Development of a Model of Organizational Effectiveness Evaluation for Faculties of Education

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Abstract

The objectives of the present research were: (1) to develop an effective evaluation model for faculties of education at higher education institutions in Thailand; (2) to study causal factors at the field and department levels for correlation and effect in effectiveness of faculties of education. A total of 1,024 samples were stratified randomly, and consisted 4 public autonomous universities and 4 public universities in Thailand. A five-point Likert scale was used to measure the developed instruments, with Cronbach's alphas ranging from 0.754 to 0.981. Statistical analyses were made based on descriptive statistics, and Pearson's product-moment correlation. Multilevel confirmatory factor analysis and multilevel causal model analysis were performed using Mplus. The model of organizational effectiveness was described by nine variables. The research results showed that the perceptions of members in faculties of education in public autonomous universities regarding faculty of education effectiveness were quite high for all variables, except for academic development, which was moderate. In the case of public universities, the perceptions of faculty members were quite high for all variables, except for the ability to acquire resources and money, which was moderate. The proposed multilevel causal model of faculty of education effectiveness fits quite well with the empirical data set ($\chi^2 = 92.210$, $df = 63$, $\chi^2 / df = 1.464$, CFI = 0.991, TLI = 0.974, RMSEA = 0.021, $SRMR_B = 0.012$, $SRMR_w = 0.008$). The predictor variables at the field and department levels accounted for variance of the faculty of education effectiveness of about 73% and 56%, respectively.

Keywords: Evaluation model, Faculty of education effectiveness

Introduction

In the higher education system in Thailand, faculties of education are the organizations that have the important role of producing and developing quality teachers. However state university application, out the idea that this occurred with the reform of education system in 1974, which set guidelines that institutions must be independent systems. The year 1991, the government announced policies to reign in government; choice for university is two ways to remain in office but need to change regulations to streamline efficiency and effectiveness. And more autonomous public universities will change is the same each university is free to manage more from the old to the University Affairs (Commission on Higher Education) has changed the management of their own. University administrators have the power to decide the budget until the administration of academic personnel, autonomous public universities began a fact is more during the economic crisis of 1997 when the International Monetary Fund (IMF) and Asian Development Bank (ADB) because Thai government used over budget for education. This reason drive to the Thai government will have the education process, that explain the Thai government monetary and fiscal budget to support higher education unnecessarily on 27 January 1998 the cabinet approved the conditions of the loan from the ADB, which made it clear that all public universities needed to change their status either to "corporate university in the government" or "autonomous public university" by the year 2002.

For differentiate between public and autonomous public universities in Thailand's university system, autonomous public universities all must change management system within from existing government regulations is the same government is another self-management by the government to withdraw a supervised including those of universities are independent of management and personal finance by themselves fully and separate decisions and diagnosis and management from the same academic level focus on management of people in each class in the system and services, but separate missions. A dynamic financial system. After the financial audit has to be a sum (Block grant) and a legal guardian to provide maintenance benefits from the property, Necessary budget should be allocated.

Performance indicators allow an organization to achieve mission success by evaluating the effectiveness of the organization (Cherrington, 1994). But there are several problems in measuring and evaluating a faculty of education's effectiveness and efficiency. Stufflebeam et al. (1971), Katz and Kahn (1978), Goodman and Pennings (1980), Harrison (1994), and Price and Mueller (1986) determined that these problems included: (1) variables were not covered; (2) variables were too abstract; (3) indicators were not sufficient; (4) the weights of indicators were not suitable; (5) criteria were unclear; (6) analysis was not covered; (7) causal factors were not shown; and (8) models were not sufficient.

Limitations of past research in developing of a model of organizational effectiveness. First, the research methodology used in developing the model, regardless of realities, organization of the relationship between the levels in descending order, especially educational organization which could not determine the influence caused by variables in the level and how much of volume. Second, problems in selecting appropriate units of analysis are not made estimate the standard error is less than the true and tested statistically significant discrepancy of type 1 (type one error) over the set.

In this research multilevel causal analysis was used in the developed model with normative approach. This approach uses the principle of causal analysis and the actual state of the organization to define domain, and to develop a model for collecting data from stakeholders and other interested groups using modern evaluation techniques.

Objectives

      1) To develop an effective evaluation model for faculties of education at higher education institutions in Thailand.

