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An In-Depth Study of Assessing the Factors Affecting Higher Education in South-East Asia: A Case Study of Two Universities

Edward Sek Khin Wong* and Teoh Ngee Heng**

The purpose of this study is to determine whether or not selected factors are related to faculty job satisfaction and dissatisfaction at two selected private universities in South-East Asia. It is an attempt to find out how faculty members feel about their jobs. What pleases them in their work? What are the intrinsic rewards they attain? What brings dissatisfaction or tends to frustrate them? Hence, this study employs the Herzberg Two-Factor theory to determine how selected factors are related to job satisfaction of university faculty members. The conclusions drawn from this study are that the major sources of job satisfaction for university faculty members are shown to be policy and administration, and salary. The relevant sources of dissatisfaction were personal achievement, personal growth, interpersonal relations, recognition, responsibility, supervision, the work itself, and the overall working conditions. The study also has a number of practical implications for institutional administrators, because if the educational institution has no instrument designed to measure faculty perceptions of their jobs and work, these administrators could elect to use the same instrument that investigates the areas of job satisfaction to gain similar results.

Keywords: higher education, Herzberg Two-Factor theory, job satisfaction, job dissatisfaction.

Introduction

The relationship between the individual and the factors determining job satisfaction has been extensively researched in developed countries. In 1992, it was estimated that over 5,000 articles and dissertations have examined the topic of job satisfaction (Cranny et al., 1992), and this is a continuing topic for research. An early assumption can

be made that interest in the subject illustrates the significance that employee satisfaction seriously influences the total operation of an organization. Staples et al. (1998) suggest that the reason for this interest is that work takes up such a significant amount of a person's life, and by increasing an individual's overall satisfaction with his or her work life improves the overall well-being of given and organization and the

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society where it resides.

In the United States, job satisfaction and dissatisfaction is a major industrial topic, and academic and other research results and general press articles number in the thousands (Locke, 1976). Yet despite this vast output, many researchers are dissatisfied with the progress that has been made in understanding and defining job satisfaction. For decades, researchers have tried to understand employee morale and to establish relationships between job satisfaction and productivity, absenteeism, and other independent variables (Cohen, 1974).

Although the concept of job satisfaction and its causes and effects have been studied over a great variety of industrial settings, few studies have dealt with institutions of higher education. However, during the past few years, additional studies have been undertaken concerning job satisfaction within these institutions (Neumann, 1978). Fundamental to any study of this type, is the attitude of educators at this level, as faculty members may not tend to consider themselves as workers, and the literature of business and industry, their models, or the theories used in describing general industrial activities, is mostly considered not applicable.

Another reason may be that of quantifying results, as only the number of scholarly publications produced by faculty members and the number of hours per week spent in teaching can be counted, but the quality of the resulting production is difficult to ascertain and almost impossible to attribute to any other type of industrial organizational environment (Cohen, 1974). Still, job satisfaction and dissatisfaction in institutions of higher education and the problems of imprecise dependent variables ought not be overlooked by researchers.

In Malaysia, research on job satisfaction has been carried out in on various industrial sectors. Dawal and Taha (2006) reported factors affecting job satisfaction in two

automotive industries in Malaysia. Lew and Liew (2006) explored the antecedents of needs and job satisfaction among employees of a leading bank in Malaysia and the implications for the Malaysian automobile sector and Santhapparaj and Shah (2005) studied the Job satisfaction among academic staff in private universities in Malaysia.

With an expansion of Malaysia's industrial sectors, many teaching staff has moved to jobs in industry (Malaysian Ministry of Higher Education, 2006) and a similar scenario is occurring in Thailand (Pasuwan, 1972). It seems clear that faculty members have left education for industry or have left a given educational institution because of circumstances within a given institution. For example, a particular faculty member may seek meaningful experience in the next position. Another may become mobile as a result of a better offer, but not as a result of dissatisfaction with his current position. However, some faculty members have left because of an institution's failure to manage job satisfaction. Good administrators apparently realize that a high rate of turnover of faculty members results in a faculty of limited commitment, ineffective curriculum development, and general faculty unrest, and it can be costly both to the reputation of the institution and to the well-being of the students (Nicholson and Miljus, 1972).

The literature indicates that job satisfaction is a prerequisite to an educator's long tenure and performance, and overall institutional effectiveness (Wood, 1976). For these reasons it seems wise to identify factors that affect job satisfaction of faculty members within an educational institution, and to positively use these results as part of an ongoing management program.

