

A TQM STUDY OF FACULTY AND TRAINEES' PERCEPTIONS OF PUBLIC VOCATIONAL TRAINING INSTITUTIONS IN TAIWAN

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Abstract: It is true that the public sector is organic so its degradation is inevitable. Therefore, the continuous review and improvement is the direction for public and private sectors around the world to go lest an organization be doomed to stagnate or wither away. The purpose of this article is to investigate the application of total quality management (TQM) on Taiwan's public professional training institutions; further to redefine a better management for them to keep the active vigor and growth. To avoid the discrepancy between theory and practices, many papers are widely collected concerning the institutional system, character, training category and TQM applications in the world; moreover, such areas as TQM definition and its actual performances and restrictions are the focuses of this article.

1. INTRODUCTION

General industrial experience with TQM practices in U.S. is chronicled from about 1980 with the broadcast of the NBC documentary "If Japan Can, Why Can't We?" which trust W. Edwards Deming and TQM movement to the forefront of North American manufacturing attention. Since then, TQM has spread all over the world. From the cases of the public sector in Canada, France, Germany and Holland, it is common for both private and public sectors to apply TQM with success. Similarly, TQM can be applied on Taiwan's public vocational training institutions without fail if the customary practices are considered and the organizational limits can be conquered.

There are 13 public vocational training institutions in Taiwan which are all affiliates of municipal, corporate body, and central government (Employment and Vocational Training Administration). In the narrow sense, public training is limited to the training implemented by public vocational training institutions. Regarding to Characteristics of Public Training as follows: (1) Institutional and operational expenditures are supported or borne by the government. (2) Job placement is one of the objectives of public training. (3) Training expenses are mainly borne by the government.

Due to resource limited, respond slowly and often lack incentives and recognition in the Public Vocational Training Center. Hence, this study will investigate the faculty and trainees' opinions on TQM and review the difficulties of public training institutions' practices on TQM, with a view to upgrading the training quality.

2. TQM (TOTAL QUALITY MANAGEMENT)

Massey(1992, 49-83) builds the theory of TQM by focusing on the need to redesign the research administration process. He identifies factors that reduce productivity in administrative and support areas along with recommendations for diagnosing problems and understanding the elements for an effective productivity improvement strategy. He raises four conditions that must be addressed for improvement effort: (1) resource constraints; (2) individual and group empowerment; (3) incentives, recognition, and rewards; and (4) strategic thinking. Massey proposes research administration processes at targets for development, his illustrations deal mainly with administrative processes that provides useful view for the management of public vocational institutions in Taiwan. He does not involve the faculty in terms of their perceptions; however, this study will verify the focus group inferences and clarify the faculty perceptions.

3. NATIONAL QUALITY AWARD CRITERIA

Although there is not a single definition or blueprint for TQM, many examples such as the Baldrige Award criteria propose that leadership sets the environment for deployment through the system while relying on the empowerment of employees and fact-based management practices. As the related theories shown herein, the National Quality Award Standard Structure covers the substantial content of TQM; moreover, it has been widely established around the world and applied on TQM. As a result, this study, on the basis of Taiwan's customary practices and organizational properties, takes Taiwan's National Quality Award as TQM criteria. Further, apply the indicators of Taiwan's National Quality Award to investigate customers' of public professional training institutions' opinions on TQM and review the difficulties of practices on TQM.

4. PERCEPTIONS ANALYSIS TO STAFF AND TRAINEES

In order to figure out what the opinions of the executives, administrators, trainers and trainees have about TQM's applications on training service quality. The article takes the employees and trainees from 13 public professional training institutions as its questionnaire subject; there are 1500 effective samples to be randomized and 916 feedback. According to the gleaned information, the statistical and inferring analysis is conducted so as to propose instrumental suggestions.

