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ABSTRACT

This study details the main activities that pre-student teachers were scheduled to engage in while in the Exploratory Field Experience Program at the University of Iowa. Its primary purpose was to investigate the effect of an undergraduate exploratory field experience (pre-student teaching) course on the attitudes held by prospective teachers. The study focused in part on the relationship between attitude change of the pre-student teachers and the following eight demographic and descriptive variables: sex, elementary vs. secondary levels, major curricular areas, university classification, ACT composite scores, grade point averages, grades received in the introduction to teaching course, and grade levels of the pre-student teaching experience. The samples of the study included 162 elementary and 286 secondary pre-student teachers for a total of 448 students enrolled in the Exploratory Field Experience Course. The attitudes were reflected in responses to statements in the Minnesota Teacher Attitude Inventory (MTAI) administered at the beginning and end of both semesters of the course. Results indicated that students entered the program with a positive attitude towards interpersonal relationships with children and teaching as a career and left the program with an even stronger positive attitude in these areas. (Descriptions and table analysis of each variable are included in the text.) (JA)

Do Pre-Student Teaching Experiences Change Attitudes Toward Teaching?

by G. C. Knoll

When an individual decides to enter the teaching profession

> ...the decision is, in the last analysis, a compromise whereby (he) hopes to gain the maximum degree of satisfaction out of his working life by pursuing a career in which he can make as much use as possible of his interests and capacities, in a situation which will satisfy as many of his values and goals as possible.[1]

While it may not be possible through a teacher education program to identify all of the underlying motives that influence an individual to choose teaching as a profession, it is possible to obtain objective data through a pre-student teacher education program designed to give the prospective teacher an opportunity to obtain practical experience in a classroom situation. Numerous educational authorities have stated that prospective teachers should obtain this practical experience prior to student teaching through working with students and participating in other professional laboratory or field experiences that give new and concrete meaning to the theories taught in the education courses. As a result of these experiences some individuals may find they are not personally suited for a teaching career before they have completed a formal teacher education program.

These kinds of experiences are paramount at a time when teacher education is experiencing critical appraisal from every segment of our

[1]Eli Ginzberg, et al., Occupational Choice: An Approach to a General Theory (New York: Columbia University Press, 1951), p. 271.

society. Preparing teachers to deal competently with the education of students in today's complex society has become an increasingly difficult task but one which is vital to our nation. Teacher competency is dependent on many things, but application of theory to classroom situations is imperative for a systematic progression from student to teacher. The provision of adequate pre-student teaching professional field experiences can provide the interpersonal relationships between teachers and their pupils. There is general agreement among educators that this is one of the most important aspects of teaching. Therefore, the types of teachers with which pupils are associated throughout their school age years should, of necessity, be a subject of continuous research and evaluation. In this way, it is possible to identify and counsel those individuals with personal and attitudinal problems before their enrollment in the student teaching phase of the teacher education program.

Furthermore, it is evident that pre-student teaching laboratory experiences are essential to the improvement of the teacher education program and toward providing the necessary knowledge skills, attitudes and beliefs of a professional person committed to education as a career.

While it is not possible in a study of this nature to give a detailed summary of the Exploratory Field Experience Program at the University of Iowa, it is possible to list the main activities that the pre-student teachers were scheduled to engage in while in the program. The essential pre-student teaching experiences included the following: observational activities, clerical duties, semi-instructional responsibilities, supervisory responsibilities, general extra-curricular duties,

and professional teacher responsibilities. The increased emphasis on this phase of preparing teachers calls for an evaluation of an institution's present laboratory or field experience program. This research study focused on one component--mean attitude change--of pre-student teachers of one institution's field experience program. Although it has been shown that attitude changes do occur among student teachers, nothing other than the published research of Cook, Leeds, and Callis,[2] has been done to evaluate attitude change among pre-student teachers in an exploratory field experience type program.

Therefore, the primary purpose of this study was to investigate the effect of an undergraduate exploratory field experience (pre-student teaching) course on the attitudes held by prospective teachers. The study, in part, focused on the relationship of eight demographic and descriptive variables to attitude change of the pre-student teachers.