      2) To study causal factors at both individual and field levels for correlation and effect in effectiveness of faculties of education.

Conceptual Frameworks

      The meaning of the effectiveness of a faculty of education is defined as its successful operation in terms of awareness of the organizational missions by the administrator, faculty members, and support staff. The main missions include teaching, research, academic services to the community, and fostering arts and culture. Other missions are human development and exploration of an improved quality of life leading to a better, more peaceful society through educational reform and sustainable development of local communities. The researchers applied multilevel causal analysis with a normative approach for the developed model. This approach is based on the concept and principles of rational analysis of actual conditions, and an educational organization that has set the scope for developing a model study with relevant groups (stakeholders), or a system-wide evaluation of data from several groups (multi-group evaluators). Such approaches would be based on modern evaluations (Kanjanawasee, 2550) to study variables that apply to an organization's effectiveness (Steers, 1977; Birnbaum, 1992; Simmons, 1993; Judge, 1994; Gibson, Ivancevich and Donnelly, 2000; LaRocco, 2003; and Rosser, Johnsrud and Heck, 2003) and use the concept of a multidimensional evaluation model (Cameron 1978, 1986; Clott, 1995; Kwan and Walker, 2003; Sowa, Selden and Sandfort, 2004) for developing the model and setting the weight score effectiveness of faculties of education at institutions of higher education in Thailand. These guidelines, as well as the Malcolm Baldrige National Quality Award (MBNQA), European Foundation for Quality Management (EFQM), and Balanced Scorecard (BSC), can be used to develop a framework of research ideas, as shown in Figure 1.
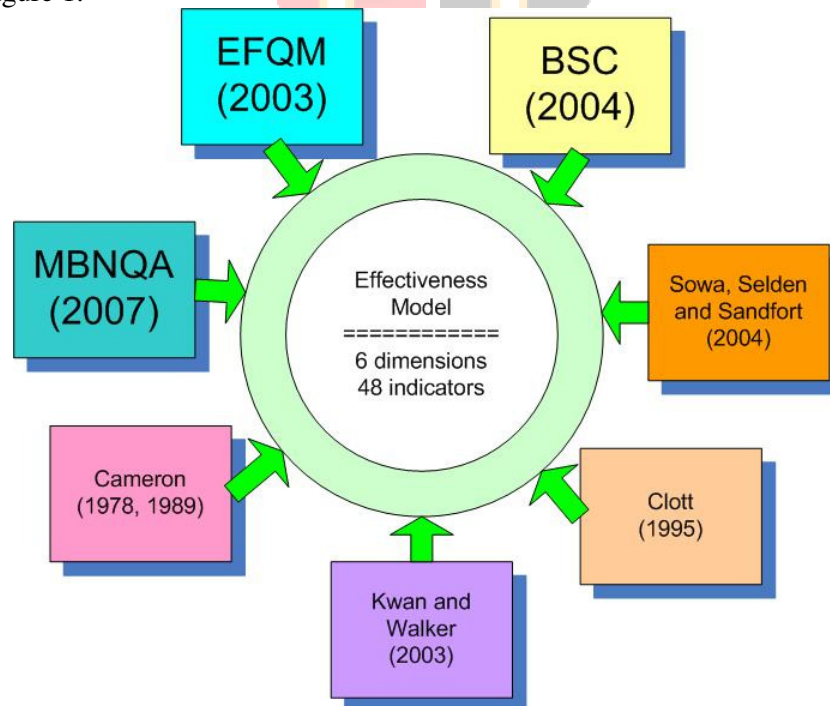

