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A FOLLOW-UP STUDY OF UTAH STATE AGRICULTURAL COLLEGE GRADUATES
IN 1948, 1951, AND 1954, WHO OBTAINED SECONDARY TEACHING CERTIFICATES

by

Wendell Blair Low

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Education

UTAH STATE AGRICULTURAL COLLEGE
Logan, Utah

1956

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Wendell Blair Low

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INTRODUCTION

Many educators consider the shortage of qualified teaching personnel as one of the most serious problems in education. In the past this shortage has been primarily confined to the elementary level. However, the United States Department of Education (23, p. 47) states:

Long-run forecasts of population indicate that employment of secondary teachers should be higher throughout the forty-year period 1960-2000 than in 1950. The long range trend for a rising proportion of young people to attend high school is expected to continue. Greatly increased Federal and State aid to education might expand enrollments considerably. The trend toward enriching curriculum, offering special subjects, and extending instruction to adult classes may also further increase the demand for secondary school teachers.

For the past 20 years the demand for secondary teachers has been consistently small because of little change in the number of students at this level. However, with an increased birthrate of approximately 40 per cent between 1941 and 1948, and an all-time record of 4 million births established in 1954, it is likely to become a more serious problem to select and train enough qualified secondary teachers.

Not only is there likely to be an increased demand for teachers but, as indicated by Maul (10), the trend in the number of teachers becoming certified is decreasing. In 1950, the colleges turned out 433,734 bachelor degree candidates that qualified for certificates on the elementary and secondary levels. However, by 1953 this number had decreased 30.7 per cent, and by 1955 had decreased 41.1 per cent (14).

Along with an increased need for teachers and a decrease in the number of potential teachers, it is felt that the problems of teachers

leaving the profession, transferring to other districts and states, and teacher morale will be among the most serious that administrators, college education departments, and the teaching profession will have to face if the schools are to be staffed adequately. It was therefore felt that a follow-up study of Utah State Agricultural College graduates, who were trained to teach in the secondary schools, could be valuable in giving more information with regard to these problems.

Statement of problem

This study reports the results of a follow-up survey of a selected group of teachers trained on the secondary level at the Utah State Agricultural College. Graduates for the years 1948, 1951, and 1954, who qualified and applied for a Utah secondary teaching certificate were the subjects used in this study. Answers to the following questions were sought:

1. What number and percentage of the graduating classes was in this category?
2. What is the age, sex, and marital status of the subjects?
3. What is the geographical distribution of those who:
 - A. are now teaching (teachers)?
 - B. have taught but are not teaching now (former teachers)?
 - C. have never taught (non-teachers)?
4. What number and percentage of the graduates from the various teaching majors:
 - A. actually taught?
 - B. left the profession?
 - C. entered into other occupations?
5. What is the recency and amount of college credit since graduation and what degrees have been obtained:
 - A. by teachers?
 - B. by former teachers?
 - C. by non-teachers?
6. What was the average grade-point of:
 - A. teachers?
 - B. former teachers?
 - C. non-teachers?

7. Of those that entered the classroom to teach:
 - A. what were the numbers and the percentages?
 - B. how many, and for what reasons did those who did not enter teaching the first year after graduation have for not entering and for later starting to teach.
 - C. how many taught on the elementary level and what were their reasons for doing so?
 - D. how long did they teach in relation to the total possible teaching years?
 - E. what were the reasons for teachers remaining in, or moving to, their present positions?
 - F. what were the numbers and the percentages of teachers leaving the teaching profession?
 - G. what were the numbers and the reasons for former teachers returning to the teaching profession?
 - H. what reasons or factors would bring about a decrease in the number of teachers that dropout?
 - I. what are the occupations of former teachers?

8. Of those who did not enter the teaching profession:
 - A. what was the number and percentage?
 - B. what were their reasons for not teaching?
 - C. what occupations did they enter?
 - D. what improvements or factors would bring these people into the teaching profession?
 - E. are their present teaching certificates valid?

9. Data on salaries:
 - A. for teachers.
 - B. for former teachers.
 - C. for non-teachers.

Delimitation of the problem

This study is limited to the Utah State Agricultural College graduates of June 1948, 1951, and 1954 who completed the requirements and applied for a Utah Secondary Teaching Certificate.

Some of the Utah State Agricultural College trained teachers could have made application for secondary teaching certificates in other states and may not have applied for a Utah certificate. This study does not include this group.

These 3 graduating classes are believed to be somewhat representative of certified teachers qualifying for secondary teaching certificates during the last decade.

Definition of terms

Certified teacher: The term "certified teacher" as referred to in this study includes any graduate of the Utah State Agricultural College who qualified for a general secondary certificate as required by the Utah State Department of Education. A general secondary certificate qualifies the recipient to teach grades 7 through 12. Also included in the study are graduates with special certificates, i.e., industrial arts, home economics, and vocational agriculture.

Teacher: The term "teacher" in this study refers to any "certified teacher" who is actually under contract, and includes all positions within the educational profession, i.e., supervision, administration; and teaching positions in colleges, universities, and private schools.

Former teacher: The term "former teacher" in this study refers to anyone who entered into a paid teaching position and then left the teaching profession.

Non-teacher: The term "non-teacher" as referred to in this study includes any "certified teacher" who has never entered into a paid teaching position.

Entering the teaching profession: The phrase "entering the teaching profession" in this study refers only to "certified teachers" who have actually entered into a paid teaching position.

Need for the study

In modern society the greatest medium for transmitting the culture is the schools. It has been said that (17, p. 116) the American school is the cornerstone of its democracy. If young people are to receive the tools with which to think clearly and solve the problems of tomorrow, they must have competent teachers. Reeder (19, p. 2) sets this forth when he states:

As is the teacher, so is the school is a time worn truism. The teacher primarily determines whether the school will be efficient or inefficient. Compared with teachers, such things as buildings, equipment, and supplies, though they should never be neglected, are of secondary importance . . . It would be better for children to attend school in hovels granted that the hovels were comfortable, safe, and sanitary, there to be instructed by competent teachers, than to attend school in million-dollar palaces, there to be under tutelage of persons of inferior qualifications. Brains, not bricks and mortar, make an efficient school.

The following facts support further the need for a study of this type:

1. In general, fewer graduates holding teaching certificates are coming from the colleges today than at any time during the past 5 years.
2. The general demand for college trained personnel has been greatly increased since the end of World War II. Many fields are now open to young men upon graduation. Science and industry are offering more and better positions than ever before.
3. Opportunities for college trained women are expanding; school teaching is losing its prior claim to services of the educated women.
4. The present military concept of national defense requires that some time in the armed forces be spent by a majority of the male college graduates.
5. Only 56 per cent of the potential secondary certified teachers actually begin to teach the first year after graduation from college; and only 65 per cent of the women and 45 per cent of the men of this group remain in the teaching field (14, p. 40).
6. Fewer youth are currently coming to maturity because of the lower birth rates in the early thirties. Therefore, the supply is limited.

7. The best efforts to date, according to the NEA, have brought to college graduation no more than half of those who ranked in the top quarter of their high school graduating classes.

The present and future supply of qualified teachers must be viewed in relation to these facts. The teaching profession will become a true profession only when its personnel becomes stable, dropouts and turnovers are at a minimum, morale is high, and graduates meeting the certification requirements have an honest desire to enter the profession.

This study was undertaken to obtain information from some of the certified teachers who were trained at the Utah State Agricultural College. In view of the limited supply of teachers graduating, their course after graduation and their suggestions for improvement of the profession were felt to be important. It is hoped this study may supply information with regard to secondary education which will assist in understanding the problems of supply and demand of teachers. The study will also help to determine the extent to which teachers trained at the Utah State Agricultural College have taught in other states.

It is hoped that this study may also supply information to the School of Education at the Utah State Agricultural College to assist in the evaluation of its teacher-training program.

Procedure in obtaining data

The Utah State Agricultural College records on graduates obtaining secondary certificates could not be used, because not all graduates received their certificates through the School of Education. The names of those teachers applying for secondary teaching certificates in the years 1948, 1951, and 1954 were obtained from the State Office of Education Certification Department. These lists were then checked against the

Commencement Programs to determine those applicants who were Utah State Agricultural College graduates.

The files in the Utah State Agricultural College Alumni Office, the Registrar's Office, and the School of Education offices were all checked for the most current address of each graduate. Since the Alumni Office had been keeping these addresses current, and had a marriage file on most of the graduates, the use of these files was felt to be the most desirable. Many of the women were married, and had it not been for this special file, the work would have been very difficult. However, 11 per cent of the subjects were listed in the lost file. An additional 9 per cent of the questionnaires sent out were returned because the subject had moved and left no forwarding address.

To locate these subjects, the permanent records of the Registrar's Office were used. From these records the names of the subjects' parents and permanent home address were obtained. An alumni change-of-address card¹ was sent to the parents of the graduates. As a result, new addresses were periodically obtained from the Alumni Office and then questionnaires were mailed out.

The response from the subjects, whose addresses had been lost and then correct addresses obtained from parents, was so successful that all parents of graduates not responding to the first questionnaire were sent an alumni change-of-address card. Also, the parents of the subjects not responding to the first questionnaire, whose permanent addresses were listed in Cache County, were contacted by telephone to obtain the subject's correct address.

1. see appendix "C" for an alumni change-of-address card reproduced in full

REVIEW OF LITERATURE

This chapter will consider briefly some of the studies that have been made to determine what happens to certified teachers after college graduation. The chapter will be divided into 2 areas dealing with the literature from (a) other areas of the United States and (b) within Utah.

Studies applying to other areas of the United States

Teacher trends in supply and demand. The purpose of this study did not specifically include the supply and demand of teachers. However, as this phase may contribute to some explanations of the results in the follow-up survey of teachers, a brief resume has been given.

The most thorough study on a national level of the supply and demand of teachers was the one conducted by the National Education Association in 1955 (14) under the direction of Ray C. Maul. This study indicated that until recently the demand for new secondary school teachers has been relatively constant for 2 decades. The demand for new teachers has been primarily to replace those leaving the profession. The total increase in pupil population to date has had little influence on the annual demand for teachers. However, student enrollment will increase greatly in the decade ahead. The largest number of babies to be born in any 1 year was in 1954 with a total of 4 million. By the year 1966 these students will be in the seventh grade. By 1970 the secondary enrollments will have increased 69 per cent over the 1950 enrollments (20).

Meanwhile, the total number of college graduates who qualified to teach has decreased 41 per cent since 1950. Also, only 55.7 per cent of the eligible college graduates holding a certificate are attracted into the field of teaching. Of this group who do teach only 57.0 per cent will remain (14).

Reasons for current teacher turnover and dropouts. Eliassen and Anderson (6) listed the following causes for the current shortage of teachers: inadequate salaries, too heavy teaching-loads, discouraging social restrictions on teachers, low prestige of teachers, continued low standards of preparation and certification of teachers, unsuitable living conditions in many rural districts, lack of challenge or attractiveness in teaching, and inadequate teaching facilities.