The underlying purpose of this study is to investigate and analyze the factors affecting faculty job satisfaction at two selected universities in Malaysia. A review of Malaysian literature has indicated

that there are a limited number of studies available to researchers with reference to this area of investigation. Relatively few studies have had as their main concern the morale of academics at tertiary levels within the universities of Malaysia. Also, the increasing intensity of the competition for quality staff and quality-demanding and quality-producing students, within higher education is founded upon the reality that the number of public and private higher education institutions has increased worldwide. Adding to this problem, in industry, it has been proven that satisfied employees deliver better service because they are able to better understand their customers, and in the case of a university, its customers are its hard-won students.

Having identified the challenging problem for higher education, the first section of this paper introduces the current literature regarding human motivation as viewed by Herzberg's theory and Maslow's theory. The second section provides the academic aspect of 2 Malaysian universities nominated as University A and University B and discusses and outlines their academic planning strategies. The third section discusses the research methods used to examine both the fundamentals of human needs and the architectural framework proposed by Herzberg's theory (2000), and the fourth section discusses the preliminary findings and the role of the factors that drive employee morale and to establish the facility that merges the relationship between job satisfaction and productivity. Finally, the fifth section presents conclusions regarding the practical significance of the research results with that of the literature, and establishes the potential business impact of these findings to job satisfaction within both the Malaysian Universities studied.

Research Objectives

The purpose of this study is to determine

what selected factors are related to faculty job satisfaction at 2 selected Malaysian universities. It is an attempt to find out how faculty members feel about their jobs, what pleases them in their work, what are the intrinsic rewards of their work, and what brings negative reactions or tends to frustrate them? The knowledge gained by examining such factors may be used in various ways, for example - as a managerial guide for administrators in area of faculty retention. If certain factors appear to be related to the formation of positive job attitudes, institutional administrators can manipulate the environments in such a manner as to promote a reasonably high level of job satisfaction. These factors may also provide:

1. Relevant information for influencing prospective students to consider careers in university teaching, research and administration.
2. Insight into those variables associated with the formation of job satisfaction attitudes of Malaysian faculty members.
3. An awareness of factors associated with work or job satisfaction and dissatisfaction.

Literature Review

The idea of being customer-focused, that is, understanding the customer's needs and finding ways to meet these needs, is a new educational concept as it treats education as any other industry, where the quality of the education programs are the primary sources of providing bundles of benefits to its customers. Nevertheless, according to Bateson and Hoffman (1999), it is often impossible for a service organization to differentiate itself from other similar organizations in regards to its offered benefit bundle, as they stressed that the contact personnel are the sources of product differentiation in all service organizations. In addition, Lovelock et al. (2002) argued

that customer-contact personnel perform a triple role as operation specialist, marketer, and are part of the serviced product itself. There are three relationships considered student to faculty, student to institution, and institution to faculty, all with two-way communication linkages, one to the other, as a descriptive triangle.

The ability to retain faculty is becoming a challenging problem for all higher education institutions (Tack and Patitu, 2000) and faculty retention is dependent upon faculty job satisfaction. A study conducted by William M. Mercer, Inc., concluded that the most objective measures of satisfaction in organizations were reported to be employee retention and turnover (Mercer, 1998). This study also reported that a 5% increase in retention resulted in a 10% decrease in costs, and, that productivity increases ranging from 25% to 65 % are possible (Mercer, 1998). From this, it is important for higher education institutions to know what motivates faculty to stay in their positions, as replacing them is not only difficult but also expensive in unrecoverable costs.

In his original motivational research, Frederick Herzberg investigated the question of why workers stay in their work positions. Taking a different approach, the Mercer study investigated the economic effects of retention versus attrition in the workforce, while Herzberg's inquiries tried to establish what motivated workers to remain in their jobs. Herzberg is the singular motivational theorist who approached the theoretical concept of motivation specifically within the context of employment and justified the contention that business was the dominant institution in society (Herzberg, 1966). Herzberg contended that industry needed to know what motivated workers to remain in a job long enough to become effective in their positions, as only experienced workers were capable of building a strong and cohesive workforce in the organization. His investigations focused upon whether

a worker's attitude toward his job would affect their productivity or willingness to remain in their position (Herzberg, 1966).

A worker's unwillingness to remain in their job is found to be both inefficient and expensive for industry (William M. Mercer, Inc. (1998). Employees who are unwilling to remain in their positions represent an unrecoverable loss for industry as it is a function of the losses of revenue during their training and orientation. Workers who did not remain in their jobs did not become proficient at their jobs, and is the same result for teachers when evidenced in higher education (Herzberg, 1966).