Figure 1: Conceptual framework for developed model

The conceptual framework for a multilevel causal analysis of faculty of education effectiveness displays 6 independent variables at the field and department levels, including: (1) educational satisfaction (ES); (2) academic development (AD); (3) faculty members' satisfaction (FMS); (4) professional development (PD); (5) system openness and community interaction (SOC); (6) ability to acquire resources and money (ARM). This is shown in Figure 2.
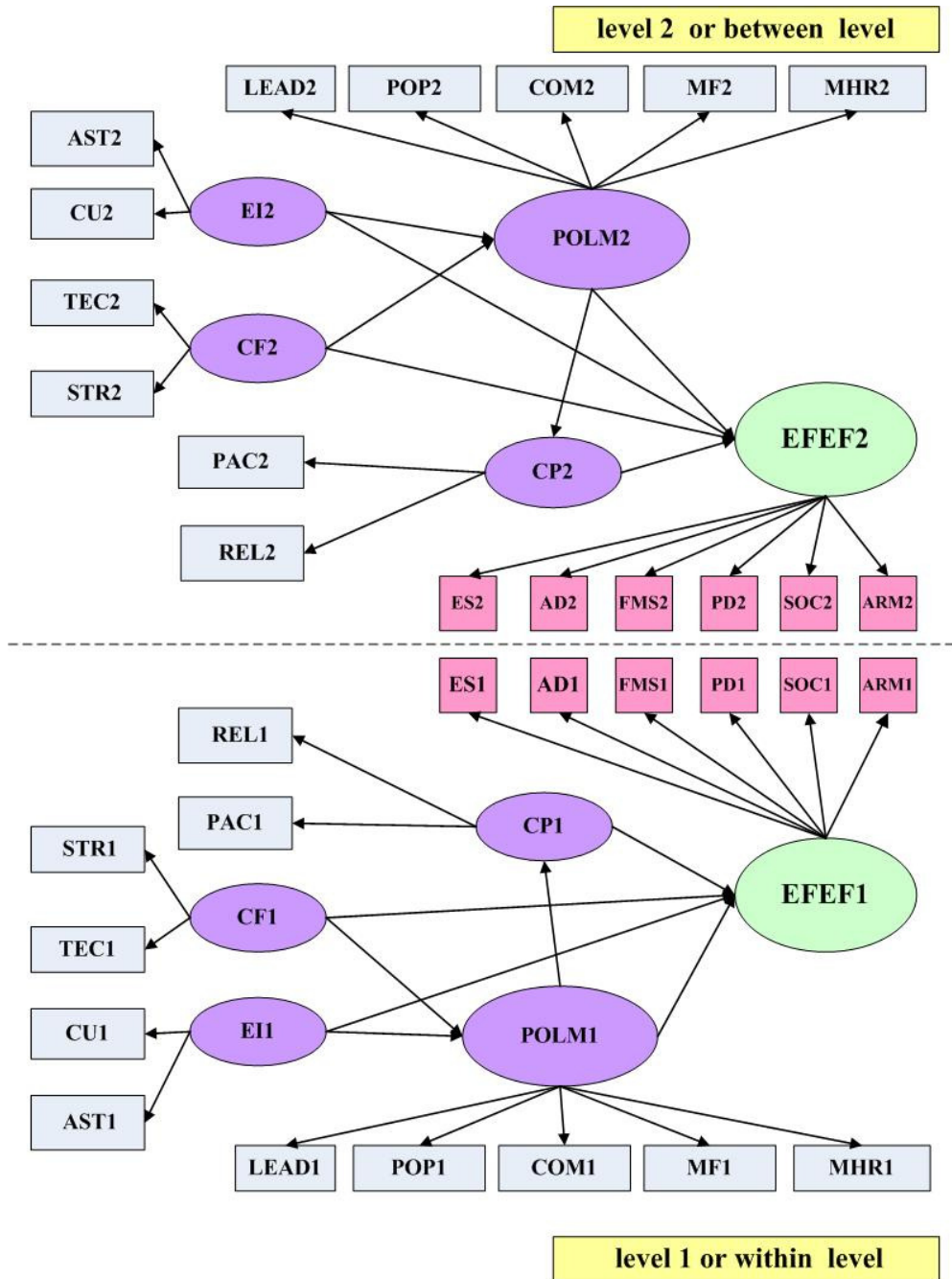

Figure 2: Conceptual framework for multilevel causal analysis

Methods

Procedure

Research and development that was used for the procedure consisted of two steps.

Step 1: Develop a conceptual framework, and a faculty of education effectiveness evaluation model based on: the MBNQA Excellence model; the EFQM Excellence model; the Balanced Scorecard model; the Cameron model; the Clott model; the Kwan and Walker model; and the Sowa, Selden and Sandfort model.

Step 2: Try out using the model with empirical data and test factors of multilevel causal analysis; check for conformation of variables in the effectiveness evaluation model; and reach a conclusion.

Participants

A total of 1,024 samples were stratified randomly, and consisted of 680 faculty members and 344 supporting staff from 4 public autonomous universities and 4 public universities in Thailand.