Method.

The samples of the study included 162 elementary and 286 secondary pre-student teachers for a total of 448 students enrolled in the Exploratory Field Experience Course for both semesters for the 1971-1972 academic year at the University of Iowa.

The attitudes were reflected in responses to statements in the Minnesota Teacher Attitude Inventory (MTAI), which is primarily designed to measure those attitudes of a teacher that predict how well he will get along with pupils in interpersonal relationships, and indirectly, how well he will be satisfied with teaching as a vocation. The teacher

[2]Walter W. Cook, Carroll H. Leeds, and Robert Callis, Minnesota Teacher Attitude Inventory Manual Form A (New York: The Psychological Corporation, 1951), p. 3.

who ranks at the high end of this scale is expected to establish better rapport with his pupils than the one who ranks low; possible range of scores is -150 to +150.[3] The MTAI was administered to the pre-student teachers at the beginning and at the end of both the 1971-1972 fall and spring semesters. The pre-test scores obtained at the beginning of each semester and the post-test scores obtained at the end of each semester were combined for the purpose of this study. The difference between the pre-test and post-test MTAI scores is referred to as the MTAI change score.

The data obtained from the pre and post MTAI's and demographic data collected were analyzed according to an analysis of variance (Lindquist Type I Design) technique.[4] The resulting F-values tested at the .001 and .01 levels of significance allowed for an analyses of the data of the following three groups of null-hypotheses.

1. Ho: There is no difference between the pre and post MTAI means for the total sample of pre-student teachers.
2. Ho: There is no difference between average MTAI means for pre-student teachers grouped by each of the eight demographic variables.
3. Ho: There is no difference between pre and post MTAI means for pre-student teachers grouped by each of the eight demographic variables.

In many pre-student teacher studies, investigators have failed to study the following eight variables and their relationship to attitude

[3]Cook, Leeds, and Callis, op. cit., p. 3.

[4]E. F. Lindquist, Design and Analysis of Experiments in Psychology and Education. (Chicago: Houghton Mifflin Co., 1953).

change: sex, elementary vs. secondary pre-student teachers, major curricular areas, university classification, ACT composite scores, grade point averages, grades received in the Introduction to Teaching Course, and grade levels of pre-student teaching experience. The data obtained from these subjects, however, are viewed as heterogeneous data and grouped according to the above variables for each of the three null hypotheses.

Results.

The results of the study employing the MTAI indicate that the pre-student teachers entered the Exploratory Field Experience Program at the University of Iowa with a positive attitude toward interpersonal relationships with children and teaching as a career. They left the Program with even stronger positive attitudes in these areas. The increases, although slightly lower, are most similar to those obtained by the authors of the MTAI with a sample from a comparable population of pre-student teachers.[5] The first group of null-hypotheses (tested by F_A) suggests that no change will occur between the pre and post MTAI means for the total sample--and consequently the eight independent variables--of pre-student teachers. The total sample had a mean increase of 3.235 between the total pre (47.176) and total post (50.411) tests on the MTAI.

Since this gain was significant at the .01 level of confidence, the hypotheses of no difference between pre and post MTAI was rejected. The F_A ratios of tables 1-8 summarize the data that relate to this first group of null hypothesis.

[5]Cook, Leeds, and Callis, op. cit., p. 3.

A major part of the study is spelled out in the second group of null hypotheses. This group of null hypotheses (tested by F_B) suggests that no difference will occur between average MTAI means for each of the eight demographic variables. Tables 1-8 present the results of the analyses of variance performed for each of these variables.

The average MTAI means for males and females were significantly different at the .001 level of confidence. Therefore the hypothesis of no difference was rejected as indicated in Table 1. Female pre-student teachers had significantly higher mean scores than male pre-student teachers. These results are in agreement with the findings reported in the MTAI manual by Cook, Leeds and Callis.