A summary of 2 doctoral dissertations¹ which were cited by the Missouri State Teachers' Association (11, p. 6) lists the following reasons for teachers leaving the profession in Missouri:

Reasons	% Men	% Women
Salary considerations	47	28
Marriage and homemaking	0	31
Retired from teaching profession	11	10
Health consideration	8	17
Better teaching conditions in another state	10	4
Student in college or university	14	4
Adventure or desire to see new horizon	7	6
Better working conditions in another occup.	19	10
More security in teaching in another state	8	6
More security in other work	20	5
Others	12	16

More teachers left the profession in Missouri because of a low

1. Carl Raymond Renz, Certain Factors Relating to the Retention of Teachers in Districts Maintaining High Schools in Missouri, Doctoral Dissertation, University of Missouri, Columbia, 1948; Herman Boroughs, Some Factors Affecting the Recruitment and Retention of Missouri Rural School Teachers, Doctoral Dissertation, University of Missouri, Columbia, 1948.

salary than for any other reason.

Knisley (8) included the following reasons for teachers leaving the teaching profession as supported by his study: salary consideration, 12 per cent; better working conditions in other occupations, 3 per cent; retired, 10 per cent; general dissatisfaction with the teaching profession, 12 per cent; domestic duties, 40 per cent; teaching in private schools, 5 per cent; desire to travel, 3 per cent; went back to college, 3 per cent; miscellaneous answers, 13 per cent.

The findings of this study indicated that most teachers who leave the profession do so for reasons other than a distaste for teaching itself. Although there were a few who listed "disliked teaching" as a reason for dropping out, results of the study indicated that correction of such problems as undue administrative and community pressures, excessive extra-curricular demands, over-crowded conditions, and poor facilities would aid in reducing dropouts from the profession. Fifty-six per cent of those leaving teaching, or changing districts, were teachers with less than 3 years' experience.

A survey of 493 teachers over a 5-year period was conducted by the Minnesota State Congress of Parents and Teachers, in cooperation with the Minnesota Governor's Commission on Teacher Supply. The study was made to determine why teachers give up the teaching profession. Findings showed that marriage and children were the major factors among younger women teachers. Other principal reasons, for men and women combined, were:

1. desire for a better salary.
2. heavy class load.
3. dissatisfaction with administration or its policies.
4. better opportunities for personal recognition and higher pay in other professions.
5. lack of any social life.

Studies relating to length of professional service. An exhaustive investigation in this field was made by C. L. Clark (5) in 1928. He found that the average service for half a million teachers in the United States was 8.3 years, but the median service was 4.9 years, showing that most of those who drop out do so in the first few years of their teaching service. On an average there were fewer years served by secondary teachers than by elementary teachers.

Clarke also reported a 10-year study of women teachers in Wisconsin, excluding Milwaukee (5, p. 1268). The average amount of time served by this group before leaving the profession was 8.41 years. However, 69 per cent of the group left teaching after 1 to 5 years; and after 25 to 36 years, only 18 per cent remained.

The National Education Association Committee on Tenure (13, p. 6) published a study in 1939 which traced the employment for the first 5 years of 956 certified teacher graduates selected at random from the class of 1933, of state universities and colleges in 12 states. Nine per cent of the teachers responding to the questionnaire had never begun to teach. Of the 870 certified teachers who taught, 52.3 per cent taught all 5 years. The remaining 39 per cent who taught dropped out of teaching within this 5-year period. Eighteen per cent of the dropouts included occurred at the end of the first year of teaching. The certified teachers included in the National Education Association study actually rendered 76.2 per cent of the total possible years service.

The reliability of this study might be questioned because of insufficient returns. Three thousand questionnaires were sent out and only 956, or 31 per cent, were returned.

If it is assumed that the certified teachers most likely to return the questionnaire were those who were still teaching, then the survey

would be skewed in favor of this group.

The "mortality" of teachers during a "professional generation" was studied by Pylman (18) in 1945. The study indicated that 23 per cent of the 1920 graduates of the University of Michigan were actively engaged in the teaching profession at the time of the study in 1944. The study further indicates a higher mortality rate for men than for women.

Overn in 1931 (16) indicated in a study of 1000 individuals who began teaching in Minnesota that 51.5 per cent were teaching at the end of the first year, 25.1 per cent after 3 years, and only 6.2 per cent after 7 years. However, it should be noted that the study did not consider the individual who left the state to teach elsewhere. Thus, his figures do not represent dropouts from the profession, but dropouts from the profession in the state of Minnesota.

Utah studies

Teacher supply and demand. Sperry conducted a study on supply and demand of secondary school teachers in Utah using 3 years, 1946 to 1949, for data. This 3-year period was used to predict whether or not the supply and the demand of teachers for Utah over a 10-year period (1946-1956), was in balance. Sperry (21, p. 63) stated:

The critical shortage of high school teachers is past. However, there continues to exist a demand for teachers in a few fields such as home economics, and English. In the majority of subjects there are more teachers than will be needed in the 1949-50 school year. Fields showing the largest over-supply of teachers are social science and mens' physical education.

The supply and demand of Utah elementary and secondary teachers was studied by Williams (25) in 1949. By comparing the 1948 Utah Teacher Directory against the 1947 graduation rosters of the Utah teacher-training institutions, he was able to find the names of 50

per cent of the new graduates filling teaching positions in Utah. He further concluded that Utah's supply of teachers for the year studied did not nearly fill the need.

Teacher turnover and dropout. Sperry (21, p. 19) also found in his study that:

Of the 1,489 teachers employed in the county districts during the 1946-7, 245, or 16 per cent, left their positions. In the city districts a total of 681 were employed and of this number 76 teachers, or 11 per cent, left their teaching positions.

Sperry also found that the reasons teachers gave for leaving their positions in 1946-47 in Utah were:

Reasons	Men	Women	Total Leaving	Per cent
Married and quit	1	77	78	24.30
Transferred to other district	46	29	75	23.36
Entered other occupation	32	19	51	15.89
Other	23	27	50	15.58
No contract offered	14	16	30	9.34
Retired	9	6	15	4.67
Illness	1	9	10	3.12
Leave of absence	3	7	10	3.12
Deceased	2	0	2	.63
Total leaving	131	190	321	

Follow-up study. Hilton (7), of the University of Utah, in 1950 conducted a follow-up study of teachers of the College of Education of the University of Utah. This study covered both elementary and secondary teachers for the graduating classes of 1936, 1941, 1946, and 1949. The total number of graduates involved in the study was 842. The percentages of returns for the 4 years 1936, 1941, 1946, and 1949 were 57.0, 74.3, 80.6, and 85.4, respectively.

Hilton's study (7, pp. 76-7) concluded:

1. Only 16.7 per cent of the 1936 graduates who certified remained

in the profession, in the 1941 group 18.5 per cent remained, 36.8 per cent for 1946, and 73.4 per cent remained for the 1949 group after their first year of teaching.

2. A total of 45.8 per cent of the possible service years was performed by graduates of the study years.
3. Of the teacher service rendered, 87.9 per cent was in Utah.
4. Of the 647 trained teachers, 21.2 per cent never began teaching, 30.3 per cent began teaching and left the profession, and 48.5 per cent remained in the teaching profession.
5. The major reasons for those who never taught were: 40.6 per cent in graduate work, 22.5 per cent wanted more money, and 18.3 per cent reported no suitable placement.
6. The major reasons for those who dropped out of teaching were: 77.8 per cent of the women got married and discontinued, for the men 37.8 per cent entered the military service, 27.0 per cent needed more money, and 21.6 per cent went into graduate work.

Because of the variation in terms and procedure found in the studies of certified teachers after graduation, it is difficult to compare findings and draw valid conclusions. However, teacher salary, and marriage and family responsibilities were consistently found to be the major reasons for teachers leaving or not entering the field.

SUMMARY OF DATA

This chapter includes the findings of the follow-up study of the Utah State Agricultural College graduates who applied for secondary teaching certificates in the state of Utah for the years 1948, 1951, and 1954.

Number of certificates recommended

The Utah State Agricultural College recommended 601 people for Utah secondary teaching certificates during the years 1948, 1951, and 1954. However, 151 of the certificates recommended were obtained by students not receiving their Bachelor of Science degrees during any one of the years considered in this study (table 1).

The 450 graduates who received their secondary teaching certificates represented 22.6 per cent of the total number of graduates from the Utah State Agricultural College during the 3 years studied.

The percentage of Utah State Agricultural College graduates receiving certificates has decreased from 27.6 per cent in 1948 to 20.5 per cent in 1954 (table 2).

Procedure used to send questionnaires

The initial questionnaire¹ and an introductory letter² were mailed to each subject on August 25 or 26, 1955. On August 27, 1955, alumni cards³ were sent to parents of "lost" graduates. Upon receiving the correct addresses of these graduates, questionnaires were mailed to them. The response of the newly located subjects to the questionnaire was excellent. For this reason, on September 20, 1955, the parents of the

1. see appendix "A"
2. see appendix "B"
3. see appendix "C"

Table 1. Number of Utah secondary teaching certificates issued upon recommendation by the Utah State Agricultural College for the years 1948, 1951, and 1954

Year Certificate Issued	Number Receiving Certificate but Not Graduate of Year Issued	Number Graduating With B.S. Degree That Received Certificate	Total Number Receiving Certificates
1948	39	143	184
1951	62	170	241
1954	50	137	176
Totals	151	450	601

Table 2. Number and percentage of Utah State Agricultural College graduates receiving Utah secondary teaching certificates for the years 1948, 1951, and 1954

Year	Total Number of Graduates in Class	Number of Graduates Receiving Secondary Certificates	Percentage of Graduating Class Receiving Certificates*
1948	518	143	27.6
1951	799	170	21.3
1954	669	137	20.5
Totals	1986	450	22.6*

* There is a possibility that some graduates qualified for a Utah secondary teaching certificate and did not apply in the State of Utah. These students could have made application for certificates in other states, and therefore, would not be included in the above figures.

subjects not responding to the questionnaire were mailed an alumni card, or contacted by telephone if they lived in Cache Valley. A second questionnaire was then sent to the subject at the new address.

On October 12, all graduates who had failed to reply were sent another questionnaire with a personal letter⁴ attached. Some questionnaires were sent to the graduates' parents with the request that they be forwarded to the subject.

On October 23, the final attempt to obtain responses from the subjects was made by sending the questionnaire with a personal note⁵.

For more detail on procedure see "Procedure in obtaining data" on page 6 of this study.

Response to questionnaire

Of the 450 graduates receiving teaching certificates, correct addresses were found for 432 (96.0 per cent). From this, 411 (95.1 per cent) responded to the questionnaire. For each of the years 1948 and 1951, 96.3 per cent of the subjects responded; and in 1954, 92.4 per cent of the subjects participated. The percentages of returns for the study were 94.6 for men and 95.9 for women (table 3).

As indicated in figure 1, the teachers and former teachers responded to the questionnaire, by dates, in about the same proportion; whereas, the non-teachers were slower to respond and more followup letters were necessary to obtain their answers. The 4.1 per cent of the subjects who did not respond probably involved more non-teachers who were noticeably slower to respond (figure 1). If this assumption were true, the skewness in favor of teachers and former teachers would be only slight.