On the other hand, Abraham Maslow's (Maslow, 1943) theory, which is considered relevant and applicable today, observes human motivation factors, it is comprehensive and did not focus on an exclusive framework, but concerned the fundamental fulfillment of human needs. However, these needs may be satisfied outside work and questions are raised as to the applicability of this theory to industry, although subsequent writers have applied the self-actualizing approach to an industrial setting. Maslow's original 5 different levels of human needs are enumerated as follows.

- 1) Lower order needs, that include the biological and physiological needs (including but not limited to desires for food, water, air, sleep, and sex),
- 2) Safety needs (the desire for security and protection against danger),
- 3) Social needs (the desire to fulfill the need for belonging, love, and affection),
- 4) The higher order needs included needs for esteem (self-esteem and esteem from others) and ,
- 5) Self actualization, defined as the need for self-fulfillment or striving to realize one's full potential.

Herzberg's theory and Maslow's theory are contrasts. Herzberg's theory was built upon 2 separate sets of conditions,

satisfiers and dissatisfiers. The dissatisfiers in Herzberg's theory corresponded to the lower order human needs enumerated in Maslow's theory. The satisfiers correspond to the higher order human needs in Maslow's theory. However, unlike Maslow, Herzberg coined his own terminology and assigned new definitions to terms previously carrying universal associations (Herzberg, 1966; Maslow, 1943). Herzberg's theoretical scheme employed a two-dimensional design, firstly, featuring hygiene factors or dissatisfiers, which were incapable of providing motivation or satisfaction, and secondly, motivators, which served as satisfiers. Dissatisfiers included company policy, supervision, working conditions, interpersonal relations, salary, status, job security, and personal life. Satisfiers included achievement, recognition, the work itself, responsibility, advancement, and growth (Herzberg, Mausner, and Snyderman, 1959).

The initial results of this work indicate a contradiction with Herzberg's conclusions, in that compared with the Herzberg Two-Factor theory, Herzberg's motivator or intrinsic factors contributed more to dissatisfaction than satisfaction of Malaysian University faculty members. It was also found that two hygiene factors, namely salary, and policy and administration, acted as significant contributors to the satisfaction of faculty members. However, since the values of the Likert ratings fell in the neutral area, it may be appropriate to conclude that the meaning of neutrality in the measurement of satisfaction and dissatisfaction partially supported the Herzberg Two-Factor theory. This is apparently due to the differences between European and Asian cultural influences or even the differences in the manner of the construction of educational occupations with similar titles but differing work loads and responsibilities as found in other cultures and cultural education organization.

From this a priori conclusion, the job satisfaction of 2 universities faculty members in this study was reflected by the presence of some hygiene factors while job dissatisfaction was reflected by the absence of motivators, the ten factors selected from the Herzberg Two-Factor theory used in the survey may not be adaptable to the measurement of satisfaction of teaching staff of the 2 Malaysian universities concerned, again probably due to cultural factors.

In Herzberg's theory, dissatisfaction did not automatically result in a lack of satisfaction, and dissatisfaction did not automatically control the behavior of the person as these 2 are independent. In contrast, in Maslow's paradigm, the lowest order unmet need would dominate the behavior of the subject and nullify any positive aspects of a satisfied higher order need, as satisfaction of a higher order need was dependent upon the satisfaction of lower order needs and the fulfillment of the 2 were inextricably intertwined (Herzberg, Mausner, and Snyderman, 1959; Maslow, 1954).

Theoretical Framework of the Study

In developing the theoretical framework, this work elects to deal with the Herzberg Two-Factor theory of job satisfaction (Herzberg et al., 1959). In this regard, the study draws 10 major factors corresponding to job satisfaction and dissatisfaction in the Herzberg Two-Factor theory to determine whether or these selected factors are related to job satisfaction of Malaysian University faculty members.

This study answers the following questions:

1. Do the selected factors measure job satisfaction of Malaysian faculty members in the two selected universities?
2. What are the characteristics of those most satisfied and the least satisfied groups?
3. Are Malaysian faculty members in

significant agreement on the factors measuring their job satisfaction?

4. Is the pattern of job attitudes of Malaysian faculty members similar to the pattern found in the Herzberg job satisfaction model?
5. Is it possible to conclude that the Two-Factor theory is adaptable to the teaching staff in institutions of higher education in Malaysian?

