

A Multivariate Analysis of Attitude Towards Teaching

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ABSTRAK

Kajian ini melaporkan perhubungan di antara sikap terhadap bidang perguruan dengan faktor-faktor etnik, jantina, syarat kemasukan, trait personaliti dan motif mengajar. Penemuan kajian menunjukkan sikap pelatih India berbeza secara signifikan daripada pelatih Melayu; tetapi tidak terdapat perbezaan yang signifikan di antara pelatih Cina dengan pelatih Melayu. Sikap pelajar lelaki tidak berbeza daripada sikap pelajar perempuan; dan sikap pelajar yang berkelulusan SPM tidak berbeza daripada sikap pelajar yang berkelulusan STPM. Tidak satu pun daripada motif mengajar yang mempunyai hubungan signifikan dengan sikap. Dua faktor personaliti berhubung secara positif dengan sikap, iaitu kestabilan emosi dan surgensi; dan dua faktor personaliti lagi berhubung secara negatif dengan sikap, iaitu tendensi paranoid dan sofistikasi.

ABSTRACT

This study reports the relationship between attitude towards teaching and ethnicity, sex, entry qualification, personality traits and motives for teaching. The findings showed that attitude of Indian trainees was significantly different from that of Malay trainees; but there was no significant difference between attitude of Chinese from that of Malay trainees. Attitude of male students was not significantly different from that of female students; and the attitude of SPM students was undifferentiated from that of the STPM students. None of the motive factors was significantly related to attitude. Two personality factors were positively related to attitude, viz., emotional stability and surgency; and another two factors were negatively related to attitude, i.e., paranoid tendency and sophistication.

INTRODUCTION

One area of interest in education, to both educationists and laymen, is attitude. Allport (1967: 8), a major contributor in the study of attitude, referred to the subject as

“a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related.”

Though there are many theories on attitude formation, there is no particular theory which attempts to explain attitude towards teaching. This lack of theory may be attributed to the disagreement among

educationists as to what is meant by “attitude towards teaching”.

Attitude towards teaching is a broad concept, having several dimensions in its interpretation. One dimension views teaching as a profession. Another dimension refers to the actual teaching process in the classroom. A third dimension is linked to the client in the classroom—i.e., the pupils. This dimension may regard teaching as the interaction between teacher and pupils. A fourth dimension refers to the workload of teachers.

For the purpose of this study, attitude towards teaching is defined as “teacher-pupil rapport and attitude towards school work”.

This definition implies the human interpersonal relationship between teachers and their pupils in the school and classroom settings. It is hypothesised that teachers with a good disposition towards their pupils reflect positive attitude, while those teachers with a poor disposition towards their pupils possess negative attitude.

Research using the Minnesota Teacher Attitude Inventory (MTAI), an instrument developed by Cook, Leeds and Callis, (1951) to measure attitude in terms of liking for children and school-work, seem to show significant differences in the attitude scores between males and females. Such findings appear to be in congruence with the general belief that females' "motherly instincts" are greater than those of males. Supporting evidence is provided by Beamer and Ledbetter (1957) and Evans (1952). However, Best (1948) reported no significant difference in the attitude of male and female students.

The MTAI has been used in Malaysia and Singapore. Obura (1974) used the MTAI on 990 teachers in Kuala Lumpur and Selangor. However, he did not produce a final score for attitude; nor a discussion of attitudes towards teaching.

Eng (1983) used the MTAI on 173 teachers in Singapore to differentiate between effective and non-effective teachers. Even though his results indicated that all the 173 teachers scored low on the MTAI, the study showed a significant difference in the attitude of effective and non-effective teachers.

Studies on attitude and personality showed that teachers who scored high on the MTAI were cooperative, friendly, objective and emotionally stable. Teachers who scored low on the MTAI tended to be critical and intolerant, hostile and belligerent, hypersensitive, depressed and emotionally unstable (Getzels and Jackson, 1963: 516).

A literature search found very little empirical work on attitude and motives for teaching. However, Ee (1974) has expressed the need for such a study to be carried out.

The theoretical framework for attitude towards teaching is derived from the social learning theory of behaviour and attitude

proposed by Bandura and Walters (1963). According to this theory, learning is a result of of *reward and punishment*. If rewards are consistent on particular behaviours, those behaviours will be adopted. A second kind of social learning is through *imitation*. According to Bandura dan Walters, by watching how other people behave, new behaviour is acquired and old ones modified.