4. see appendix "D"

5. see appendix "E"

Table 3. Number and percentage of Utah State Agricultural College graduates for 1948, 1951, and 1954, holding Utah secondary teaching certificates, who responded to the survey

Year	Number Issued Certificates			Number of Correct Addresses Obtained			Per Cent of Correct Addresses Obtained			Number of Responses			Per Cent of Responses for Correct Addresses		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
1948	71	72	143	70	67	137	98.6	93.1	95.8	67	65	132	95.7	97.0	96.3
1951	112	58	170	110	54	164	98.2	93.1	96.5	106	52	158	96.4	96.3	96.3
1954	85	52	137	82	49	131	96.5	94.2	95.6	75	46	121	91.5	93.9	92.4
Totals and Percent	268	182	450	262	170	432	97.8	93.4	96.0	248	163	411	94.6	95.9	95.1

W. A. ... *...*

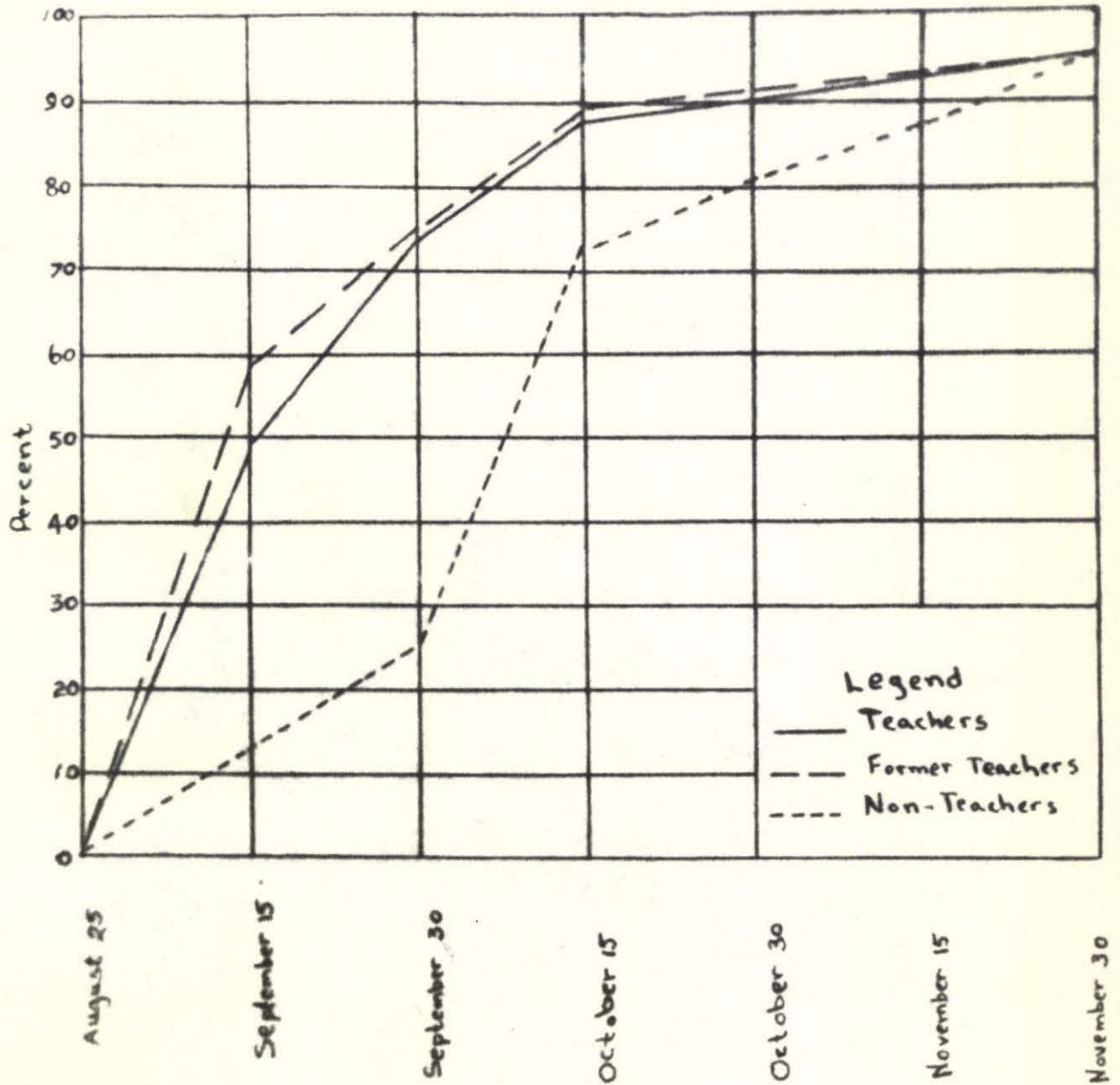


Figure 1. Dates and Percentages of Responses Received From Teachers, Former Teachers, and Non-Teachers.

Sex, age, and marital status of graduates

The total number of graduates for the 3 years who were issued Utah secondary teaching certificates was 450. Of this total, 59.6 per cent were men and 40.4 per cent were women.

The number of women qualifying for secondary teaching certificates has decreased in relationship to the number of men from 50 per cent in 1948, to 38 per cent in 1954.

There was very little age difference between the categories except that the average age of the male non-teacher for 1954 was 2 years lower than the teacher and former teacher for the same year. This was attributed to the younger graduate being compelled to fulfill his military obligation.

The percentages of male subjects who were married was 97.1 for the former teachers, 91.4 for the non-teachers and 92.3 for the teacher. The greater percentage of male graduates in the former teacher class can be partly explained in that the reason this group listed for leaving the teaching profession was that "salaries were too low." Several of this group stated that the teaching salary was inadequate to meet their increasing family responsibilities. One graduate stated: "If I am to dress my children properly and keep food in their mouth, and have a good standard of living, I cannot stay in teaching in Utah."

Of women graduates, 56.4 per cent of the teachers, 92.8 of the former teachers and 87.2 per cent of the non-teachers were married.

The reasons for these percentages were that the majority of the women in the former-teacher group indicated that they left the profession for "marriage and family responsibilities (table 19)." This was also the major reason women gave for not entering the teaching profession (table 21).

Table 4. Age and marital classification of the Utah State Agricultural College graduates of the years 1948, 1951, and 1954, who held secondary teaching certificates

Year	Teachers		Former Teachers		Non-teachers		Totals									
	Male	Female	Male	Female	Male	Female	Male	Female								
	Average Age	Per Cent Married	Average Age	Per Cent Married	Average Age	Per Cent Married	Average Age	Per Cent Married								
1948	34	97.8	31	76.5	34	100.0	30	97.1	33	100.0	30	100.0	34	98.5	30	92.3
1951	30	90.3	29	71.4	28	91.7	29	86.2	29	100.0	26	87.5	29	93.4	27	84.6
1954	28	88.5	24	40.2	28	100.0	23	60.0	26	80.6	25	70.0	27	86.7	25	50.0
Average and Per Cent	30	92.3	27	56.4	30	97.1	29	92.8	28	91.4	27	87.2				

Geographical distribution of graduates

A total of 26 states, 1 territory, and 7 foreign countries was listed by the subjects as their present location. Military service was partly responsible for this wide distribution. The 197 subjects who were teaching listed 18 states and 1 foreign country. Fifty and six-tenths per cent of all the subjects, and 59.4 per cent of the ones who were teachers resided in Utah. The following table shows that Idaho and California were next in receiving the services of the subjects who were teachers.

Location of Graduates	1948		1951		1954	
	% Men	% Women	% Men	% Women	% Men	% Women
Utah	49.2	47.7	53.7	51.9	41.0	60.9
Idaho	16.4	21.5	16.0	11.5	5.1	6.5
California	9.0	3.1	6.6	7.7	10.3	10.9

Additional data concerning the distribution may be found in table 32 in the appendix, and in table 5.

Because the major portion of the graduates remain in Utah, emphasis should be placed on requirements and conditions of this area. However, a number of graduates stated they had trouble obtaining teaching positions in other states and felt that at least requirements of surrounding states should be met also. One woman graduate of 1951, now living in California stated:

There is a great deal of red tape and difficulty in obtaining a teaching contract in San Francisco if your teaching certificate is from a state other than California. The teaching profession should establish a standard on a national level (requirements, tests, etc.) that would enable a teacher to teach in any state, I believe.

Table 5. Geographical distribution of Utah State Agricultural College graduates for 1948, 1951, and 1954, who held secondary teaching certificates, and were teaching at the time of the study

Area	1948		1951		1954		Totals			
	Men	Women	Men	Women	Men	Women	Men	Women	Total	Per Cent
Arizona	0	0	0	0	1	0	1	0	1	.5
California	3	1	4	1	2	2	9	4	13	6.1
Colorado	1	0	0	0	0	0	1	0	1	.5
Florida	0	0	0	0	1	0	1	0	1	.5
Idaho	9	4	14	1	3	3	26	8	34	17.3
Indiana	0	0	1	0	0	0	1	0	1	.5
Iowa	2	0	0	0	0	0	2	0	2	1.0
Minnesota	0	1	0	0	0	0	0	1	1	.5
Montana	1	0	0	0	0	0	1	0	1	.5
Nevada	1	0	3	0	1	2	5	2	7	3.6
New York	0	0	2	0	0	0	2	0	2	1.0
Oregon	2	1	1	0	1	0	4	1	5	2.5
So. Dakota	0	0	1	0	0	0	1	0	1	.5
Texas	0	0	0	0	0	1	0	1	1	.5
Utah	25	8	34	4	23	23	82	35	117	59.4
Washington	1	0	0	0	0	0	1	0	1	.5
Wisconsin	0	2	0	0	0	0	0	2	2	1.0
Wyoming	1	0	1	0	3	0	5	0	5	2.5
Canada	0	0	1	0	0	0	1	0	1	.5
Totals	46	17	62	6	35	31	143	54	197	99.4

Classification of graduates by major

This section deals with the graduates' major field of college study.

A total of 23 different majors were listed by those who participated. A summary (table 6) of the 23 majors was made grouping related majors into 10 categories. Twenty and four-tenths per cent of the graduates listed physical education as their major. This percentage was composed of 51 men and 33 women.

Language arts ranked second with 15.1 per cent of the total number of graduates. Home economics was third with 13.4 per cent; and social science fourth with 11.4 per cent. The 3 categories having the least graduates were biological science (3.6 per cent), commerce (3.6 per cent), and exact science (5.3 per cent).

According to Sperry (21), Bartlett (3), Maul (10), and the United States Department of Labor (24), some areas of secondary education are overcrowded, viz. English, social studies, and boys' physical education; whereas, in girls' physical education, home economics, and science, there exists a demand for teachers.

It appears that more guidance should be offered to the students with respect to the supply and demand of teachers in various teaching fields in order to bring the supply and demand into balance. One male graduate who majored in mathematics and is now an Engineering Aid stated:

I believe more time should be used in acquainting the students with the advantages of each occupation, such as, where jobs are available, salaries paid, if traveling is necessary, etc..