Methodology

Basic Assumption

The basic assumptions for this study include the following:

1. There are certain factors that affect job satisfaction of university faculty members.
2. That the sample of 200 faculty members is representative of the population of faculty members in the two selected Malaysian universities.
3. Because data used in this study were collected through a survey questionnaire, it is assumed that respondents were truthful in expressing attitudes towards their jobs.
4. The value of the findings will be increased considerably if the effects of the factors that cause dissatisfaction can be minimized or eliminated and the factors that increase faculty job satisfaction can be maintained or maximized within these two institutions.

Hypothesis

The following null hypotheses were tested:

1. HI: There are no significant differences among faculty members of different age levels regarding the factors measuring their job satisfaction.
2. HII: There is no significant difference between male and female faculty

members regarding the factors measuring their job satisfaction.

3. HIII: There is no significant difference between married and unmarried faculty members regarding the factors measuring their job satisfaction.
4. HIV: There are no significant differences among faculty members with different number of years of service regarding the factors measuring their job satisfaction.
5. HV: There are no significant differences among faculty members with different levels of formal education regarding the factors measuring their job satisfaction.
6. HVI: There are no significant differences among faculty members engaged in teaching and research, and the faculty members engaged in academic administration regarding the factors measuring their job satisfaction.
7. HVII: There are no significant differences among faculty members of different academic ranks regarding the factors measuring their job satisfaction.

The Selection of Sample

The sample of faculty members was selected from 2 private universities in Malaysia. Although the 2 institutions may not constitute a large enough sample to be representative of all colleges and universities in Malaysia, it was felt they might provide a large sample size of faculty within the range and diversity typically found within the universities located within Malaysia. Because faculty members are the primary focus of this study, the two institutions were selected to assure that different types of university faculty could be studied and also the same types of faculty across these 2 universities.

The Sample

For this study, 100 faculty members of the two universities were randomly selected

from the university's personnel files. The following criteria were used in selecting the sample and these criteria for sample selection were determined for the purpose of gaining a representative sample from each university. The faculty members were full time employees.

Each chosen faculty member had to have at least three months employment with the given university and it was found that most had an employment record of more than one year.

All responses were coded and analyzed by computer using the programming of Statistical Packages for Social Sciences (SPSS).

The results will be presented in 2 sections: general characteristics of the sample, and the results of statistical tests of the null hypotheses.

General Characteristics of the Sample

The initial section of the instrument asked the sample to respond to 7 personal variables: age, sex, marital status, number of years employed, highest level of formal education, professional rank, and primary

responsibility. Table 1 summarizes these data.

Tests of the Hypothesis

Hypothesis I: There are no significant differences among faculty members of different age levels regarding factors measuring their job satisfaction.

A one way analysis of variance and Scheffe test were used to measure the significance of the different age levels of a faculty member's response to each major factor. Table 2 represents the means and standard deviations of all age levels and F statistic for each major factor.

An examination of Table 2 indicates a highly significant statistical difference in the responses to the salary factor. In addition, an analysis by means of Scheffe method also reveals a significant difference ($p = .05$) in satisfaction with salary between Group 5 (41 and over) and all the other age groups.

Based on the mean differences, Group 5 (age 41 years and over) tends to be less satisfied with the salary factor than the other age level groups. The null hypothesis

Table 1. General Characteristics of the Sample of Each University

Characteristics	University A		University B	
	No.	%	No.	%
Age :				
25 or less	3	4.2	1	1.2
26 - 30	6	8.3	11	13.6
31 - 35	28	38.9	19	23.5
36 - 40	21	29.2	15	18.5
41 or over	14	19.4	35	43.2
Totals	72	100.0	81	100.0
Sex :				
Male	49	68.1	58	71.6
Female	23	31.9	23	28.4
Totals	72	100.0	81	100.0
Marital Status :				
Married	65	90.3	77	95.1
Single	7	9.7	4	4.9
Totals	72	100.0	81	100.0

Table 2. The Means of Major Factors Measuring Job Satisfaction for Five Age Groups

Major factor - Age	25 or less	26-30	31-35	36-40	41 over	F Statistics
Achievement	2.3620	2.6912	2.6209	2.6120	2.6094	0.803
Growth	2.6263	2.6760	2.6841	2.7437	2.8750	0.587
Interpersonal relation	2.3542	2.5295	2.4984	2.4037	2.3103	0.900
Policy and administration	3.1250	3.2650	3.1027	3.0281	3.0063	1.092
Recognition	2.6570	2.9200	2.7000	2.7182	2.7385	0.591
Responsibility	2.5250	2.8520	2.6287	2.7568	2.6246	1.157
Salary	3.5417	3.5067	3.3378	3.2697	2.8375	4.648
Supervision	2.9687	3.1717	2.9748	3.0407	2.8784	0.689
Work itself	2.3438	2.6567	2.5278	2.6204	2.6211	0.637
Working condition	2.2656	2.5826	2.5321	2.4389	2.3320	0.147
Overall job satisfaction	2.5000	2.8182	2.7895	2.7150	2.6852	0.289