Instrumentation

In this study, a survey questionnaire was adopted as the research instrument. The researcher also interviewed some administrators of faculties of education in order to improve the quality of the questionnaire, which was divided into three sections, described briefly as follows:

Part 1: Demographic information – categorized questions about selected demographic variables: gender, education, academic position, work position, experience, number of research studies per year, and times of seminars. This part served as reference information for the study.

Part 2: Relationships and factors influencing the effectiveness of the disciplines of the faculty of education – a total of 100 items measured on a five-point Likert scale, with Cronbach's alphas ranging from 0.754 to 0.810.

Part 3: Effectiveness of education – 6 variables (a total of 48 items) measured on a five-point Likert scale, with Cronbach's alphas ranging from 0.799 to 0.981.

Statistics

Statistical analysis was conducted using SPSS 16.0 for Windows for analysis of Pearson's product-moment correlation. Multilevel confirmatory factor analysis and multilevel causal model analysis were performed using Mplus version 5.21.

Results

The research results showed that the perceptions of members of faculties of education in public autonomous universities towards the faculty of education's effectiveness were quite high for all variables, except for academic development, which was moderate. In the case of faculty members in public universities, perceptions were quite high for all variables except the ability to acquire resources and money, which was moderate. A comparison between the groups of variables showed that faculty members' satisfaction and goal attainment were higher than the other variables, as shown in Table 1.

Table 1: A comparison of variables at public autonomous universities and public universities

Variables	MEAN	SD	CV%	MIN	MAX	SK	KU
Public autonomous universities (N = 500)							
1) Educational satisfaction (ES)	3.818	0.366	9.59	1.000	5.000	0.626	3.818
2) Academic development (AD)	3.114	0.387	12.43	1.000	5.000	1.498	4.039
3) Faculty members' satisfaction (FMS)	4.243	0.621	14.64	1.000	5.000	0.924	4.243
4) Professional development (PD)	3.767	0.609	16.17	1.000	5.000	0.182	3.767
5) System openness and community interaction (SOCI)	3.823	0.527	13.78	0.000	5.000	-0.509	3.823
6) Ability to acquire resources and money (ARM)	4.023	0.730	18.15	1.000	5.000	-0.555	3.133
Public universities (N = 524)							
1) Educational satisfaction (ES)	3.882	0.266	6.85	1.000	5.000	-0.565	3.882
2) Academic development (AD)	3.741	0.395	10.56	1.000	5.000	-0.787	4.071
3) Faculty members' satisfaction (FMS)	4.372	0.449	10.27	1.000	5.000	-1.148	4.372
4) Professional development (PD)	3.806	0.677	17.79	1.000	5.000	-0.047	3.806
5) System openness and community interaction (SOCI)	3.610	0.489	13.55	1.000	5.000	0.434	3.610
6) Ability to acquire resources and money (ARM)	3.171	0.462	14.57	1.000	5.000	0.324	3.604

Note 1. Public autonomous universities $SE_{SK} = 0.009$ $SE_{KU} = 0.211$ 2. Public universities $SE_{SK} = 0.120$ $SE_{KU} = 0.184$

The proposed multilevel causal model of faculty of education effectiveness fits quite well with the empirical data set (χ^2 = 92.210, *df* = 63, χ^2 / df = 1.464, CFI = 0.991, TLI = 0.974, RMSEA = 0.021, $SRMR_B$ = 0.012, $SRMR_w$ = 0.008). Statistical analysis further showed that individual-level variables, such as management policy, and characteristics significantly affected the faculty members' perceptions of effectiveness. For field-level variables, only policy management of the unit was significant. The predictor variables at the field and department levels accounted for variance of effectiveness of about 73% and 56%, respectively (details shown in Table 2).
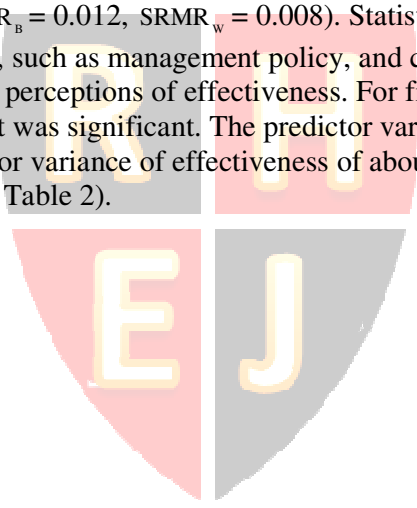
Table 2: Weighted values of the element indicators in the multilevel causal model of faculty of education effectiveness