Another male graduate who majored in physical education stated:

I feel that more guidance in the early years of college would have placed me in a different field and I would not be in my present situation. I would like to see the Utah State Agricultural College Placement Bureau keep a closer record of their

Table 6. Summary of classification by majors of the Utah State Agricultural College graduates for the years 1948, 1951, and 1954, who held secondary teaching certificates

Major	Teachers			Former Teachers			Non-teachers			Totals			
	Men	Women	Per Cent	Men	Women	Per Cent	Men	Women	Per Cent	Men	Women	Total	Per Cent
Physical Education	28	18	54.8	5	12	20.2	18	3	25.0	51	33	84	20.4
Language Arts	15	9	38.7	1	21	35.4	3	13	25.9	19	43	62	15.1
Home Economics	0	18	32.7	0	23	41.8	0	14	25.5	0	55	55	13.4
Social Science	18	4	46.8	6	6	25.5	13	0	27.7	37	10	47	11.4
Industrial Arts	32	0	71.2	4	0	8.8	9	0	20.0	45	0	45	10.9
Vocational Agriculture	23	0	59.0	8	0	20.5	8	0	20.5	39	0	39	9.4
Fine Arts	8	3	41.1	1	4	18.5	6	5	40.4	15	12	27	6.5
Exact Science	11	0	50.0	3	1	18.2	7	0	31.8	21	1	22	5.3
Commerce	2	3	33.3	1	2	20.0	3	4	46.7	6	9	15	3.6
Biological Science	6	0	40.0	6	0	40.0	3	0	20.0	15	0	15	3.6
Totals	143	55	48.2	35	69	25.3	70	39	26.5	248	163	411	

graduates who do not enter the teaching field immediately after graduation. A periodic letter stating the up-to-date situation on jobs available is one of the many ways to keep in contact with potential teachers. Personally, I found the system reluctant to give out information.

Just a comment that Utah as a whole could more fully prepare graduates by teaching the requirements (as extensive as possible) of surrounding states.

The major fields having the greatest dropout of teachers, as indicated by the percentage of former teachers, were home economics (41.8 per cent), biological science (40.0 per cent), and language arts (35.4 per cent). The dropouts for home economics and language arts were largely women who left because of family responsibilities.

Of the 10 categories commerce (46.7 per cent), fine arts (40.4 per cent), and exact science (31.8 per cent), had the largest percentages of graduates not entering the teaching profession.

College training and degrees obtained since graduation

This section considers the amount of college credit and degrees obtained by the subjects since graduation. The section has been divided into three groups (a) teachers, (b) former teachers, and (c) non-teachers.

Teachers. The teacher group exceeded the other 2 groups in the percentage receiving college credit, in average number of quarter hours taken, and in the number of degrees obtained since graduation. However, when the men and women are considered separately, the findings are slightly different. Seventy-nine per cent of the men in this group received college credit. The male teacher averaged 23.3 quarter hours and 26.5 per cent of them received advanced degrees (table 7).

The women teachers have not shown nearly as much enthusiasm in advanced training as the men of this group. They averaged 6.6 quarter hours of college credit, with 3.6 per cent of them receiving an advanced degree.

Table 7. Amount of graduate credit, and number of degrees, obtained since graduation by the subjects who are still teaching

Year	Total Number			Per Cent Receiving Credit			Per Cent Receiving Degrees		Average Number of Hours*	
	Men	Women	Total	Men	Women	Total	Men	Women	Men	Women
1948	46	17	63	89.1	64.7	82.5	47.8	11.8	39.0	14.4
1951	62	7	69	79.0	57.1	76.8	12.8	0.0	20.3	4.7
1954	35	31	66	65.1	35.5	51.5	0.0	0.0	8.3	2.7
Totals	143	55	198	79.0	47.3	70.2	26.5	3.6	23.3	6.6

* Average number of hours was calculated by dividing the total number of graduates in the category into the total hours taken.

Only 47.3 per cent of the women teachers had taken any advanced college training.

Of the 1948 male graduates who remained in teaching, 47.8 per cent have received graduate training. This was exceeded by both male former teachers (49.0 per cent, table 8) and non-teachers (57.1 per cent, table 9) for the year 1948. However, the male teachers for the years 1951 and 1954 exceeded the other 2 groups.

One male graduate who majored in political science and is now teaching had the following comment to make on training:

It is my opinion that if the educational program offered by the universities of today offered less history and philosophy of education and more practical methods of education, there would be more good derived from attending universities. It is not the amount of quarter hours that count but the practical training received in obtaining these hours I can truthfully say that I have never taken at the U. S. A. C. or the University of Alberta a course in how to teach social studies, or language, or biology, or any other course. I took lots of courses in why something should be taught and what Dewey, Kant, Spencer, and the rest of these eminent gentlemen thought about education, but never did I get a course in HOW social studies should be taught, or HOW English composition should be taught. I think that if the School of Education would give more practical training in methods of teaching, they would be doing their students a great service.

Former teachers. The graduates who entered the teaching profession and then left averaged less graduate training than the teacher group, but more than the non-teacher group from the three study years.

Seventy-four per cent of the men who left teaching had received credit since graduation and they averaged 31.6 quarter hours of schooling with 14.3 per cent of them receiving higher degrees (table 8).

The women who left the profession averaged less than the women of the teacher group, but more than the non-teacher group.

Non-teachers. Ten per cent of the women and 45.7 per cent of the men of this group had received advanced training since graduation.

Table 8. Amount of graduate credit, and number of degrees, obtained since graduation by the subjects who are former teachers

Year	Total Number			Per Cent Receiving Credit			Per Cent Receiving Degrees		Average Number of Hours*	
	Men	Women	Total	Men	Women	Total	Men	Women	Men	Women
1948	14	35	49	78.6	37.1	49.0	21.4	5.7	50.1	7.2
1951	12	29	41	91.7	45.2	58.5	16.7	0.0	29.1	4.0
1954	9	5	14	44.4	0.0	28.6	0.0	0.0	6.3	0.0
Totals	35	69	104	74.1	37.7	50.0	14.3	2.9	31.6	5.3

* Average number of hours was calculated by dividing the total number of graduates in the category into the total hours taken.

No higher degrees were obtained by the women and the average number of quarter hours was 1.2.

The 7 males of the 1948 class who had never taught all received some college education after graduation, and 57.1 per cent of them obtained an advanced degree with an average number of 77.3 quarter hours for each man (table 9).

Several of the men commented that there was little inducement for teachers to obtain advanced degrees in majors other than Educational Administration. One of these comments by a graduate of 1951, who has chosen the army as a career, was:

I feel very strongly that there is too little inducement for advancing in the teaching profession. The difference in salary for obtaining a Master's Degree is hardly worth the time it takes to sweat out the degree. In Utah there is no inducement whatsoever for one that wants to do graduate work beyond a Master's. It has been, and for a long time, a known fact, that to advance in the teaching profession you must become an administrator. Not all teachers have capabilities of an administrator, nor are there opportunities enough anyhow. Persons should be rewarded for preparing themselves professionally--in the field of their choice--and not in some field that is forced upon them because it contains the only real advancement. Better teachers mean better trained students who in turn gain more both esthetically and physically throughout their lives. It is the same merry-go-round that we have heard for years, but the one also that is hard to demonstrate to the lay people due to the time interval to actually see the fruits. It is certainly my hope that eventually a teacher can be rewarded for being a teacher.

Tables 29, 30, and 31 of appendix F show that 26 per cent of the graduates receiving graduate credit were in educational administration and 44.8 per cent of all the teachers who received an advanced degree were in this area. The second ranking graduate major was physical education with a percentage of 13.2, followed by industrial arts with 9.7 per cent, and home economics with 7.9 per cent.

This study does not attempt to explain the supply and demand of teachers; however, the number of graduates listing positions not

Table 9. Amount of graduate credit, and number of degrees, obtained since graduation by the subjects who have never taught

Year	Total Number			Per Cent Receiving Credit			Per Cent Receiving Degrees		Average Number of Hours*	
	Men	Women	Total	Men	Women	Total	Men	Women	Men	Women
1948	7	13	20	100.0	7.7	40.0	57.1	0.0	77.3	.1
1951	32	16	48	43.8	12.5	33.3	25.0	0.0	28.2	1.6
1954	31	10	41	35.5	10.0	29.3	12.9	0.0	14.1	2.0
Totals	70	39	109	45.7	10.3	33.0	22.9	0.0	26.9	1.2

* Average number of hours was calculated by dividing the total number of graduates in the category into the total hours taken.

available in desired area was larger with those graduates majoring in boys' physical education. A typical response from one of these graduates was:

In this area (metropolitan) and radii of 200 miles the P. E. field is crowded and it is too hard to locate a decent position without making it an expedition. Also not having been a star in my field adds to making it harder, not to mention, not having any teacher training other than practice teaching. At present I am employed as a sales correspondent and quite enjoy it.

Analysis of grade point of graduates

The basic problem of teacher shortage goes much farther than just not enough teachers. According to the National Manpower Council (15, p. 134):

It is quite clear that there are not enough people who want to amass the necessary qualifications and go into teaching. What is much less well known is that the people who do elect to enter the teaching field, on the average, are fairly poor academic caliber, compared with those who elect to enter other fields.

It was statements like this one that caused the writer to analyze the grade points of the graduates included in this study to determine whether or not there was any significant difference between the three groups of graduates: teachers, former teachers, and non-teachers.

Grade points were obtained for 399 of the 411 graduates who responded to the questionnaire. Upon the analysis of the data obtained from the questionnaires it was felt that there would be little justification for considering women. The reason for this was that 74.4 per cent of the women gave "marriage" as their reason for not entering teaching and 87.0 per cent of those women leaving the teaching profession listed "marriage and family responsibilities." A somewhat similar situation existed among the males of the 1954 graduating class. Of this group 48.7 per cent of the male former teachers and those who had never

taught listed "military service" as their reason.

It was felt that to consider these 2 groups would tend only to distort the results. Therefore, the men for the years 1948 and 1951 were the only groups considered in this analysis. This group was composed of 146 teachers, 32 former teachers and 69 men who had never taught (non-teachers). The average grade points were 1.8640 for teachers, 1.8141 for former teachers, and 1.8789 for non-teachers.

Fisher's (F) analysis of variance was used to analyze the data. Since a greater source of variation of the mean was found within the groups of teachers, former teachers, and non-teachers than between these groups it was concluded that there was no significant difference existing.

Other studies (2, 17, 22) indicate that people entering the teaching profession are considerably above the average of the general population.

For calculations for Fisher's (F) see appendix G.

Data concerning those subjects who entered the teaching profession

This section considers the data obtained from the graduates of Utah State Agricultural College who received secondary certificates during the years 1948, 1951, and 1954 and indicated they were teaching or had taught at some time since graduation.

Number and percentage. Of the 411 graduates included in the study, 73.5 per cent (302) have taught for 1 year or more (table 10).

The percentage of men of the 1948 and 1951 classes entering the profession exceeded the percentage of females entering the profession by 9.6 and .6 per cent respectively. However, in 1954 the women exceeded the number of men by 19.6 per cent. The low percentage of men (58.7) entering the teaching profession for 1954 can partly be explained by the fact that 46.3 per cent of the male graduates were in the armed

Table 10. Number and percentage of the Utah State Agricultural College graduates for the years 1948, 1951, and 1954, who entered the teaching profession

Year	Total Class Response			Number That Have Taught			Percentage of Class That Has Taught		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
1948	67	65	132	60	52	112	89.6	80.0	84.8
1951	106	52	158	74	36	110	69.8	69.2	69.6
1954	75	46	121	44	36	80	58.7	78.3	73.5
Totals and Per Cent	248	163	411	178	124	302	71.7	75.5	73.5

services (table 10).