Table 3. Comparison of Male and Female Faculty Members Regarding Factors Measuring Their Job Satisfaction

Major factors	Group	Mean	Standard Deviation	Pooled t-value
Achievement	Male	2.6275	0.328	1.0954
	Female	2.6421	0.405	
Growth	Male	2.6799	0.619	0.0726
	Female	2.749	0.628	
Interpersonal relation	Male	2.4116	0.512	1.0853
	Female	2.3609	0.631	
Policy and administration	Male	3.0102	0.522	0.0676
	Female	3.103	0.515	
Recognition	Male	2.669	0.427	1.4277
	Female	2.7177	0.561	
Responsibility	Male	2.6213	0.536	0.6641
	Female	2.7421	0.61	
Salary	Male	3.1061	0.798	0.6588
	Female	3.2077	0.697	
Supervision	Male	2.7016	0.737	0.4112
	Female	2.9412	0.678	
Work itself	Male	2.6501	0.556	0.4562
	Female	2.5662	0.608	
Working condition	Male	2.3578	0.506	0.0691
	Female	2.1544	0.513	
Overall job satisfaction	Male	2.6352	0.758	0.3308
	Female	2.7842	0.809	

is then rejected for this factor. Because no significant differences are noted in the faculty members' responses for the other

major factors, the null hypothesis is not rejected for other major factors.

Hypothesis II: There is no significant difference between male and female faculty members regarding the factors measuring their job satisfaction.

The results of the data analysis of this hypothesis are found in Table 3. A t-test was conducted on the mean differences between male and female faculty members' responses for each of the ten factors. The t-formula for pooled variance was used in this evaluation.

An examination of this table indicates no significant statistical differences reported between male and female faculty members regarding the major factors affecting their job satisfaction, therefore, the null hypothesis is not rejected.

Hypothesis III: There is no significant difference between married and unmarried faculty members regarding the factors measuring their job satisfaction.

The t-test was conducted on the mean differences between married and unmarried faculty member's responses for each of the major factors. A significant statistical difference between married and unmarried faculty members was found in the working conditions. As the table shows, the mean of married (2.6866) was lower than that for unmarried (2.8530). Based on the mean differences, married faculty members were more dissatisfied with working conditions than their unmarried counterparts. The null hypothesis is rejected for this factor.

Table 4. Comparison of Married and Unmarried Faculty Members

Major factors	Group	Mean	Standard Deviation	Pooled	t-value
Achievement	Married	2.6193	0.482		0.2535
	Unmarried	2.6741	0.458		
Growth	Married	2.7711	0.560		0.4106
	Unmarried	2.9451	0.607		
Interpersonal relation	Married	2.3866	0.621		0.2936
	Unmarried	2.5217	0.658		
Policy and administration	Married	3.0421	0.598		0.4299
	Unmarried	3.1155	0.548		
Recognition	Married	2.6897	0.680		1.1672
	Unmarried	2.8765	0.851		
Responsibility	Married	2.6457	0.645		0.3725
	Unmarried	2.7431	0.694		
Salary	Married	3.0854	0.681		0.5206
	Unmarried	3.2145	0.754		
Supervision	Married	2.9574	0.875		0.9286
	Unmarried	3.0120	0.721		
Work itself	Married	2.6875	0.621		0.6364
	Unmarried	2.7251	0.703		
Working condition	Married	2.3801	0.612		0.5496
	Unmarried	2.6423	0.547		
Overall job satisfaction	Married	2.6212	0.712		1.1062
	Unmarried	2.7710	0.564		

Because no significant statistical difference is noted between married and unmarried faculty members' responses to other factors, the null hypothesis is not rejected for the other factors of the study.

No significant statistical difference between married and unmarried faculty members was found for all major factors. The mean of married (2.7169) was lower than that for unmarried (2.8270). Based on the mean differences, married faculty members were slightly more dissatisfied with working conditions than their unmarried counterparts.

Because no significant statistical difference is noted between married and unmarried faculty members' responses to all the factors, the null hypothesis is not rejected for this study.

Hypothesis IV: There are no significant differences among faculty members with different number of years of service regarding the factors measuring their job satisfaction.

