. (1994). *Analysing The TQM Adoption Experiences Within A Corporate Staff Unit: A Progressive Learning Model*. Total quality Management. Vol. 5. No. 3.
- Flood, R.L. (1993). *Beyond TQM*. Great Britain: John Wiley & Sons.
- Ghost, B.C. & Mak T.L. (1994). *Total Quality Management in Services: The Case of Singapore's Advertising Industry*. The TQM Magazine. Vol 6. No. 4.
- Gilbert, M.J.(1994). *Understanding Quality Management Standards*. Headway: Hodder & Stoughton.
- Gilmour, P. & Hunt, R.A. (1995). *Total Quality Management*. Melbourne: Longman.
- Gitlow, H.S. & Gitlow, S.J.(1994). *Total Quality Management in Action*. NJ.: PTR Prentice Hall.
- Gob P.L. & Ridgway, K. (1994). *The Implementation of Total Quality Management in Small and Medium Sized Manufacturing Companies*. The TQM Magazine. Vol 6. No.2. pp. 54-60.
- Gould. D.T. (1991). *Implementing A Quality System in A U.K. Manufacturing Company*. Inter. Journal of Quality & Reliability Management.
- Ho K.M.,S. & Cicmil, S. (1995). *Total Quality Management Transfer to Small and Medium Industries in Malaysia by SIRIM*. Total Quality Management. Vol. 6. No.3.

- Hodgetts, R.M. (1990). *Modern Human Relations at Work*. (6 th.). The Dryden Press. Harcourt Brace College Publ.
- Hoffner, G.D. et al. (1994). *Breakthrough Thinking in Total Quality Management*. N.J.: PTR Prentice Hall.
- Hosotani, K. (1992). *Japanese Quality Concepts: An Overview*. N.Y.: Quality Resources.
- Hunt, V.D. (1992). *Quality in America: How to Implement A Competitive Quality Programme*. Illinois: Business One Irwin.
- Hutchins, D. (1992). *Achieve Total Quality*. England: Director Books.
- Ishikawa, K. (1985). *What is Total Quality Control? The Japanese Way*. Engelwood, N. J.: Prentice-Hall, Inc.
- Jablonski, J.R. (1994). *Implementing TQM*. New Mexico: Technical Management Consortium, Inc.
- Jerome, P. F. and Schmidt, W. H. (1993). *TQM Manager. A Practical Guide For Managing in A Total Quality Organisation*. pp. 11-17.
- Johnson, R.S. (1993a). *TQM; Leadership for The Quality Transformation*. ('part 1). Quality Progress. Vol. 26. No. 1.
- Juran, J. M. (1989). *Juran on Leadership for Quality An Executive Handbook*. New York: The Free Press.
- Kathawala, Y. (1989). "A Comparative Analysis of Selected Approaches to Quality", *International Journal of Quality and Reliability Management*. Vol. 6. No. 5. pp. 6 - 12.
- Kanji, G.K. et al (1992). *Total Quality Management As A Strategic Variable*. In Total Quality Management. Vol. 3. No.1. pp. 3-8.
- Kanji, G.K. et al. (1994). *Total Quality Management and Statistical Understanding*. Total Quality Management. Vol. 5. No. 3.
- Kanji, G.K. et al. (1995). *Quality Motivation*. Total Quality Management. Vol. 6. No. 4.
- Kanji & Asher (1993). *Total Quality Management - Not A Quick Fix*. Advances In Total Quality management. pp. 1-3.
- Kanji & Asher (1993). *Education and Training for Total Quality Management*. Advances In Total Quality Management. pp. 77-84.