This study focuses on two aspects of importance and difficulty on the basis of variables. In terms of importance, nine indicators are combined to be six variables by factor analysis. They are information application and research development, human development and management, customer services quality assurance and social responsibility, high-rank management, TQM performance and organizational process. In terms of difficulty, nine indicators are combined to be six variables by factor analysis. They are customer services quality assurance and social responsibility, human development and management, high-rank management and organizational process, information applications and research development, TQM performance and quality assurance. For the analysis and discussion, such approaches are used as frequency distribution, descriptive statistics, t-test, one-way ANOVA (Scheffes' after-test will be the alternative for a comparison in case of any significant difference) and two-way ANOVA. (see Figure 1)

The analysis to the faculty and trainees is as follows:

(1) Regardless of personal background, the faculty or trainees all agreed with the importance in the training quality improvement by promoting TQM. (see Table 1)

(2) The faculty subject to such conditions as female, educational background equaling to master degree or higher, aged between 25 and 35 with work title of executives believe that there is no factor important than to upgrade the training quality by TQM. (see Table 2-4)

(3) Among the six factors, the following three draw more difficulty in case of execution:

A. High-rank management and organizational process: Among the faculty, non-executive trainers and administrators of bachelor's degree, aged 25-45 vote on this factor. (see Figure 2)

B. Human development and management: Among the faculty, aged 25-45, seniority of 6-15 years and being employed in municipal governments all vote on this factor. (see Table 5)

C. TQM performance: Among the faculty, those aged 25-45, affiliate of municipal all vote on this factor. (see Table 6)

(4) Among the faculty, executives of master or higher degree think that it is not difficult to upgrade the training quality by promoting TQM; however, among trainees, those with master degree are different from the faculty's opinion. (See Figure 3)

(5) According to the author's interview with the public sector affiliated to municipal governments, it indicates that it is harder to promote TQM by basic units due to the lack in talents and scientific quality control. Therefore, it should be the central authority that is responsible to build a practical system according to the demand of various training institutions, then prevail the system over them.

5. CONCLUSION AND SUGGESTION

Upon the Analysis from the above research, the study provides to set forth TQM suggestions for training institutions and they are hereby described as follows:

(1) Standards and objectives: This section is related to high-rank management and organizational process; it is fundamental but the hardest to carry out, while it will be helpful to promote TQM if public training institutions can set up standards and objectives. Therefore, it is suggested that TQM skills should be documentalized, formed and computerized; also, any inappropriate regulations or laws should be modified. Actually, any policy will never succeed without the support of leading officials. That executives all believe in TQM's essentialty is a beneficial pulse to get TQM promoted.

(2) Resources: Because the resources of training institutions affiliated to the municipal governments have are less than those of central authorities, employees of the latter are more optimistic about the promotion of TQM than those of the former. Thus, the municipal governments should acquire more resources to promote TQM

(3) Communication and execution among institutions: To have a policy performed effectively, it depends on the executive authorities and staff who have to make out TQM objectives, approval standards, performance technology and procedures through all communicating channels. Moreover, such key factors as high-rank management and organizational process, information application and research development, human development should be integrated and cooperated.

(4) Characteristics specific to executing institutions: The characteristics include the level, affiliation, size, organizational structure, staff composition and the external relationship of an institution will effect on the willingness and ability to promote TQM. Also, it should be highlighted on how to create an organization suitable for the TQM culture. Among the thirteen public training institutions, there are two corporate bodies that have stronger attitudes than governmental organizations and encounter less difficulty in performance. Such findings may prove private enterprises have more energy and flexibility, so the government should learn to form an organizational culture of active public services.

(5) Social, economical and political factors: Public training institutions should have a good awareness of the media. To let all citizens agree with the efforts made by training institutions and to win more support. Training institutions should keep constant touch, establish good interactive relationship, set up a complaint feedback system, hold regular surveys on the satisfaction with training program and employment of expertise so that they can identify the disadvantages or achievements of such institutions, revise their decisions and propose determined concerns.