An analysis of variance and the Scheffe test were employed for testing of this hypothesis. Table 5 represents the means of all groups of years employed and the F statistic for each major factor. Again, there is only a significant statistical difference in the faculty members' responses to the salary factor. Results of the Scheffe method also support similar significant difference

($p = .05$) in satisfaction with salary between Group 4 (11 years and over) and other age groups.

An inspection of Table 5 indicates that Group 4 (11 years and over) has the lower mean and is thus less satisfied with salary factor than other groups. Thus, the null hypothesis is rejected for this factor. As for the rest of the factors, the null hypothesis is not rejected.

Hypothesis V: There are no significant differences among faculty members with different levels of formal education regarding the factors measuring their job satisfaction.

A one way analysis of variance and the Scheffe test were used in the testing of this hypothesis. Table 6 shows the mean of each highest level of formal education group and the F statistic of each major factor.

An inspection of Table 6 reveals a highly significant difference in salary factor among the groups having different levels of formal education. The results of the Scheffe method also support similar significant difference between Group 2 (Master's degree) and Group 3 (Doctoral degree). Group 2 has the lower mean and is thus less satisfied with the salary factor than the other groups. The null hypothesis for this factor is rejected.

Because no significant differences are produced for the other major factors, the

Table 5. The Means of Major Factors Measuring Job Satisfaction for Four Groups on the Number of Years Employed

Major factors	< 1 year	1-5 years	6-10 years	> 10 years	F Statistics
Achievement	2.7721	2.6120	2.8128	2.8847	0.917
Growth	2.5910	2.6012	2.6911	2.6239	0.547
Interpersonal relation	2.3571	2.2911	2.4326	2.6312	1.311
Policy and administration	3.1120	3.2140	3.1201	3.0021	0.851
Recognition	2.1422	2.5142	2.7716	2.6470	1.329
Responsibility	2.8102	2.5664	2.8712	2.5121	1.482
Salary	3.1120	3.1941	3.3060	2.8754	4.127
Supervision	2.9612	3.0215	3.0121	2.8416	0.852
Work itself	2.7412	2.6512	2.6102	2.6530	0.154
Working condition	2.5336	2.5247	2.4671	2.3201	0.971
Overall job satisfaction	3.1250	2.6652	2.8114	2.5641	0.715

null hypothesis is not rejected for those factors.

Hypothesis VI: There is no significant difference between faculty members engaged in teaching and research, and faculty members engaged in academic administration regarding the factors affecting their job satisfaction.

A one way analysis of variance and the Scheffe test were employed for testing this hypothesis. Table 7 gives the means and standard deviations of each group of assigned responsibility and the F statistic for each factor.

An examination of Table 7 indicates no significant differences in the responses of each group regarding factor affecting their

job satisfaction. Thus, the null hypothesis is not rejected.

Hypothesis VII: There are no significant differences among faculty members of different academic ranks regarding the factors measuring their job satisfaction.

A one way analysis of variance and the Scheffe test were employed to measure the significance of four groups of faculty members with different academic ranks regarding the factors affecting their job satisfaction. Table 8 presents the mean of each group of academic rank and the F statistic for each major factor. An examination of Table 8 discloses the following:

A significant statistical difference among

Table 6. The Means of Major Factors Measuring Job Satisfaction for Three Educational Level Groups

Major factors	Bachelor's Degree	Master's Degree	Doctoral Degree	F Statistics
Achievement	2.9457	2.7712	2.9871	0.917
Growth	2.1458	2.4120	2.6120	0.471
Interpersonal relation	2.6078	2.9921	3.0814	0.914
Policy and administration	3.1121	3.2189	3.0410	0.551
Recognition	2.6612	2.7145	2.4712	1.24
Responsibility	2.7450	2.6210	2.7810	0.847
Salary	3.1020	2.9914	3.6278	3.984
Supervision	2.8971	2.8952	3.1600	0.745
Work itself	2.7811	2.6410	2.5870	0.541
Working condition	2.4510	2.4415	2.3918	1.118
Overall job satisfaction	2.8142	2.8874	2.7731	0.771

Table 7. The Means of Major Factors Measuring Job Satisfaction for Five Groups on the Basis of Primary Responsibility