The average MTAI means for elementary vs. secondary pre-student teachers were significantly different at the .001 level of confidence. Therefore, the hypothesis of no difference was rejected. As indicated in Table 2, elementary pre-student teachers had significantly higher mean attitude scores than the secondary pre-student teachers. These results are again in agreement with the findings reported in the MTAI Manual by Cook, Leeds, and Callis.

The average MTAI means for major curricular areas were significant at the .001 level of confidence. Therefore, the hypothesis of no difference was rejected. As indicated in Table 3, elementary pre-student teachers had higher mean attitude scores than early childhood pre-student teachers, early childhood pre-student teachers had higher mean scores than secondary academic pre-student teachers, and secondary academic pre-student teachers had higher mean scores than secondary non-academic pre-student teachers. The secondary academic subgroup included subjects

who had majors in English, foreign languages, mathematics, sciences, and social studies. The secondary non-academic subgroup included those who had majors in home economics, arts and crafts, music, business, and physical education. In this study, the elementary pre-student teachers had higher mean attitude scores than early childhood pre-student teachers. With this exception, these results are in agreement with the findings reported in the MTAI Manual by Cook, Leeds, and Callis.

The average MTAI means by university classification were significant at the .01 level of confidence. Therefore, the hypothesis of no difference was rejected. As indicated in Table 4, freshman/sophomore level, junior level, and senior level pre-student teachers, respectively, had progressively lower mean attitude scores on the MTAI. Freshman and sophomore level pre-student teachers were combined because of the small number of freshman subjects.

The average MTAI means by ACT composite scores were not significant at either the .001 level or the .01 level of confidence. Therefore, the hypothesis of no difference was accepted. Although the F ratio was not significant, Table 5 indicates that pre-student teachers with observed values of 11-20, 21-24, 28-35, and 25-27, respectively, had progressively higher mean attitude scores on the MTAI. In general, mean attitude scores had a slight increase as ACT composite scores increased.

The average MTAI means by grade point averages (GPA) were not significant at either the .001 or .01 level of confidence. Therefore, the hypothesis of no difference was accepted. Although not significant, Table 6 indicates that pre-student teachers with grade point averages of

2.50 and below, 2.50 to 2.80, 2.80 to 3.10, and 3.10 and above, respectively, had progressively higher mean attitude scores on the MTAI. Mean attitude scores increased as grade point averages increased.

The average MTAI means by grade received in the Introduction to Teaching Course were significant at the .01 level of confidence. Therefore, the hypothesis of no difference was rejected. Pre-student teachers with C/D's, B's, and A's for course grades, respectively, had progressively higher mean attitude scores on the MTAI. Course grade of C's and D's were combined because of the small number of pre-student teachers receiving D's.

The average MTAI means by grade levels of the pre-student teaching experience were significant at the .001 level of confidence. Therefore, the hypothesis of no difference was rejected. Pre-student teachers with exploratory experiences in elementary, intermediate, junior high, and senior high levels, respectively, had progressively lower mean attitude scores on the MTAI. That is, it would appear that the mean attitude scores were negatively correlated with the grade levels of the pre-student teaching experience.

The third group of null hypotheses (tested by F_{AB}) suggests that there is no interaction between pre-post MTAI means and the MTAI means for each of the eight demographic variables. The F_{AB} ratios of Tables 1-8 indicate that no interaction occurred between the pre-post difference and each of the eight demographic variables. Therefore, the third group of null hypotheses was accepted.

Table 1

MTAI Mean Scores by Sex

Sex	MTAI Pre	MTAI Post	Difference	Average	F-Values
Male	38.822	44.578	5.756	41.700	F_A = 7.174*
					F_B = 17.674**
Female	50.780	52.927	2.147	51.853	F_{AB} = 1.880

* .01 Level of Significance
** .001 Level of Significance

Table 2

MTAI Mean Scores by Elementary vs. Secondary Levels

Level	MTAI Pre	MTAI Post	Difference	Average	F-Values
Elementary	52.500	56.562	4.062	54.531	F_A = 7.149*
					F_B = 15.099**
Secondary	44.161	46.927	2.766	45.544	F_{AB} = 0.265