Number and reasons for a lapse after graduation before entering the teaching profession. Thirty-five (11.2 per cent) graduates who entered teaching let 1 or more years lapse after graduation before beginning to teach. Of the 35 subjects 26 were men and 9 were women (table 11).

Table 11 shows the individual reasons that were checked for the lapse in years after graduation before entering the teaching profession. "Further schooling" was checked by 10 (28.6 per cent) of the subjects to be the major reason for lapse. "Military service" and "no position available in desired area" ranked next with 25.7 and 20.0 per cent respectively.

Five (14.3 per cent) of the males checked "better job" as their reason for not going directly into teaching. Three of them indicated that they were now supplementing their income by teaching.

Number and reasons given by secondary teachers teaching on the elementary level. Of the total number of teachers and former teachers (302), 39 or 12.9 per cent of them entered the elementary level to teach for 1 or more years. Of these 39 elementary teachers, 4 males and 7 females were classified as former teachers, leaving 82.1 per cent of this group still teaching on the elementary level. This percentage was considerably higher than the percentage (48.2) of graduates who remained in the secondary level. C. L. Clarke (5) also found in his study that on the average there were fewer years served by secondary teachers than by elementary teachers.

The major reason (table 12) listed for entering the elementary level rather than the secondary level was "elementary position available in desired locality." This reason was checked by 13 of the 21 men and 2 of the 18 women. This major reason accounted for 37.5 per cent of the

Table 11. Reasons given by Utah State Agricultural College graduates for a lapse of 1 or more years between graduation and the beginning of teaching

Reasons for Lapse	1948			1951			1954			Totals			Per Cent
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	
Further Schooling	4	2	6	3	0	3	1	0	1	8	2	10	28.6
Military Service	3	0	3	6	0	6	0	0	0	9	0	9	25.7
No Position Available in Desired Area	1	1	2	2	2	4	0	1	1	3	4	7	20.0
Better Job Available*	1	0	1	3	0	3	1	0	1	5	0	5	14.3
Missionary Work	0	2	2	0	0	0	0	0	0	0	2	2	5.6
Family Responsibility	0	1	1	0	0	0	0	0	0	0	1	1	2.9
Professional Football Career	1	0	1	0	0	0	0	0	0	1	0	1	2.9
Totals	10	6	16	14	2	16	2	1	3	26	9	35	100.0

* Now teaching to supplement income.

Table 12. Number and reasons given by Utah State Agricultural College graduates, holding secondary certificates, entering the elementary level to teach

Number and Reasons	1948		1951		1954		Totals		Per Cent
	Male	Female	Male	Female	Male	Female	Male	Female	
Number entering elementary level to teach*	5	15	12	1	4	2	21	18	^a 12.9
Elementary position available in desired locality	3	2	6	0	4	0	13	2	37.5
Position not available on secondary level where husband is located	0	8	0	1	0	1	0	10	25.0
Went into administration	1	0	3	0	0	0	4	0	10.0
Preference for elementary	0	2	1	1	0	0	1	3	10.0
Personality not strong enough to command respect	1	0	2	0	0	0	3	0	7.5
Shortage of elementary teachers	1	2	0	0	0	0	1	2	7.5
Never seriously planned to teach on secondary level	0	0	0	0	0	1	0	1	2.5

* Four males and 7 females of the total are now classified as former teachers.

^a Percentage obtained by dividing the total number (302) of teachers and former teachers into the total number of males and females that have taught on the elementary level.

number of responses. Ten of the 18 women listed "position not available on secondary level where husband is located" as their major reason for having taught on the elementary level.

Two other reasons, "went into elementary administration," and "preference for elementary level", received 10.0 per cent each of all responses given.

Other reasons and percentages are given in table 12.

Years of teaching service. This section contains a resume of the percentage of the subjects who remained in the teaching profession at the start of each school year. A comparison was made between the possible years of teaching service each group could have given and the service that was actually rendered.

More (74.2 per cent) of the 1948 graduates (table 13) entered the teaching profession the first year after graduation than did the graduates of 1951 (55.1 per cent) and 1954 (62.8 per cent). After 8 years 47.7 per cent of all men and women who graduated in 1948 were still teaching. Forty-four and three-tenths per cent of the 1951 subjects were still teaching at the beginning of 5 years of service, and 54.5 per cent of the 1954 graduates were still in teaching after 1 year.

Probably the most significant information revealed in table 13 was that men, once they enter the teaching field, remain for a longer period than do women. The number of men entering the teaching profession for 1951 increased from 53.7 per cent for the first year to 59.4 per cent for the fifth year after graduation. This was attributed mostly to the fact that male subjects had completed their military obligation and then entered the profession (table 11). The women for this same period decreased from 55.1 per cent the first year to 13.5 per cent the fifth year after graduation (table 13). Because more men remain in teaching those

Table 13. Percentage of the subjects who were in the teaching profession at the start of each school year

No. of Years Taught	1948			1951			1954		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	77.6	70.8	74.2	53.7	57.7	55.1	53.3	78.3	62.8
2	82.0	55.4	68.9	49.1	50.0	49.4	45.3	69.6	54.5
3	76.1	38.5	57.6	51.9	28.8	44.3			
4	71.6	20.0	46.2	55.7	19.2	43.7			
5	71.6	24.3	48.5	59.4	13.5	44.3			
6	71.6	23.1	47.7						
7	67.2	23.1	45.5						
8	68.7	26.2	47.7						

who really intended to teach and are interested in the field should be sought to fill the teacher demand which is not being met in Utah (20) or the nation thus providing a more permanent teaching staff.

In 1953-54 (26, p. 25) there were 1016 letters of authorization in the State of Utah; 177 of these were on the secondary level. The teaching profession would be benefited if more of the professionally trained teachers would enter and remain in teaching.

In comparing the actual teaching service rendered with the possible years that could have been rendered, table 14 indicates approximately 58 per cent for the years 1948 and 1954, but only 48.8 per cent for the 1951 class.

The overall percentage realized by the subjects for the 3 years was 55.4. However, the percentage realized by the male graduates was 62.1 as compared to 43.4 per cent for the women subjects.

The largest percentage of teachers leaving the profession was within the first 3 years of teaching. From the fourth year on as indicated by subjects of the 1948 group, the change is small.

Reasons for teachers moving to or remaining in their present teaching positions.

Of the 302 graduates who entered teaching, 65.6 per cent remained in the teaching profession. These graduates who are still teaching gave 29 different reasons (table 15) for remaining in, or moving to, their present teaching positions. The average number of reasons checked by the men teachers was 2.8, by the women teachers 1.9, giving an average number of 2.5.

One hundred and six teachers (53.5 per cent) indicated "better salaries" as their reason for moving or remaining in their present teaching positions. Eighty-six of these 106 teachers listing this as a major consideration for remaining in, or moving to a new position were men. Only 20 (36.4 per cent) women checked this as a major reason.

Table 14. Comparison, by class, of the total years of teaching service rendered and the possible years of teaching service by the subjects of the study

Class	Total Years Taught			Total Possible Years Subjects Could Have Taught			Per Cent Realized		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
1948	381	203	584	512	502	1014	74.4	40.4	57.6
1951	286	100	386	530	260	790	54.0	38.4	48.8
1954	74	68	142	150	92	242	49.3	73.9	58.7
Totals	741	371	1112	1192	854	2046	62.1	43.4	55.4

Table 15. Reasons that Utah State Agricultural College graduates of the study years who held Utah secondary certificates, gave for remaining in, or moving to, their present teaching positions

Reasons	Men	Women	Total	Per Cent
Better salaries	86	20	106	21.2
Desired to settle in this community	77	23	100	20.0
Greater opportunity for professional advancement	60	10	70	14.0
Larger district of school system	48	6	54	10.8
Better tenure	24	3	27	5.4
Health-personal or family	16	8	24	4.8
Smaller district or school system	13	7	20	4.0
Change in family residence	5	14	19	3.8
High cost of living	10	2	12	2.4
Poor living conditions	10	1	11	2.2
Restrictions on teachers (personal)	9	1	10	2.0
Educational philosophy conflicted with policies	7	1	8	1.6
Too many community responsibilities	5	1	6	1.2
Others*	27	5	32	6.4
Total number of reasons checked	397	102	499	
Number of teachers responding	143	55	198	

* Too many personality conflicts with former administration, faculty, or school board, resentful attitude of laymen toward teachers, Mormon religion made Utah impossible, area better to go with my ranch, mine, contracting, etc., good faculty to associate with, better opportunity to find husband or wife, closer to summer employment, excellent leadership by superintendent and principal, better retirement system, to work with Catholic church, own property in area, too many responsibilities in system, too much travel, required to teach in fields other than major, teaching is good steady job, no contract offered.

The second ranking reason was "desired to settle in this particular community." One hundred, or 50.5 per cent, of all teachers checked this reason. It was checked by 54.5 per cent of the men teachers and by 41.8 per cent of the women teachers. This reason ranked first with female teachers and second with male teachers.

The third, fourth, and fifth ranking reasons for teachers remaining in, or moving to a new position were "greater opportunity for professional advancement" (14.0 per cent), "larger district or school system" (10.8 per cent), and "better tenure (5.4 per cent)."

In comparing the reasons marked most frequently by teachers, according to year of graduation, it was found that the teacher graduates for the year 1948 had a larger percentage of males checking salaries as a reason than did the 1951 or 1954 graduates. For further information on salaries see page 63 of this study.

Some of the reasons for moving to a new district or remaining in their present positions that were not included on the questionnaire, but listed by the teachers under "others" were:

1. The Mormon religion made Utah an impossible place to teach. (3 responses)
2. Teaching in this area goes better with my farming, or mining, interests. (3 responses)
3. Better opportunity to find a husband or wife. (3 responses)
4. Close to summer employment. (2 responses)
5. Excellent leadership by superintendent and principal. (2 responses)
6. Have a good faculty to associate with. (3 responses)

See table 15 for other reasons which teachers gave for remaining in their present teaching positions or moving to new districts.

Number leaving teaching. Of the 302 graduates who taught, 104 (34.4 per cent) left the teaching profession.

The percentage of graduates leaving the profession during an 8-year period was 43.8 for the year 1948; 37.3 per cent left during a 5-year period (class of 1951); and 17.5 per cent left after 1 year of teaching (class of 1954).

The average percentage of females leaving the teaching profession was 55.6. However, only 19.7 per cent of the males who started to teach left the profession. The lowest percentage of men (16.2) leaving their teaching positions was found among the 1951 group. The highest dropout was found in 1948, with 23.3 per cent of the teachers leaving; and in the 1954 group, 20.5 per cent dropped out of teaching after only 1 year (table 16). The 1954 group of dropouts included 9 males, 5 of whom checked "salaries too low" as their major reason for leaving the profession (table 17).