- Kennerfalk, L. & Klefsjo, B. (1995). *A Change Process for Adapting Organisations to A Total Quality Management Strategy*. Total Quality Management. Vol. 6. No.2.
- Kogure, M. (1992). *Some Basic Problems of Quality Assurance in Service Industries*. Total Quality Management. Vol.3. No.1. pp. 9-17.
- Lee, G.L. & Oakes I. (1995). *The 'Pros' and 'Cons' of Total Quality Management for Smaller Firms in Manufacturing: Some Experiences Driven The Supply Chain*. Total Quality Management. Vol.6. No. 4.
- Logothesis, N.(19%). *Towards A Quality Management of Education*. Total Quality Management. Vol. 6. Nos. 5 & 6.
- MacDonald, J. (1992). *Reason for Failure*. Total Quality Management. Aug. pp. 237 - 241.
- Mackowski, S.J. (1994). "A Question of Understanding". *The TQM Magazine*. Vol 6. No. 1. pp.24 - 25,
- Madsen, O.N. (1995). *Public Enterprise and Total Quality Management*. Total Quality Management. Vol. 6. No. 2.
- Madsen, O.N. & Carlsson, R. (1995). *'Total Quality in Education': A Case Study*. Total Quality Management, Vol. 6. Nos. 5 & 6.
- Madu, C. N. and Chu, H.K. (1993). *Dimensions Of Quality in Higher Institutions*. Total Quality Management. Vol. 4. No. 3. pp. 325 - 338.
- Mizuno, S. (ed) (1988). *Management for Quality Improvement: The Seven QC Tools*. Cambridge, Massachusetts: Productivity Press.
- Morrison, C. M. and Rahim, M. A (1993). *Adopt A New Philosophy: the TQM Challenge*. Total quality Management. Vol. 4. No. 2. pp. 143 - 147.
- Mukherjee, S.P.(1995). *Quality Assurance in An Education System*. In Part V: Continuous Improvement and Everybody's Participation. Total Quality Management. Vol 6. Nos. 5 & 6.
- Naharuddin, A (1994). *Perkhidmatan Berkualiti Di Sektor Awam - Kaedah dan Prinsip TQM*. Bulletin Produktiviti dan Kualiti. Jilid 3. Bil.1. pp. 48 - 53.
- Neese, T.A. & Ledbetter, W.B. (1991). *Quality Performance Management in Engineering/ Construction*. AACE Transactions. P. A2(1) - A2(10).
- New Straits Times (August, 1996). *Plan to Implement TQM at Education Ministry*.
- Norusis, M. (1995). *SPSS 6.1, Guide to Data Analysis*. Prentice Hall. New Jersey.

- Oakland, J.S. (1989). *Total Quality Management*. Oxford: Heinemann Professional Publishing.
- Oakland, J.S. & Beardmore, D. (1995). *Best Practice Customer Service*. Total Quality Management. Vol. 6 No. 2.
- Oakland, J.S. & Waterworth, R.D. (1995). *Total Quality Management Training: A Review and Suggested Framework*. Total Quality Management. Vol. 6. No.4.
- O'Brien, P. & Walley, P. (1994). *Total Quality Team Working: What's Different?* Total Quality Management. Vol. 5. No. 4.
- Omachonu, V.K. & Ross, J.E. (1994). *Principles of Total Quality*. Florida: St Lucie Press.
- Palmer, G. and Saunders, I. (1992). *Total Quality and Human Resource Management: Comparisons and Contrasts*. Asia Pacific Journal of Human Resources. Vd 30. No. 2 pp. 67 - 77.
- Porter, L. J. & Parker, A.J. (1993). *Total Quality Management - The Critical Success Factors*. The Total Quality Management. Vol. 4. No. 1.
- Raju, S.M.S.(1995). *Total Quality Management*. New Delhi: Tata McGraw-Hill Publ. Co. Ltd.
- Randeniya et al. (1995). *Total Quality Management: The Need to Uncouple Empowerment*. Total Quality Management. Vol. 6. No. 3. pp. 215 - 220.
- Robbins, S.P.(1993). *Organisation Behaviour*. (6th. Ed)N.J.: Prentice Hall Inter. Ed
- Ross, J. E. (1994). *Total Quality Management: Text, Cases and Readings*. (2nd. Ed). London: Kogan Page Ltd.
- Rossetto, S. & Franceschini, F. (1995). *Quality and Innovation: A Conceptual Model of Their Interaction*. Total Quality Management. Vol. 6. No. 3.
- Sadgrove, K. (1995). *Making TQM work*. London: Kogan Page Ltd.
- Saunders, LW. & Graham, M.A. (1992). *Total Quality Management in The Hospitality Industry*. Total Quality. Vol. 3. No.3. pp. 243-255.
- Saunders, LW. & Preston. A.P. (1994). *A Model and A Research Agenda for Total Quality Management*. Total Quality management. Vol. 5. No. 4.
- Seghezzi, H.D.(1992). *Top Management and Quality*. N.Y.: Hanser Publishers.
- Shector, E.S.(1992). *Managing for World-class Quality*. N.Y.: Marcel Decker, Inc.