Social psychologists have tried to explain the influence of culture on behaviour and attitude. The different belief systems, norms and roles that are unique to a particular culture or ethnic group, are acquired through the process of socialization. Some of the determinants of social roles are occupation, sex, ethnicity and social class. Based on these factors, attitude towards teaching is likely to differ according to the various ethnic groups.

The purpose of this study was to assess the attitude towards teaching among teacher trainees in terms of their personality traits, motives for teaching and selected classification variables.

MATERIALS AND METHODS

Subjects

The subjects for the study consisted of 210 pre-service teachers from a teachers' college in Kuala Lumpur, who were specializing in primary school teaching. At the time of data collection, i.e. September 1986, these students were in their fourth semester.

Instruments

Four sets of instruments were used. The first set pertained to personal and demographic information of the subjects. Personality traits were measured by using the 16 P.F. questionnaire (Form A), developed by Cattell *et al.* (1950). The 16 P.F. consists of 187 items which measure the 16 traits, which are as follows:

Traits	Low Score vs. High Score
Factor A	- reserved vs. outgoing
Factor B	- less intelligent vs. more intelligent
Factor C	- affected by feeling vs. emotionally stable

- Factor E - humble vs. assertive
- Factor F - sober vs. happy-go-lucky
- Factor G - expedient vs. conscientious
- Factor H - shy vs. venturesome
- Factor I - tough-minded vs. tender-minded
- Factor L - trusting vs. suspicious
- Factor M - conventional vs. imaginative
- Factor N - simplicity vs. sophistication
- Factor O - placid vs. apprehensive
- Factor Q1 - conservative vs. experimenting
- Factor Q2 - group dependent vs. self-sufficient
- Factor Q3 - casual vs. controlled
- Factor Q4 - relaxed vs. tense.

The test-retest reliability of the 16 P.F. ranges from 0.70 to 0.90 if the interval is just over a few days. However, the correlation (reliability) between test and retest scores two months later range from 0.63 to 0.88 with a median of 0.78.

Thirty items were specially developed by the author to extract the underlying motives for teaching. Four alternative responses were given for each item, i.e., strongly agree, agree, disagree, and strongly disagree. These items were derived from several sources, viz., from a pilot study carried out by the author, Fox's questionnaire (1961), and the Research Unit, Singapore (1968). Responses to the items were subjected to factor analysis in order to extract the underlying motives for teaching.

In this study, the Minnesota Teacher Attitude Inventory (MTAI) that was developed by Cook, Leeds and Callis (1951), was used to measure attitude towards teaching. The MTAI contains 150 statements which seek opinions about children and their behaviour. A five-point scale was used to record responses to strongly agree, agree, undecided, disagree and strongly disagree.

Although it was accepted that there was no right or wrong answers, responses were nevertheless classified as "right" or "wrong". A score of 1 was given to a "right" response and -1 to a "wrong" response. The possible range for attitude score based on the MTAI was from minus 150 to plus 150. A positive score indicated a liberal classroom attitude while a negative score indicated a less liberal attitude towards teaching.

Responses to the 16 P.F and the MTAI could either be scored by hand, by using the scoring stencils provided by the developers of the Inventory, or by computer through the services of their publishers. However, in the present study, scoring was accomplished by SPSS (Nie *et al.*, 1970) data transformation of "Recode" and "Compute".

Analysis

Multiple regression analysis was used to explain attitude towards teaching. The independent variables used in the regression equation were the 16 raw personality scores, 5 factor scores on motives for teaching, and 3 classification variables, viz., sex, ethnicity and entry qualification. Raw personality scores rather than the standard scores (sten) were used because they offer greater variability, which is very desirable in regression analysis. The regression equation takes the following linear form:

$$Y = a + b_1X_1 + \dots + b_{16}X_{16} + c_1Z_1 + \dots + c_5Z_5 + dG + eQ + f_2E_2 + f_3E_3 + u$$

where,

- Y = attitude score
- X_p = score on the personality factors
($p = 1, \dots, 16$)
- Z_m = motive factor scores (derived from factor analysis) ($m = 1, \dots, 5$)
- G = sex (0 if male, 1 if female)
- Q = entry qualification (0 if SPM, 1 if STPM)
- E = ethnicity ($E_2 = 1$ if respondent is Chinese
= 0 otherwise
 $E_3 = 1$ if respondent is Indian
= 0 otherwise)

a, b, c, d, e, f = intercept and regression coefficients, respectively

and u = error term assumed to have zero mean and constant variance.