(6) Executor's intention: As the research shown, all faculty and trainees of public training institutions think that it is no doubt to promote TQM and improve the training quality. However, it is a special requirement to instill the policy idea into those of bachelor's degree being employed in municipal government and non-executive trainers and administrators; further to provide opportunities to join in advanced and seminar programs, especially for female faculty. Also, the incentives should be regulated to help employees to get promotion and improve their ability because of advanced program. Additionally, the personnel management reforms should be emphasized. So, this thesis agrees with such reforms on faculty management, suggestions channel and intellectual restoration with a view to upgrade manpower quality and modify work approaches in conformity with the spirit of TQM.

In reality, it will cause great hindrance and confinement if TQM is fully applied to public training institutions; nevertheless, such disadvantages can be removed provided with a harmony between the spirit of TQM and the management of each individual public training institution. As the saying goes, "actions are mightier than words"; no policies are perfect except when they are fulfilled. As our government is devoted to making clerical reforms to build a government of honesty, efficiency and public servants, our national manpower resources will be well-developed; power be fortified, competence be risen supposed with effective TQM applications in line with the economy, society and politics.

6. FIGURES AND TABLES

The definition for D1-D6 and I1-I6 in Figure 1-3 and Table 1-4:

D1: Customer Services Quality Assurance and Social Responsibility D2: Human Development and Management

D3: High-rank Management and Organization Process D4: Information Applications and Research Development

D5: TQM Performance

D6: Quality Assurance

I1: Information Application and Research Development I2: Human Development and Management

I3: Customer Services Quality Assurance and Social Responsibility I4: High-rank Management