Observed variables	Field-level (within groups: W)				Department-level (between groups: B)				Intraclass Variable Correlation (ICCs)	Intercepts or average group means
	β	SE	Z	R^2	β	SE	Z	R^2		
Measurement model of faculty of education effectiveness										
1) Educational satisfaction (ES)	0.793	0.308	3.876	0.504	0.818	0.101	8.068	0.670	0.594	3.910
2) Academic development (AD)	0.662	0.150	4.410	0.464	0.658	0.177	5.328	0603	0.438	4.434
3) Faculty members' satisfaction (FMS)	0.681	0.195	1.958	0.645	0.748	0.156	4.787	0.560	0.532	4.370
4) Professional development (PD)	0.637	0.360	3.491	0.688	0.611	0.295	2.053	0.597	0.459	4.057
5) System openness and community interaction (SOC)	0.631	0.187	2.765	0.609	0.697	0.158	4.421	0.486	0.549	3.758
6) Ability to acquire resources and money (ARM)	0.621	0.222	2.797	0.786	0.659	0.190	3.459	0.634	0.649	3.219
Measurement model of internal environment										
1) Atmosphere (AST)	0.994	-	-	0.544	0.537	-	-	0.737	0.005	4.221
2) Culture (CU)	0.237	-	-	0.445	0.651	-	-	0.531	0.031	5.528
Measurement model of characteristics										
1) Technology (TEC)	0.737	0.000	25.889	0.989	0.771	-	-	0.795	0.008	3.662
2) Structure (STR)	0.741	0.007	31.614	0.056	0.457	-	-	0.409	0.008	3.959
Measurement model of personnel										
1) Professional and academics (PAC)	0.623	-	-	0.641	0.417	-	-	0.740	0.031	5.170
2) Relationship (REL)	0.421	-	-	0.510	0.737	-	-	0.778	0.010	5.274
Measurement model of policy and management										
1) Leadership (LEAD)	0.523	0.018	1.230	0.641	0.814	0.054	21.007	0.713	0.001	4.087
2) Policy and planning (POP)	0.601	0.050	3.103	0.410	0.811	0.056	12.141	0.718	0.023	4.649
3) Communication (COM)	0.723	0.177	2.130	0.541	0.917	0.048	19.157	0.840	0.016	3.916
4) Management of finance (MF)	0.701	0.190	2.003	0.610	0.937	0.069	13.541	0.878	0.012	5.329
5) Management of human resources (MHR)	0.601	0.150	2.803	0.520	0.717	0.109	12.541	0.678	0.002	4.197

$\chi^2 = 92.210$, $df = 63$, $\chi^2/df = 1.464$, CFI = 0.991, TLI = 0.974, RMSEA = 0.021, $SRMR_B = 0.012$, $SRMR_W = 0.008$

(Mplus 5.21 standardized estimates)

R^2 of causal model faculty of education effectiveness (field-level) = 0.731

R^2 of causal model faculty of education effectiveness (department-level) = 0.562

Average cluster size = 36.704 Number of departments = 34

Conclusion

This research was to develop an effective evaluation model for faculties of education at institutions of higher education in Thailand. The validation model for faculties of education in public autonomous universities was quite high for all variables, except for academic development, which was moderate. But the perceptions of faculty members in public universities were quite high for all variables, except for the ability to acquire resources and money which was moderate. A comparison between groups of variables showed that the faculty members' satisfaction was critical variables (Cameron, 1978, 1986; Clott, 1995; Kwan and Walker, 2003; Sowa, Selden and Sandfort, 2004; Balanced Scorecard, 2004; European Foundation for Quality Management, 2006; and Malcolm Baldrige National Quality Award, 2007).

The proposed multilevel causal model of faculty of education effectiveness fits quite well with the empirical data set. Statistical analysis further showed that the individual-level variables, such as policy of management, and characteristics of faculty's member significantly affected the faculty members' perceptions of the faculty's effectiveness. In the case of field-level variables, only policy management of the unit was significant (Steer, 1977; Gibson, lvancevich and Donnelly, 2000). The predictor variables at the field and department levels accounted for variances of effectiveness of about 73% and 56%, respectively.

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