Major factors	Teaching	Research	Teaching and Research	Administration	Teaching and Administration	F Statistics
Achievement	2.7814	2.4782	2.8142	2.9945	2.7941	1.305
Growth	2.9541	2.8142	2.8454	2.9210	2.7769	1.542
Interpersonal relation	2.5411	2.8721	2.6145	2.6782	2.5121	1.121
Policy and administration	3.2141	3.1274	3.1190	3.1784	2.9945	0.897
Recognition	2.8745	2.7721	2.7985	2.7885	2.7813	1.023
Responsibility	2.7894	2.6154	2.6878	2.9987	2.5212	1.978
Salary	3.1540	3.8871	3.3162	3.3710	3.1285	1.219
Supervision	3.1678	3.1010	3.1335	3.0109	2.9412	0.987
Work itself	2.4215	3.2156	2.5515	2.6615	2.4815	1.654
Working condition	2.4725	2.1712	2.4412	2.5123	2.4017	1.419
Overall job satisfaction	2.8812	3.2106	2.9916	2.8745	3.1024	2.742

the groups with different academic ranks is found in the recognition factor. An F-value of 3.107 is recorded Group 3 (associate professors) has the lower mean and is thus more dissatisfied with recognition than other groups.

A highly significant statistical difference among the groups is found in the salary factor. This factor has an F-value of 5.016. The Scheffe method also reveals a significant difference ($p = .05$) in satisfaction with salary between Group 3 (associate professors) and Group 2 (assistant professors), and between Group 3 (associate professors) and Group 1 (tutors). Inspection of Table 8 shows that lowest level of satisfaction with the salary factor is reported by Group 3 (associate professors).

A significant statistical difference among the groups is also found in working conditions. An F-value of 2.998 is recorded. Again, Group 3 (associate professors) has the lower mean and is more dissatisfied with working conditions than the other groups.

Although the Scheffe method does not substantiate the result of the one way analysis of variance on recognition and working conditions, the null hypothesis is rejected for recognition, salary, and working conditions. The data obtained were analyzed to differentiate between the two groups of faculty members relative to the rating factors. All null hypotheses were

tested using a t-test, an analysis of variance, and the Scheffe test.

Result and Discussion

The major sources of job satisfaction for Malaysian faculty members were policy and administration, and salary. The relevant sources of dissatisfaction were achievement, growth, interpersonal relations, recognition, responsibility, supervision, work itself, and working conditions.

Among the major sources of job satisfaction, age, number of years employed, formal education level, and academic rank of faculty members were salary. The findings disclosed that the age group of 41 years and over were least satisfied with salary than the other groups. Those who were associate professors as well as those who have been employed for more than 11 years were the groups found to be least satisfied with salary. However, when formal education levels were considered, those with a doctoral degree were found more satisfied with their salary as compared with other groups of less formal education.

Among the major sources of job dissatisfaction, marital status and academic rank of faculty members were affected by working conditions and recognition. Married faculty members were more significantly dissatisfied with working

Table 8. The Means of Major Factors Measuring Job Satisfaction for Four Groups on the Basis of Academic Ranks

Major factors	Tutors	Lecturers	Associate Professors	Professors	F Statistics
Achievement	2.7819	2.6689	2.5512	2.2456	2.247
Growth	2.7754	2.8714	2.9412	2.5417	0.154
Interpersonal relation	2.7814	2.6140	2.2184	2.5141	0.915
Policy and administration	3.1514	3.1121	2.7125	2.8810	2.117
Recognition	2.9125	2.8702	2.5140	2.7714	3.107
Responsibility	2.7128	2.7716	2.1625	2.2741	2.391
Salary	3.4120	3.2116	2.2142	2.4362	5.016
Supervision	2.9812	3.1125	2.5145	2.6745	2.001
Work itself	2.8714	2.7125	2.4102	2.6915	0.978
Working condition	2.6150	2.4156	2.2151	2.3912	2.998
Overall job satisfaction	2.9146	2.7981	2.6234	3.0021	2.012

conditions than the unmarried co-workers. Also, associate professors were found to be significantly more dissatisfied with working conditions and recognition than the other groups of faculty members with different academic ranks. Meanwhile sex and the primary responsibility of faculty members were found to have no significant differences regarding the major factor measuring faculty job satisfaction.

In comparison with the Herzberg Two-Factor theory, the motivator or intrinsic factors contributed more to dissatisfaction than satisfaction of faculty members. Conversely, it was found that two hygiene factors, those of salary, and those of policy and administration, acted as significant contributors to the satisfaction of faculty members in this study. However, since the values of rating factors fell in the neutral area, it may be appropriate to conclude that the meaning of neutrality in the measurement of satisfaction and dissatisfaction supported in part the Herzberg No-factor theory.

Because the job satisfaction of Malaysian university faculty members in this study was reflected by the presence of some hygiene factors while job dissatisfaction was reflected by the absence of motivators, the ten factors selected from the Herzberg Two-Factor theory for use in the assessment instrument may not be adaptable to the measurement of satisfaction or dissatisfaction of teaching staff in the two selected Malaysian universities. Some deviations from the Two-Factor theory could be due to cultural or occupational differences or both between Professor Herzberg's population and the population of this study.