Data were key-punched into diskettes using a micro-computer word-processing software, and then processed and analyzed using the SPSS package on the IBM 4381 main-frame at the Universiti Sains Malaysia, as well as the SPSS/PC (Norusssis, 1986) on a personal computer.

RESULTS

The overall results of the multiple regression analysis of attitude teaching are presented in Table 1. The adjusted R-square of 0.288 means that about 30% of the variance in the attitude score is jointly explained by the 24 independent variables used in the regression equation.

TABLE 1
Overall results of regression analysis of attitude

Multiple R	.63146		
R-Square	.39874		
Adjusted R-Square	.28822		
Standard Error	17.84440		
Analysis of Variance			
	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>
Regression	25	28719.62876	1148.78515
Residual	136	43305.45766	318.42248
F = 3.60774 Signif F = .0000			

(p < 0.0001)

The ANOVA of the regression shows that the F ratio of 3.607 is significant at p < 0.0001, indicating that the coefficient of multiple determination, R-square, is significantly different from zero.

Results of the regression analysis of attitude are given in Table 2. A discussion based on Table 2 follows.

Attitude and sex

Sex is a dummy variable which takes the value of 0 if the student is male and 1 if female. Therefore males form the "control" group. The negative regression coefficient of the SEX dummy variable connotes that the mean attitude score of female students is lower than that of male students. However, the difference is not significant.

Attitude and Ethnicity

For the ethnicity variable, the Chinese and Indian trainees are being compared to the Malay trainees. The first dummy variable for the ethnicity factor is CHI, which takes the value of 1 if the student is Chinese and 0

otherwise. The second dummy variable for the ethnicity factor is IND which takes the value of 1 if the student is Indian and 0 otherwise.

The regression coefficient of the CHI dummy variable is not significantly different from zero. This means that there is no significant difference between the means of attitude score of Chinese students and Malay students, when the other independent variables in the model are held at their mean values. However, the regression coefficient of the IND dummy variable is significantly different from zero; this indicates that there is a significant difference between the means of attitude score of Malay students and Indian students.

Attitude and Entry Qualification

Entry qualification (CERT) is a dummy variable which takes the value of 0 if the student has the SPM qualification and 1 if he or she has the STPM qualification. Regression results show that the coefficient of CERT is not significantly different from zero. Hence there is no significant difference between the means of attitude score of SPM holders and STPM holders.

Attitude and Personality

Out of the 16 personality factors, only four factors came out significant at p < 0.05 or better. They were emotional stability (FC), surgency (FF), paranoid tendency (FL) and sophistication (FN). Of the four factors, paranoid tendency and sophistication were inversely related with attitude.

Attitude and Motives

Three of the motive factors have positive regression coefficients (FAC1, FAC3 and FAC5), while the remaining two motives have negative coefficients (FAC2 dan FAC4). However, none of the five coefficients are statistically significant.

DISCUSSION

This study has shown that of the three classification variables used to explain attitude, only ethnicity is significantly related with the dependent variable.