* .01 Level of Significance
** .001 Level of Significance

Table 3

MTAI Mean Scores by Major Curricular Areas

Areas	MTAI Pre	MTAI Post	Difference	Average	F-Values
Early Childhood	48.902	57.634	8.732	53.268	
Elementary	54.551	57.144	2.593	55.847	$F_A = 7.184^*$
Academic	45.169	49.338	4.169	47.254	$F_B = 8.018^{**}$
Non-Academic	40.768	39.817	-.951	40.293	$F_{AB} = 1.484$

* .01 Level of Significance
** .001 Level of Significance

Table 4

MTAI Mean Scores by University Classification

Classification	MTAI Pre	MTAI Post	Difference	Average	F-Values
Freshman/ Sophomore	53.562	55.733	2.171	54.648	
Junior	46.173	49.398	3.225	47.785	$F_A = 7.135^*$
Senior	42.702	47.149	4.447	44.926	$F_B = 4.683^*$
					$F_{AB} = 0.196$

* .01 Level of Significance

Table 5

MTAI Mean Scores by ACT Composite Scores

Observed Values	MTAI Pre	MTAI Post	Difference	Average	F-Values
11-20	43.033	45.538	2.505	44.286	
21-24	45.655	52.239	6.584	48.947	$F_A = 7.172^*$
25-27	49.081	52.734	3.653	50.907	$F_B = 1.494$
28-35	49.783	49.983	.200	49.883	$F_{AB} = 1.246$

* .01 Level of Significance

Table 6

MTAI Mean Scores by Grade Point Averages

G.P.A.	MTAI Pre	MTAI Post	Difference	Average	F-Values
2.50 and Below	42.500	47.274	4.774	44.887	
2.50 to 2.80	47.735	45.857	-1.878	46.796	$F_A = 7.202^*$
2.80 to 3.10	47.812	53.842	6.030	50.827	$F_B = 2.661$
3.10 and Above	50.864	54.320	3.456	52.592	$F_{AB} = 1.870$

* .01 Level of Significance

Table 7

MTAI Mean Scores by Grade Received in the Introduction to Teaching Course

Course Grade	MTAI Pre	MTAI Post	Difference	Average	F-Values
C's/D's	44.139	45.981	1.842	45.060	
B's	45.512	48.820	3.308	47.166	F_A = 7.137*
A's	52.133	56.370	4.237	54.252	F_B = 5.424*
					F_{AB} = 0.264

* .01 Level of Significance

Table 8

MTAI Mean Scores by Grade Levels of the Pre-Student Teaching Experience

Grade Levels	MTAI Pre	MTAI Post	Difference	Average	F-Values
Elementary (K-3)	54.533	60.167	5.634	57.350	
Intermediate (4-6)	50.862	54.738	3.876	52.800	F_A = 7.243*
Junior High (7-9)	42.423	48.442	5.019	45.433	F_B = 6.838**
Senior High (10-12)	46.007	44.190	-1.817	45.099	F_{AB} = 2.705

* .01 Level of Significance
** .001 Level of Significance

Conclusions.

Empirically, the results of this study show that a pre-student teaching experience does improve the attitudes of prospective teachers toward greater interpersonal relations with pupils and a greater satisfaction with teaching as a vocation. Therefore, based on this positive attitude change, perhaps there is merit for teacher education programs with early and continuing field experiences and opportunities for practice with more conventional and realistic classroom learning. In addition, it is apparent that subdividing the sample into eight pre-selected demographic variables does show some significant results in this investigation. Since the average MTAI means by sex, elementary vs. secondary, pre-student teachers, major curricular areas, university classification, grade received in the Introduction to Teaching Course, and grade levels of pre-student teaching experience were significantly different, it is conceivable that pre-student teachers' attitudes might be further improved if attempts were made to structure the teacher preparation program so as to provide field experiences specifically tailored to the needs of the individual students with different major educational philosophies and varied socio-educational backgrounds and experiences. Consequently, one student or group of students may develop the skills and attitudes necessary to assume responsibilities in the classroom in a short period of time while another student or group may need much more time and need much closer supervision.

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