Number and reasons given for interruption of teaching service. Of the graduates who have taught and then left for 1 or more years, 15 (12.6 per cent) have re-entered (table 17). Of the graduates of 1951 that left, 14.6 per cent have returned; and 14.0 per cent of the 1948 graduates who left are now teaching. None of the 1954 dropouts have returned because only 1 year of their record was covered by the study. The men accounted for 73.3 per cent and the women for 26.7 per cent of this group.

The major reasons for interruption given by graduates returning to the teaching profession are listed in table 18. Three of the 5 teachers checking "better jobs offered" were males. They have since returned to teaching to supplement their income. Three of the men listed "military service" as their reason for interruption. Other reasons for interruption "family responsibility" and "needed more money" were listed by 3 who

Table 16. Number and percentage of teachers leaving, and remaining in, the teaching profession for the 3 subject groups.

Year	Total Number That Taught			Per Cent That Left Teaching			Per Cent That Remain in Teaching		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
1948	60	52	112	23.3	67.3	43.8	76.7	32.7	56.2
1951	74	36	110	16.2	80.6	37.3	83.8	19.4	62.7
1954	44	36	80	20.5	13.9	17.5	79.5	86.1	82.5
Totals and Percentages	178	124	302	19.7	55.6	34.4	80.3	44.4	65.6

Table 17. Number of subjects, who left the teaching profession for 1 year or more, and then returned

Year	Number Leaving ^a	Number Returning	Per Cent
1948	57	8	14.0
1951	48	7	14.6
1954	14	0	0.0
Totals	119	15 ^b	12.6

^a Total number leaving was obtained by adding the number who left the teaching profession and the number who had left and returned.

^b Includes 4 women.

Table 18. Reasons given for interrupting teaching by those Utah State Agricultural College graduates included in the study^a

Reasons for Interruption	1948		1951		Totals			
	Men	Women	Men	Women	Men	Women	Total	Per Cent
Better job offered ^b	3	2	0	0	3	2	5	33.3
Needed more money ^c	0	0	3	0	3	0	3	20.0
Military service	0	0	3	0	3	0	3	20.0
Further schooling	1	0	1	0	2	0	2	13.3
Family responsibility	0	2	0	0	0	2	2	13.3
Totals	4	4	7	0	11	4	15	99.9

^a None listed for 1954.

^b The 3 males indicated that they were now teaching to supplement their income.

^c Left the state and then secured a better teaching position with a larger salary.

indicated they went to another state and then secured a better paying teaching position, and "further schooling."

Reasons given by former teachers for leaving the teaching profession.

The former teachers indicated 18 different reasons for leaving the teaching profession (table 19). They were asked to check or list 1 or more reasons. The average number of reasons checked was 1.5. The men listed an average of 2.3 and the women 1.1 reasons.

Sixty out of 69 (87.0 per cent) of the women responding to this question listed "marriage and family responsibilities" as the reason for leaving the teaching profession. Only 2 (5.7 per cent) of the males gave this as the reason and both of them commented that they needed a larger income to meet the needs of their growing family.

Twenty-six out of 35 males (74.0 per cent) listed "salaries too low" as the reason for leaving the teaching profession and only 2.9 per cent of the women listed this as their reason. Such researchers as Hilton (7), Knisely (8), Renz (11), and Boroughs (11), support the finding that salary is a major consideration for leaving the profession.

"Better working conditions elsewhere" was ranked second by the men as a reason for leaving the teaching profession with 37.1 per cent so indicating, but none of the 69 women checked this reason.

The next 5 reasons ranked by the males were "teaching load too heavy-no limit to hours of work" (31.4 per cent), "required to teach in field other than major" (17.1 per cent) "further education" (17.1 per cent), "inadequate merit recognition, advancement, or incentive" (14.3 per cent), and "greater professional advancement elsewhere (11.4 per cent)."

The reason "position not available in desired area" was the second ranking reason for women and was checked by 5 (7.3 per cent) of them.

Table 19. Reasons given for leaving the teaching profession by those graduates of the Utah State Agricultural College included in the study

Reasons for Leaving the Teaching Profession	Men	Women	Total	Per Cent
Marriage and family responsibilities	2	60	62	39.5
Salaries too low	26	2	28	17.8
Better working conditions elsewhere	13	0	13	8.3
Teaching load too heavy- no limit to hours	11	1	12	7.6
Required to teach in field other than major	6	1	7	4.5
Further education	6	1	7	4.5
Dislike teaching	2	3	5	3.2
Position not available in area	0	5	5	3.2
Inadequate merit recognition	5	0	5	3.2
Greater professional advancement elsewhere	4	0	4	2.5
Others*	6	3	9	5.6
Contract not offered	0	0	0	0.0
Total No. of reasons checked	81	76	157	
Number responding	35	69	104	
Average No. reasons	2.3	1.1	1.5	

* Military service, missionary work, better retirement, no personal freedom, wanted better supervisory backing, better tenure elsewhere, opportunity to travel

Women who had left were generally more satisfied with teaching than men.

A typical response from a woman dropout was:

I enjoyed my teaching very much and wish that I could be teaching again. The hours are excellent for a wife and mother. The salary is superb in relation to clerking, secretarial work, or other jobs I might do. I hope that within the next year I will find it possible to re-enter the teaching profession.

With the present and future demand for elementary and secondary teachers, it is imperative that the turnover of teachers in our schools be reduced to a minimum. Also, it is imperative that the teacher "drop-outs" be reduced as much as is humanly possible. This reduction in teachers leaving is necessary from at least 2 standpoints: first, the lack of qualified teachers; and second, retention of better trained teachers in the positions in which they are now employed. The importance of this second point is verified by Chamberlain (4, p. 194) who states:

If experience on the part of the teacher contributes in general to increased efficiency in the classroom, and there can be little doubt that it does, particularly for the first few years, a large per cent of turnover is certain to produce a poorer educational product than would result if the teaching staff remained relatively stable. A high percentage of withdrawals from the profession, or any other condition that makes necessary the employment of relatively large numbers of inexperienced teachers each year, represents, then, an undesirable situation.

Although there were a few who dropped out of the teaching profession because of a dissatisfaction with teaching, the findings of the study seem to indicate a need for such changes as improvement in salaries, lessening of overcrowded conditions, elimination of undue administrative and community pressures, and improvements in buildings and equipment. These changes would aid in eliminating dropouts and bringing more qualified teachers into the profession. Although the changes are large the problems of the individual districts, help from the education departments of the state, colleges, and universities will certainly be needed. Armstrong (1, p. 49) states:

There is greater competition between teaching and other occupations today than there was before World War II. In the years before World War II teaching was something of a preferred occupation. It provided sure income, even though the salary was small. This was perhaps the major reason why the percentage of the total college enrollment preparing for teaching was much higher before than after World War II.

Occupations of former teachers. Tables 22 and 23 list the occupations of all male and female former teachers and non-teachers. This section is concerned only with the occupations of the former teacher group. There were 20 different occupations listed and because of difficulty in combining these occupations into categories they are listed separately for the male former teacher in table 22.

Five (13.9 per cent) of the 34 male former teachers listed salesman as the occupation they entered after leaving the teaching profession; farming ranked second with 4 men (11.1 per cent); engineering and electronics, and military service were listed by 3 individuals (8.3 per cent) for each occupation. Accountant, agricultural specialist, and store clerk received 5.6 per cent each.

In contrast to the varied positions listed by the male former teacher, only 8 occupations were listed by the female group. Eighty one and two-tenths per cent of the women listed "homemaking" as their occupation. The position of "secretary" was given by 7.3 per cent. Other occupations as listed in table 23 accounted for 11.5 per cent of the occupations listed by the women who left the teaching profession.

Data concerning those subjects not entering the teaching profession

This section will be concerned with the data on the subjects who have never entered the teaching profession.

Number and percentage. Of the 411 graduates, 109 (26.5 per cent) have never taught (table 20). The 109 subjects were composed of 70 males and 39 females. When considering the total number of subjects,

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Table 20. Number and percentage of the Utah State Agricultural College graduates from the 3 study years holding secondary teaching certificates, who have never taught

Year	Total Class Response			Number Who Have Never Taught			Percentage Who Have Never Taught		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
1948	67	65	132	7	13	20	10.4	20.0	15.2
1951	106	52	158	32	16	48	30.2	30.8	30.4
1954	75	46	121	31	10	41	41.3	21.7	33.9
Totals	248	163	411	70	39	109	28.3	24.5	26.5

more men (28.3 per cent) than women (24.5 per cent) have never entered the teaching profession. This figure becomes more significant when the reasons given by males and females for not entering the profession are considered. See page 55 of this study for reasons why graduates have never entered the profession.

Only 15.3 per cent of the 1948 graduates have never taught as compared to 30.4 per cent for 1951, and 33.9 per cent for 1954.

The ratio of males to females not entering the teaching profession was 1:2 in 1948 and by 1954 it was 2:1. This complete reversal in the ratio was partly due to the 19 males (table 21) who entered the military service. Even when this factor is taken into consideration the ratio of males to females is higher, indicating that a smaller per cent of the 1954 male graduates are entering teaching.

Status of teaching certificates. The non-teacher subjects for the years of 1951 and 1954 all have valid certificates for the State of Utah because only 4 years have elapsed in the case of the 1951 graduates and a certificate is valid for 5 years. Three (42.9 per cent) of the seven 1948 male graduates who have never taught failed to renew their certificates. Twelve (92.3 per cent) of the 13 women non-teachers have let their teaching certificate lapse.

In Utah for the year 1954 (26, p. 30) there were 1053 letters of authorization. There were 279 more letters of authorization issued in 1954 than in 1952.

Reasons for not entering the profession. The 109 non-teacher subjects listed 19 different reasons (table 21) for not entering the teaching profession. The average number of reasons checked by the graduates was 1.8, with the men averaging 2.0 reasons and the women 1.4 reasons. The average number of responses was much higher for the men in 1948 and 1951

Table 21. Reasons given for not entering the teaching profession by Utah State Agricultural College graduates of the study years who held secondary teaching certificates

Reasons	Men	Women	Total	Per Cent
Better salaries elsewhere	35	2	37	18.9
Military service	25	0	25	12.8
Marriage	1	29	30	15.3
Better working conditions elsewhere	16	4	20	10.2
Position not available in desired area	8	9	17	8.7
Further education	15	1	16	8.2
Present teaching conditions not desirable	9	2	11	5.6
Enjoyed other work more	8	0	8	4.1
No incentive for outstanding work	8	0	8	4.1
Took course, but never seriously planned to teach	3	3	6	3.1
More professional prestige elsewhere	5	0	5	2.5
Others*	9	4	13	6.5
Total number of reasons given	142	54	196	
Total number of graduates responding	70	39	109	
Average number of responses per graduate	2.0	1.4	1.8	

* Temperment not suited to teaching, position not available, required to teach out of major field, too much regimentation and mental strain, missionary work, more security (tenure) elsewhere, because I am an American citizen I cannot teach full time in foreign country

(3.4 and 4.2) than in 1954 (1.3). This wide difference is again attributed to the number of male graduates of 1954 entering the military service thereby checking only one reason for not entering teaching.