TABLE 2
Regression analysis of attitude

Variable	B	SE B	Beta	T	Sig T
CERT	-2.64268	3.83777	-.05211	-.689	.4922
SEX	-.31768	4.10786	-.00749	-.077	.9385
IND	15.58049	4.54117	.32628	3.431	.0008 **
CHI	9.28290	5.34345	.17528	1.737	.0846
FAC 1	1.63512	1.92565	.06440	.849	.3973
FAC 2	-1.97463	2.05721	-.07568	-.960	.3388
FAC 3	2.76936	2.03501	.10579	1.361	.1758
FAC 4	-3.61124	1.90128	-.14280	-1.899	.0596
FAC 5	2.97738	1.90633	.11601	1.562	.1206
FA	.87801	.73699	.08737	1.191	.2356
FB	.76753	1.02170	.05415	.751	.4538
FC	1.79908	.52062	.30640	3.456	.0007 **
FE	-.04051	.59013	-.00509	-.069	.9454
FF	1.12275	.56105	.14935	2.001	.0474 *
FG	-1.02207	.78831	-.09841	-.297	.1970
FH	-.50489	.55220	-.07348	-.914	.3622
FI	.00816	.65346	.00094	.012	.9901
FL	-1.69863	.68136	-.18702	-2.493	.0139 *
FM	.31555	.66267	.03599	.476	.6347
FN	-1.39434	.70401	-.14693	-1.981	.0497 *
FO	.54531	.63488	.08090	.859	.3919
FQ 1	.48060	.63641	.05828	.755	.4514
FQ 2	.87449	.65440	.10737	1.336	.1837
FQ 3	1.46167	.79695	.13351	1.834	.0688
FQ 4	.31909	.54466	.05561	.586	.5589
(Const)	-75.28079	29.78931		-2.527	.0126

** sig . at . 01 level

* sig. at . 05 level

By using dummy variables for ethnicity, it is found that there are differences in the mean attitude score among the three ethnic groups in the study. There had been reports on the difference in attitude score according to country, namely United States and Ireland (Tarpey 1965) and England (Evans 1966). This difference may be attributed to the different child-rearing practices which is a function of attitude formation, as proposed by social-learning theory.

In comparing the child-rearing practices in the United States and England, Lynn and Gordon (1966) found American mothers to be less punitive and more extraverted than Eng-

lish mothers. It may be inferred from here that extraverted mothers have a more liberal attitude towards children. This may be a reason why the MTAI scores in the United States are generally higher than those in England or Ireland.

Based on the evidence from the United States and England, the writer is inclined to believe that the difference in the mean attitude scores according to ethnicity is related to whether one group is more punitive in their child-rearing practice than the other group.

Of the 16 personality factors, emotional stability (FC) came out very significant. This appears to be a powerful variable which has

potential use in identifying and selecting teacher candidates. It may be inferred from this finding that an emotionally stable person is more likely to have positive attitude towards teaching. Emotional stability has been described by Ryans (1967) as a very desirable characteristic for school teachers.

From the result of this study, it is suggested that policy makers should select potential teachers on the basis of this personality trait. A person who is emotionally stable is normally in control of himself or herself and would be calm in facing challenges.

One of the Deputy Education Ministers recently expressed concern when he said that teachers should not abuse the power vested in them. He further admitted that, with about 160,000 teachers in the country, it was difficult for the Ministry to monitor the emotional state of every teacher. In the light of this statement, there is no doubt that the selection of teachers is not a trivial matter in the education cycle. This view is reflected by the Minister of Education when he suggested that the selection of trainee teachers be tightened to ensure that only genuinely interested and suitable candidates are selected (*The Star*, March 24, 1987). If there was an objective and reliable method of selecting emotionally stable teachers, such undesirable teacher behaviour would not have surfaced.

Society demands that school children be handled properly by their teachers. Society is concerned with the increasing number of emotionally disturbed teaching personnel in schools. However, one must remember that teaching is not only challenging but also taxing. Much stress is encountered in teaching. There have been numerous incidents reported both in the literature as well as in the local papers concerning emotionally disturbed teachers in the schools. Sources from the National Union of the Teaching Profession said that at least 36 teachers from 50 large-sized schools in Malacca alone were found to suffer from mental problems (*New Straits Times*, March 12, 1987). The same newspaper also reports that there is at least one teacher in each large-sized school who suffers from a mental problem.

With reference to selection of teacher trainees, this study points towards the need for selecting potential teachers on the basis of emotional stability. Items that measure emotional stability may be used in student teacher selection.

CONCLUSION

In conclusion, the findings of the study did not show the five motive factors to be good predictors of attitude. However, looking at the signs of the regression coefficients, one may make a tentative conclusion regarding motives. Students who rate themselves positively in terms of their personal attributes, those who are altruistically inclined and admit they choose teaching as a direct influence from other adults seem to have a positive attitude towards teaching.

The influence factor has some implications on the vocational guidance programme in the secondary schools. Special talks need to be given to secondary leavers on the importance and advantage of a teaching career. School councillors need to highlight the altruistic factor of the "helping profession" and recommend teaching as a career only to promising students.

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