- Skrabec, Q.R. (1994). *Integrating Quality Control and Inspection Into Your Total Quality Management System*. Total Quality Management. Vol. 5. no. 5.
- Smith, G.F. (1993). *The Meaning of Quality*. Total Quality Management. Vol. 4. No.3.
- Spanbauer, S. J.(1995). *Reactivating Higher Education With Total Quality Management: Using Quality and Productivity Concepts, Techniques and Tools to Improve Higher Education*. Total Quality Management. Vol. 6. Nos. 5 & 6.
- Statt, D. (1981). *A Dictionary of Human Behaviour*. London: Harper & Row Publ.
- Stebbing, L. & Pengelly, R.J.(1994). *Quality Management for ah? Small Business*. N.Y.: Ellis Horwood.
- Stensaasen, S. (1995). *The Application of Deming's Theory of Total Quality Management to Achieve Continuous Improvements in Education*. Total Quality Management. Vol 6. Nos. 5 & 6.
- Sullivan, L. P. (1988). "The Seven Stages in Company-wide Quality Control", in Chase, Rory I.(d). *Total Quality Management An IFS Executive Briefing*. Bedford, England: IFS Publication, U.K. pp. 11 - 19.
- Teare, Ret al. (1994). *Achieving Quality Performance*. N.Y.: Cassel.
- Termer, A. R & DeToro, I. J.(1992). *Total Quality Management*. Mass.: Addison-Wesley Publ. co., Inc.
- Tofte, B. (1995). *A Theoretical Model For Implentation of Total Quality Leadership in Education*. Total Quality Management, Vd. 6. Nos. 5 & 6.
- Warta Q (19%). *10 Fundamental Principles of Quality*. IPQ/4-96. UUM.
- Warta Q (19%). *Determinants of Service Quality*. IPQ/3-96. UUM.
- Weller, L.D. and Sylvia, A.H. (1994). *Why Are Educators Stonewalling TQM?* The TQM Magazine. Vol. 6. No. 3. pp. 23 - 28.
- Wheelen, T.L. & Hunger, J.D.(1995). *Strategic Management and Business Policy* (5th. Ed). Addison-Wesley Publ. Co., Inc.
- Wilkinson, A. & Witcher, B. (1993). *Holistic Total Quality Management Must Take Account of Political Processes*. Total Quality Management. Vol.4 No.1. pp.47-55.
- William, M. (1992). *Centring on Excellence*. The TQM Magazine. Vd. 4. Nos. 1-6. pp. 365-368.

Williams, R.L. (1994). *Essentials of Total Quality Management*. N.Y.: AMACOM.

Wolman, B.B. (1973). *Dictionary of Behavioural Science*. N.Y.:Van Nostrand Reinhold Co.

Wynne, R.M. & Lancaster, J. (1992). *The Importance of Understanding The Concepts of Total Quality Management and The consequent Training Needs*. Total Quality Management. Vol.3. No.1. pp.19-29.

Zink, K.J. & Schmidt, A. (1995). *Measuring Universities Against The European Quality Award Criteria*. Total Quality Management. Vol. 6. Nos. 5 & 6.