"Better salaries elsewhere" was checked by 37 non-teachers; 34 per cent of all non-teachers responding checked this as one of their reasons for not teaching. It accounted for 18.9 per cent of the total responses and was 6.1 per cent greater than any other reason listed. Of the 37 non-teachers using "better salaries elsewhere" as a reason for not teaching, 35 (94.6 per cent) were men.

The second ranking reason, listed by 25 male non-teachers, was "military service." These 25 men accounted for 35.7 per cent of the total number of male subjects not entering the teaching profession. No women gave this reason. The reason ranking first for women was "marriage." A total of 30 subjects, 29 women and 1 man, checked this reason to account for 15.3 per cent of the total number of responses. Seventy-four per cent of the female non-teachers checked "marriage" as the major reason for not entering teaching.

One woman, who majored in home economics and is now a homemaker, made the following comments:

My purpose in taking education classes was to prepare me for any emergencies which might arise such as death of the family provider, also I do not have much desire to be regimented like teachers are. I prefer to be my own boss. I feel that the extra clothing and expenses necessary for teaching as well as baby sitters for my children and housekeepers would use up any money I might make as a teacher. I can save more, take care of and educate my own children, be happier, and enjoy life more by staying home and keeping house. I hope I never have to be a teacher.

Receiving 8.7 per cent of the total number of reasons checked was "Position not available in desired area." Eight men and 9 women accounted for this percentage. "Better working conditions elsewhere" received 10.2

per cent of the number of reasons checked. Of the 20 graduates listing this reason 16 (80.0 per cent) were males. This could possibly indicate more dissatisfaction with teaching by men, or that men were more readily able to secure positions with conditions superior to teaching in other fields. Fourteen and eight-tenths per cent of the graduates who have never taught indicated that they have been furthering their education; however, 93.8 per cent of those involved were males.

"No incentive for outstanding work" was a reason listed by some per cent of the total responses. It should be noted that all 8 males stated that salary should be commensurate with merit.

For further breakdown according to years of graduation consult table 21.

Occupations of non-teachers. The 69 men who have never taught listed 26 different occupations. Of these 69 male non-teachers 23 (33.3 per cent) listed "military service" as their occupation. This high percentage in relation to the male former teachers is attributed to the large number of graduates for the year 1954 who have not fulfilled their military obligation (table 22). The second ranking occupation was "medical, dental or physical therapy student" with 8.7 per cent. This group was not considered as graduate students because they probably will not enter or re-enter the teaching profession upon the completion of their schooling. "Engineering and electronics" accounted for 5.8 per cent of the male non-teachers. The occupations of "salesman," "graduate student," and "machinist" each accounted for 4.3 per cent.

Table 22 lists 33 occupations of male former teachers and non-teachers. These occupations are listed according to percentage ranks for these 2 groups.

Table 22. Present occupations of male former teachers and non-teachers who applied for secondary teaching certificates and graduated from the Utah State Agricultural College in 1948, 1951, and 1954

Present Occupations	Former Teachers	Per Cent	Non-Teachers	Per Cent
Military service	3	8.3	23	33.3
Salesman	5	13.9	3	4.3
Engineering, electronics	3	8.3	4	5.8
Medical, Dental, Physical Therapy students	1	2.8	6	8.7
Farming	4	11.1	1	1.4
Accountant	2	5.6	2	2.9
Agriculture Specialist	2	5.6	2	2.9
Graduate student	1	2.8	3	4.3
Construction	1	2.8	2	2.9
Machinist	0	0.0	3	4.3
Physical Therapist	1	2.8	2	2.9
Athletic Director	0	0.0	2	2.9
Clerk (drugstore, grocery)	2	5.6	0	0.0
Electrician	0	0.0	2	2.9
Interior Decorator	0	0.0	2	2.9
Wildlife Technician	1	2.8	1	1.4
Dentist	0	0.0	1	1.4
Equipment Inspector	0	0.0	1	1.4
Employment Service Counselor	1	2.8	0	0.0
Forest Ranger	1	2.8	0	0.0
Lawyer	0	0.0	1	1.4
Lumber Yard Supervisor	0	0.0	1	1.4
Mathematician	0	0.0	1	1.4
Newspaper Manager	1	2.8	0	0.0
Probation and Parole Officer	1	2.8	0	0.0
Professional Football	0	0.0	1	1.4
Production Planner	1	2.8	0	0.0
Radio Program Director	0	0.0	1	1.4
Red Cross District Executive	1	2.8	0	0.0
Service Station Attendant	0	0.0	1	1.4
Small Business Operator	0	0.0	1	1.4
Special Agent FBI	0	0.0	1	1.4
Superintendent of Airport	0	0.0	1	1.4
Therapist in Manual Art	1	2.8	0	0.0
Truck Driver	1	2.8	0	0.0

The 40 females checked 9 different occupations. Of these 9 occupations "homemaker" was checked by 30 (75.0 per cent). The second ranking occupation, as indicated in table 23, was "secretary", which was checked by 3 (7.5 per cent) of the women non-teachers.

Of the 109 women who never taught or are not now teaching, 86 (78.9 per cent) checked homemaker as their present occupation. The occupations of "secretary," "bookkeeper," and "missionary" received 7.4, 3.8, and 2.8 per cent respectively. Other occupations and percentages for women are listed in table 23.

In table 24 the employment status of non-teachers with regard to their major field of study is given. Of the 70 men who are non-teachers, 18 (25.7 per cent) were employed in their major field of study.

A larger percentage (40.6) of the male non-teachers for 1951 were employed in their major field than for the years 1948 (14.3 per cent) and 1954 (12.9 per cent).

Of the 40 female subjects who never taught, 75.0 per cent were homemakers. However, of those women engaged in other occupations, 75.0 per cent were employed in their major field of study. As compared to 18.0 per cent for males, it would appear that men have greater opportunities for employment in fields other than their major.

Changes deemed necessary. Each non-teacher subject was asked "What changes in the teaching profession would you deem necessary before you would enter it?"

The 109 non-teachers checked the changes deemed necessary before they would enter the profession. The male non-teachers for the years 1948, 1951, and 1954 averaged 2.1, 2.1, and 1.7 reasons respectively. The overall average was 1.9. The female non-teacher (table 25) averaged only 1 reason.

Table 23. Present occupations of female former teachers and non-teachers, who graduated from the Utah State Agricultural College in 1948, 1951, and 1954, with secondary teaching certificates

Present Occupations	Former Teachers	Per Cent	Non-Teachers	Per Cent	Total	Per Cent*
Homemaker	56	81.2	30	75.0	86	78.9
Secretary	5	7.3	3	7.5	8	7.4
Bookkeeper	2	2.9	1	2.6	3	2.8
Missionary	2	2.9	1	2.6	3	2.8
Graduate Student	1	1.4	1	2.6	2	1.8
Train Hostess	1	1.4	0	0.0	1	.9
IBM Operator	1	1.4	0	0.0	1	.9
Occupational Therapist	0	0.0	1	2.6	1	.9
Television Programming	0	0.0	1	2.6	1	.9
Home Demonstration Agent	0	0.0	1	2.6	1	.9
Nurse	0	0.0	1	2.6	1	.9
Taking Care of Parents	1	1.4	0	0.0	1	.9
Total Number of Graduates Not Teaching	69	63.3	40	36.7	109	100.0

* Percentage calculated by dividing the total number of former and non-teachers into number of former teachers or non-teachers for each occupation

Table 24. Present employment status of non-teacher subjects with regard to their major field

Year of Graduation	Employed in Major Field of Study				Not Employed in Major Field				Total	
	Per Cent		Per Cent		Per Cent		Per Cent		Total	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Total
1948	1	0	14.3	0.0	6	13	85.7	100.0	7	13
1951	13	3	40.6	18.8	19	13	59.4	81.2	32	16
1954	4	0	12.9	0.0	27	10	87.1	100.0	31	10
Totals	18	3	25.7	7.7	52	36	74.3	92.3	70	39

Table 25. Changes that were deemed necessary by the non-teaching graduates of the 3 study years before they would enter teaching as a profession

Changes Deemed Necessary	1948		1951		1954		Totals			
	Men	Women	Men	Women	Men	Women	Men	Women	Total	Per Cent
Higher salaries	7	3	25	4	19	2	51	9	60	34.3
Better facilities and equipment	1	2	7	3	6	1	14	6	20	11.4
Attitude of laymen toward teachers	2	1	7	1	4	0	13	2	15	8.6
More secure tenure	1	2	6	0	5	1	12	3	15	8.6
Smaller teaching load	1	0	0	1	5	2	6	3	9	5.1
More professional prestige	1	0	8	0	0	0	9	0	9	5.1
Fewer personal restrictions on teachers	1	0	3	0	5	0	9	0	9	5.1
Better retirement system and benefits	0	1	6	0	0	0	6	1	7	4.0
Others*	1	0	5	4	3	0	9	4	13	7.5
Conditions satisfactory-would teach if needed money	0	4	0	7	7	0	7	11	18	10.3
Total number of responses	15	13	67	20	54	6	136	39	175	
Total number of graduates responding	7	13	32	16	31	10	70	39	109	
Average number of responses	2.1	1.0	2.1	1.2	1.7	.6	1.9	1.0	1.6	

* Less public pressure on salaries, less clerical work, better administration, better preparation for teaching, incentives for better teaching

Of the total 109 non-teachers, 60 (55.0 per cent) checked "higher salaries" as the major change before they would enter the profession. Fifty-one out of the 60 were men. The 60 responses accounted for 34.3 per cent of the total number of reasons. "Better facilities and equipment" was checked by 20 non-teachers and this second ranking reason accounted for 11.4 per cent of the total. "The improvement of laymen's attitude toward teachers," and "more secure tenure" were of equal rank with 8.6 per cent of the total reasons being in each category. Reasons such as "more professional prestige," "smaller teaching load," and "fewer personal restrictions on teachers," each accounted for 5.1 per cent of the total number of reasons.

Women appeared more satisfied than men with the profession as indicated by the number of responses each group made. Also, 11 of the 18 responses on "conditions satisfactory and would teach if needed money" were checked by females.

Since there is a definite shortage of teachers throughout the nation, it would seem that certain changes are necessary within the teaching profession if this shortage is to be rectified. Of the total number of graduates covered in this study, 26.5 per cent have never taught (table 20). In the 1948 class, 8 years after graduation, 52.3 per cent of the total graduates were not employed as teachers. When these figures are considered with the increasing demand for qualified teachers, the situation looks even more critical.

Data on salaries

Dissatisfaction in regard to salary was the most important single factor for male teachers leaving the school district, the state, or the teaching profession, and the reason given by more male teachers for not entering teaching.

Since only 3.4 per cent of the females listed salaries as a major consideration, their salaries are not considered here.

A typical male comment on salaries was made by a graduate of the class of 1951. He was employed as a junior mathematician. He stated:

I taught air force personnel for two and a half years at Lowery Air Force Base. At the time I accepted this position I would have taught in a secondary school (from which I had several offers) but the pay was better for doing about the same type of work. I enjoyed teaching, am sure I would enjoy teaching math and physics on the secondary level, if the pay were somewhat commensurate with the salary I am now receiving. I have no real desire to remain in the work I'm doing now and would really enjoy teaching if my wife and children were able to eat and wear decent clothes.