I5: TQM performance

I6: Organization Process

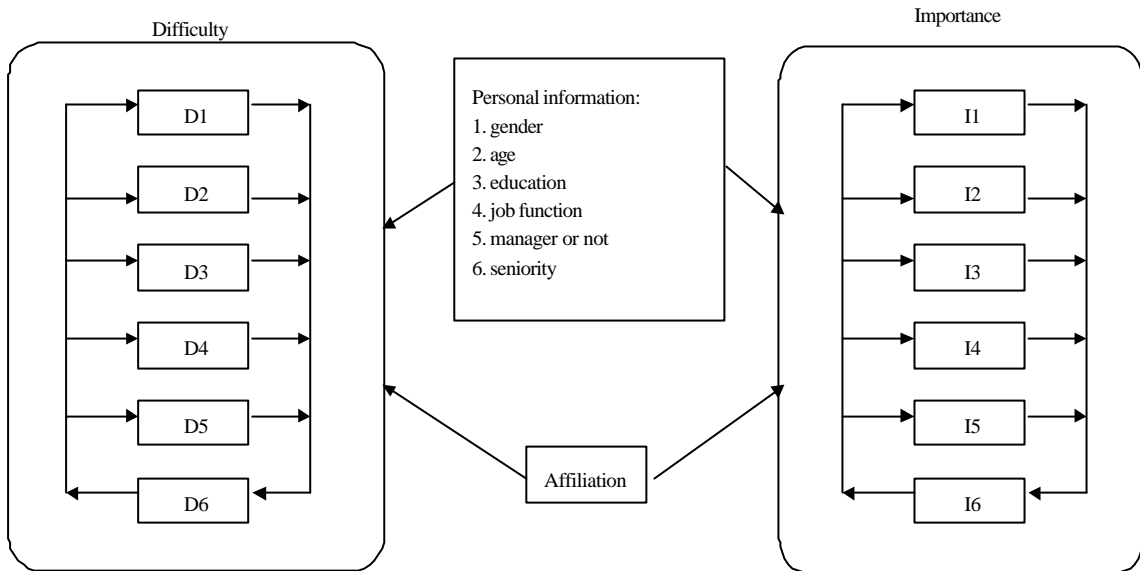


Figure 1 The conceptual framework of the study

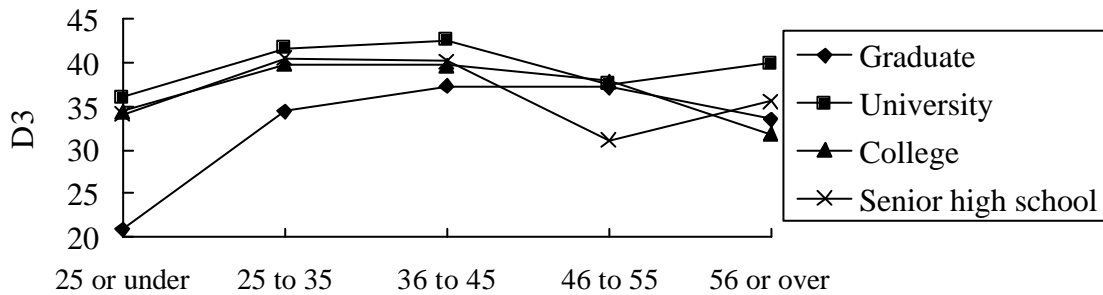


Figure 2 Analysis of difficulty for the age and education of faculty on high-rank management and organization process

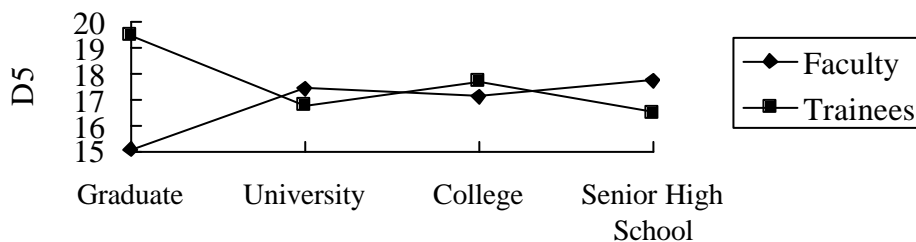


Figure 3 Analysis of difficulty for the education of the faculty and trainees on TQM performance

Table 1 Analysis of importance for the faculty and trainees on TQM

Variables	Mean			SD			SE			Median
	Faculty	Trainee	Both	Faculty	Trainee	Both	Faculty	Trainee	Both	
I1	63.679	61.036	62.189	9.108	11.515	10.616	0.482	0.533	0.370	45
I2	54.200		54.200	8.576		8.576	0.449		0.449	45.5
I3	84.835	82.481	83.519	11.906	14.467	13.441	0.636	0.686	0.476	60
I4	26.095	24.498	25.204	3.178	4.278	3.910	0.161	0.193	0.132	18
I5	12.405	11.926	12.137	20.74	2.631	2.412	0.105	0.118	0.081	9
I6	29.953	28.794	29.296	4.109	5.455	4.948	0.209	0.243	0.166	21

Table 2 Analysis of importance for the gender of faculty and trainees on TQM (*P < 0.05)

Variables	Sample		Mean		SE		F (prob)		T value for inequality of variances (prob)	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
I1	599	205	61.83	63.35	10.60	10.75	0.044	(0.834)	-1.76	(0.078)
I2	261	100	53.64	55.81	8.66	8.09	0.156	(0.693)	-2.17	.(0.031)
I3	582	199	82.90	85.59	13.24	13.71	0.266	(0.606)	-2.45	.(0.015)
I4	647	213	25.18	25.32	3.84	4.06	0.274	(0.601)	-0.48	(0.631)
I5	657	217	12.09	12.34	2.45	2.30	0.842	(0.359)	-1.33	(0.184)
I6	650	218	29.10	29.90	5.00	4.82	0.920	(0.338)	-2.08	.(0.038)