Conclusion

The findings of this sample of faculty members are in partial support of the Herzberg Two-Factor theory. This study shows that all motivator factors are related to

job dissatisfaction, while some of the hygiene factors, in fact, lead to job satisfaction. These "motivators" in Herzberg's words including advancement, recognition, responsibility, achievement, and the work itself attained low value for Malaysian faculty members, showing a trend in the direction of job dissatisfaction. Two "hygiene" factors, policy and administration, and salary were low in Herzberg's model, but appeared high for Malaysian faculty members, disclosing a trend in the direction of job satisfaction. This study also suggests that cultural background differences may have an impact on employee's reaction to job satisfaction, as the pattern of job attitudes for Malaysian faculty members is not similar to that in the Herzberg Job Satisfaction Model.

Practical Implication

This study has a number of practical implications for the institutional administrators. If the educational institutions in Malaysia have no instrument designed to measure faculty perceptions, the administrators may elect to use the same instrument to investigate the areas of job satisfaction. However, some changes in the instrument may be made to meet the local needs. It is recommended that the administrators of the two selected institutions in this study conduct a series of follow-up studies to determine whether faculty attitudes have changed within a succession of short terms, say at least annually in each institution.

Since findings reveal that all motivator or intrinsic factors are strongly related to job dissatisfaction, concerted efforts should be made to improve job satisfaction in each of the motivator or intrinsic factors. Jobs should be enriched and emphasis should be placed on motivator or intrinsic areas to allow the faculty to reach towards self-actualization and satisfaction. Improvement in areas rated low would lead to

improvements in education 'production' as well. If motivator or intrinsic factors could be improved to provide more flexibility and more adaptability to changing conditions, if interpersonal relations are improved so as to facilitate better teaching, and if working conditions are improved, the resulting quality of education would most certainly have to increase along with faculty satisfaction. Further, it may be beneficial to the institution in terms of the selection and recruitment process, as an institution's ability to attract and retain able faculty members may well depend upon the degree of satisfaction the institution provides its faculty.

In summary, this study provided the means to perceive factors that measure Malaysian university faculty members' job satisfaction. It is recommended that each selected institution utilize the results from this study to improve the job satisfaction of each individual faculty member according to his or her indicated needs. In addition, the disclosing factors that affect faculty job satisfaction should be documented to assist with general and long-range plans for improvement.

Limitations

As stated in the above, the conclusions of this study cannot be generalized to all faculty members across Malaysia. The results are restricted to the two universities from which the samples were drawn.

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Recommendations for Future Research

Based on the results of this study, the following recommendations are made for further study of factors measuring Malaysian faculty job satisfaction:

1. The present study might be replicated by using the critical incident method employed by Professor Herzberg as a parallel verification study for the structured questionnaire.
2. The replication of the study on factors measuring Malaysian faculty job satisfaction with larger sample groups coverings all universities in the country is needed to substantiate the effects of both significant and non-significant factors in the present study. The problem areas could be further investigated, the findings of which might possibly indicate what could be done to increase faculty job satisfaction in the universities of Malaysia.
3. This instrument is based heavily on the motivator and hygiene factors in the Herzberg Two-Factor theory. It is recommended that more attempts need to be made in developing a standardized research instrument to measure factors related to job satisfaction in Malaysia.
4. With the development of such an instrument, research of the cooperative type could be undertaken. These may be some of the challenges and the needs which lie ahead for job satisfaction researchers

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Appendix 1

Faculty Job Satisfaction / Dissatisfaction Survey

Instruction

1. Response to each of the item by marking/checking the appropriate choice or entering the required information.
2. If you have difficulty in responding to any of the item, please give best choice.
3. All items must have a response.
4. Confidentiality of data will strictly be maintained. The identification number above is for ensuring responses are collected from the sample selected. Such tag will be removed once the data has been entered into the file.

For each of the following questions, please mark the appropriate choice or provide the relevant required information.

1. Institution: _____ Department: _____
2. Your gender: _____ (male or female)
3. Your marital status : _____ (married or unmarried)
4. Your age: _____ years _____ months
5. Number of years employed: _____
6. Highest level of education: _____
(Bachelors / Master's / Doctoral degree)
7. Present professional rank: _____
(Tutor / Lecturer / Associate Professor / Professor)
8. Your primary responsibility is (Mark one only):
 - 8.1 Teaching
 - 8.2 Research
 - 8.2 Teaching and Research