Table 3 Analysis of importance for the education degree of faculty on TQM

Variables	Sample				Mean				SD				SE			
	G	U	C	H	G	U	C	H	G	U	C	H	G	U	C	H
I1	22	103	166	57	64.82	63.86	63.79	63.26	7.001	9.961	9.066	8.276	1.493	0.982	0.704	1.096
I2	22	107	162	64	54.45	54.89	54.05	54.14	8.337	8.618	8.604	8.395	1.777	0.833	0.676	1.049
I3	21	101	153	66	85.43	84.10	85.19	85.76	10.31	12.48	12.15	11.09	2.249	1.242	0.982	1.365
I4	24	116	173	67	26.50	26.18	26.07	25.84	3.007	3.220	3.274	3.033	0.614	0.299	0.249	0.371
I5	25	114	175	69	12.20	12.54	12.42	12.42	1.607	2.117	2.118	2.032	0.322	0.198	0.160	0.245
I6	25	111	173	67	29.72	30.17	29.86	30.10	3.373	3.917	4.392	3.806	0.675	0.372	0.334	0.465

(G: graduate, U: university, C: college, H: senior high school)

Table 4 Analysis of importance for the age of faculty on TQM (Y1: <25, Y2: 26-35, Y3: 36-45, Y4: 46-55, Y5: >56)

Variables	Sample					Mean					SD					SE				
	Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5
I1	14	86	166	69	16	63.50	65.13	63.23	63.72	60.88	8.582	9.143	9.548	7.787	9.722	2.294	0.986	0.741	0.938	2.431
I2	18	86	165	72	17	51.44	56.03	54.27	53.38	51.76	8.241	8.064	8.383	8.898	10.53	1.942	0.870	0.653	1.049	2.555
I3	17	82	158	73	16	83.59	87.27	84.23	84.27	83.13	9.709	11.73	12.31	11.26	14.31	2.355	1.295	0.980	1.318	3.578
I4	18	89	180	77	19	25.89	26.43	25.82	26.36	25.74	3.123	3.457	3.261	2.738	3.016	0.736	0.367	0.243	0.312	0.692
I5	19	91	182	76	18	11.95	12.80	12.34	12.37	11.94	2.013	2.056	2.074	2.071	2.461	0.462	0.216	0.154	0.238	0.580
I6	18	88	180	75	18	30.17	30.76	29.60	29.95	29.61	3.434	3.686	4.497	3.672	3.310	0.810	0.393	0.335	0.424	0.780

Table 5 Analysis of difficulty for age, seniority, affiliates of faculty on human development and management (*P<0.05)

Factors		Sample	Mean	SD	SE	Scheffe'
Age	① 25 or under	18	.32.2222	8.0114	1.8883	② >① ③ >① ③ >④
	② 26-35	82	.40.8659	11.6479	1.2863	
	③ 36-45	165	.40.9455	10.5016	0.8175	
	④ 46-55	72	.35.6806	9.1341	1.0765	
	⑤ 56 or over	16	36.3750	11.1587	2.7897	
Seniority	① under 1	17	32.4706	8.0709	1.9575	③ >① ④ >①
	② 1-5	50	40.5000	11.5851	1.6384	
	③ 6-10	73	41.3425	10.5228	1.2316	
	④ 11-15	96	41.2188	10.8105	1.1033	
	⑤ 16 or over	97	36.6082	9.6583	0.9807	
Affiliate	① Central government	165	.37.7333	10.8274	0.8429	② >①
	② Municipal government	153	.41.2288	10.9229	0.8831	
	③ Corporate body	39	37.1795	8.7475	1.4007	

Table 6 Analysis of difficulty for age and affiliation of faculty on TQM performance (*P<0.05)

Factors		Sample	Mean	SD	SE	Scheffe'
Age	① 25 or under	18	15.2222	3.7816	8913	③ >④ ② >④
	② 26-35	87	18.1609	5.1487	0.5520	
	③ 36-45	174	.17.7701	4.5900	0.3480	
	④ 46-55	74	.15.6892	4.5749	0.5318	
	⑤ 56 or over	17	15.3529	5.3026	1.2861	
Affiliation	① Central government	172	.16.5116	4.9329	0.3761	② >①
	② Municipal government	158	.17.8228	4.8945	0.3894	
	③ Corporate body	45	17.6222	3.7434	0.5580	

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