The salary of male teacher subjects was \$4,531 which included supplemental earnings¹, and was exceeded by the salaries of former teachers (\$4,669) and non-teachers (\$5,482).

Tables 26, 27, and 28 indicate the average salary of all males from the 3 years compiled by state, and present status as a teacher, former teacher, or non-teacher. Because of the sparse distribution of male graduates among some states, caution should be exercised in drawing conclusions concerning average salaries offered in these states.

The average salary (table 26) of the teachers for 1948 was \$4,951²; \$4,802³ for the former teacher; and \$7,500 for non-teachers. Utah's teachers, former teachers, and non-teachers, in comparison had salaries of \$4,470⁴, \$4,525, and \$7,000 respectively.

Idaho and California ranked second and third in competing for Utah State Agricultural College graduates with percentages of 16.4 and 9.0

1. \$583.00

2. includes supplemental income of \$701.00 average

3. 58.3 per cent of the salaries listed were in the sixth bracket on the questionnaire which read "over \$5,000" making it impossible to obtain a true average salary on this group

4. a larger number of vocational agriculture teachers were in Utah and Idaho and thus, due to their year around salary the average for these 2 states was made higher

Table 26. Average salary and location of the males of the 1948 Utah State Agricultural College graduating class who held secondary teaching certificates

Location of Graduates	Teachers		Former Teachers		Non-Teachers		Total	
	Number	Average Salary	Number	Average Salary	Number	Average Salary	Number	Average Salary
California	3	a ^a 5,083 b ^b 83	1	5,250	2	7,750	6	6,042
Colorado	1	3,750 250	2	5,250	0	0	3	4,625
Idaho	9	4,028 1,589	2	5,250	0	0	11	5,273
Indiana	0	0	1	c	0	0	0	c
Iowa	2	4,750 1,750	0	0	0	0	2	6,500
Montana	1	5,250 750	0	0	0	0	1	6,000
Nevada	1	5,250 1,250	0	0	0	0	1	6,500
New Mexico	0	0	0	0	1	7,500	1	7,500
Oregon	2	4,750 1,000	0	0	0	0	2	5,750
Texas	0	0	0	0	1	8,000	1	8,000
Utah	25	4,070 400	6	4,525	2	7,000	33	4,633
Washington	1	4,750 0	1	4,250	1	c	3	4,500
Wyoming	1	4,250 0	1	5,250	0	0	2	4,750
Totals	46	4,250 701	14	d ^d 4,804	7	7,500	67	5,101

a teaching salary

b supplemental income

c salaries of students were not figured in the average

d 58.3 per cent of the salaries listed were in the sixth bracket which read "over \$5,000" making it impossible to obtain a true total average salary on this group

Table 27. Average salary and location of the males of the 1951 Utah State Agricultural College graduating class who held secondary teaching certificates

Location of Graduates	Teachers		Former Teachers		Non-Teachers		Total	
	Number	Average Salary	Number	Average Salary	Number	Average Salary	Number	Average Salary
Arizona	0	0	0	0	1	6,000	1	6,000
California	4	^a 5,000 ^b 815	1	5,250	2	4,750	7	5,429
Idaho	14	3,964 393	2	4,750	1	5,800	17	4,488
Illinois	0	0	0	0	2	5,800	2	5,800
Indiana	1	4,250 250	0	0	0	0	1	4,500
Kansas	0	0	0	0	1	5,900	1	5,900
Minnesota	0	0	0	0	1	7,000	1	7,000
Nevada	3	4,750 750	0	0	3	6,000	6	5,750
New Jersey	0	0	0	0	1	6,500	1	6,500
New York	2	4,250 250	0	0	0	0	2	4,500
Oregon	1	4,250 250	0	0	0	0	1	4,500
So. Dakota	1	3,750 750	0	0	0	0	1	4,500
Utah	34	3,662 610	6	4,500 167	17	5,645	57	4,689
Washington	0	0	2	4,500 750	1	5,500	3	5,333
Wyoming	1	3,750 1,250	0	0	1	6,000	2	5,500
Austria	0	0	0	0	1	5,000	1	5,000
Canada	1	3,750 0	0	0	0	0	1	3,750
Totals	62	3,911 560	11	4,614	32	5,366	105	4,725

^a teaching salary

^b supplemental income

Table 28. Average salary and location of the males of the 1954 Utah State Agricultural College graduating class who held secondary teaching certificates

Location of Graduates	Teachers		Former Teachers		Non-Teachers		Total	
	Number	Average Salary	Number	Average Salary	Number	Average Salary	Number	Average Salary
Arizona	1	^a 3,250 ^b 250	0	0	0	0	1	3,500
California	2	4,000 1,500	4	5,167	2	^c 2,600	8	4,608
Florida	1	3,250 0	0	0	0	0	1	3,250
Idaho	3	4,083 0	0	0	1	^c 1,000	4	3,312
Massachusetts	0	0	0	0	1	3,500	1	3,500
Michigan	0	0	0	0	1	^c 4,000	1	4,000
Nevada	1	4,250 250	1	4,750	0	0	2	4,625
New Jersey	0	0	0	0	1	^c 1,000	1	1,000
New York	0	0	0	0	2	^c 3,750	2	3,750
Oregon	1	4,250 0	0	0	1	5,000	2	4,625
Pennsylvania	0	0	0	0	1	0	1	0
So. Dakota	0	0	0	0	1	^c 4,000	1	4,000
Texas	0	0	0	0	2	^c 4,750	2	4,750
Utah	23	3,459 565	2	4,500	7	^c 4,340	32	4,123
Virginia	0	0	1	4,250	0	0	1	4,250
Washington	0	0	1	4,750	4	^c 3,500	5	3,750
Wyoming	3	3,750 500	0	0	0	0	3	4,250
Alaska	0	0	0	0	2	^c 5,250	2	5,250
Canada	0	0	0	0	1	6,500	1	6,500
Germany	0	0	0	0	3	^c 3,667	3	3,667
Korea	0	0	0	0	1	^c 1,500	1	1,500
Totals	35	3,614	9	4,250	31	^d 3,782 ^e 4,989	75	^f 3,980

^a teaching salary

^b supplemental income

^c armed forces

^d average including armed forces wages

^e average without armed forces wages

^f includes armed forces wages

respectively. The average salary for all graduates of 1948 in these 2 states was \$6,042 for California and \$5,270 for Idaho. The average salary for all graduates of 1948 in the state of Utah was \$4,633. This was exceeded by all other states except Washington.

The average salary of the graduates of 1951 who were classified as teachers was \$4,571¹. Former teachers averaged \$4,840 and non-teachers averaged \$5,366. All graduates, teachers, former teachers, and non-teachers remaining in Utah earned \$4,272, \$4,667, and \$5,645 respectively.

Idaho and California were again the second and third ranking states in competition for graduates. Idaho received 16.2 per cent of all the 1951 subjects and California received 6.7 per cent. The salaries in these 2 states for teachers were \$4,488 and \$5,429 respectively.

Graduates of the class of 1951 remaining in Utah averaged \$4,689 compared to an overall average salary of \$4,725.

Of the male graduates still teaching, 55.7 per cent were in Utah as compared to 44.3 per cent located in other states.

The average salaries of male graduates for 1954 were \$4,085² for teachers, \$4,250 for former teachers, and \$4,989³ for non-teachers. Forty-one per cent of the graduates of this class have never taught and these graduates averaged \$904⁴ more per year than did the graduates who were teaching.

California ranked second and Idaho third in competing for the graduate subjects of 1954, with 10.7 and 5.3 per cent respectively.

With salaries being the most important single factor for male teachers leaving or not entering the profession, there seems to be little

1. includes supplemental income of \$560 average
2. includes supplemental income of \$471 average
3. average salary does not include the salary of those graduates who are in the armed forces
4. calculated by using only those salaries of non-teachers who were not in the armed forces

reason to justify the present shortage of certified teachers. Moehlman (12, p. 207) summed it up by saying:

Supply and demand in the teaching profession run in cycles . . . During periods of deflation and depression the result is a dangerous oversupply; during inflation and national crisis (such as war) when teachers' salaries are low, there is usually an undersupply. Undersupply first calls back the teachers with submarginal training, those who have grown too old mentally if not physically, and anyone to whom a "special" certificate can be given without too many blushes. The next step is almost hysterical recruitment drives by laymen, teacher-training agencies, and teachers. Almost everything is done except to raise salaries adequately, provide proper working conditions, and consider teachers as full citizens. Long range institutional planning and adequate salaries and working conditions will do more to make teaching attractive to more capable people than anything else. There has never been an adequate supply of well-educated teachers.

SUMMARY

This study reports the results of a follow-up survey of a selected group of graduates trained on the secondary level at the Utah State Agricultural College. Graduates for the years 1948, 1951, and 1954, who qualified and applied for a Utah secondary teaching certificate were the subjects used in this study.

The main objectives of the study were to determine to what extent the Utah State Agricultural College graduates of the School of Education have entered the teaching profession, and how many and why they have left or never entered the profession.

There exists at the present a definite shortage of teachers and it was felt that a follow-up study of this type would contribute information regarding ways in which the profession could be improved.

Findings of the study were:

1. The 450 graduates who received Utah secondary teaching certificates composed 22.6 per cent of the total number of graduates from the Utah State Agricultural College during 1948, 1951, and 1954. The number of graduates receiving certificates dropped 7.1 per cent from 1948 to 1954.
2. A total of 26 states, 1 territory, and 1 foreign country were listed by the subjects as their present location. Fifty and six-tenths per cent of the subjects were located in Utah. Fifty nine and four-tenths per cent of the subjects who were teaching resided in Utah.
3. Physical education and English were listed by the largest number

of graduates as their major field of study, whereas, the 3 majors with the least graduates were biological science, commerce and exact science.

4. Teachers received more college credits and advanced degrees than did the former teacher and non-teacher groups.
5. No significant grade point difference was found between the graduates entering teaching, leaving teaching, or those who have never taught.
6. Of the 411 subjects, 73.5 per cent have taught for 1 year or more.
7. Those who entered the elementary level to teach accounted for 12.9 per cent of the total number of teachers and former teachers. The major reason given for teaching on the elementary level instead of the secondary was "elementary position available in desired area."
8. The graduates considered in the study rendered 55.4 per cent of the total possible years of teaching service. Eight years after graduation 47.7 per cent of the 1948 group were still teaching. Five years after graduation 44.3 per cent of the 1951 group remained in teaching.
9. "Military service" was listed by 25.7 per cent of the graduates as the major reason for not entering the teaching profession immediately following graduation.
10. Of the 302 graduates who entered teaching, 104 (34.4 per cent) left the profession. The percentage of dropouts was 55.6 per cent for the females and 19.7 per cent for the males.
11. "Better salaries" was listed as the major reason for teachers remaining in, or moving to, their present position. Ranking second was "desired to settle in this particular community."
12. The major reasons given by men for leaving the teaching profession

were "salaries too low" and "better working conditions elsewhere."

"Marriage and family responsibilities" was listed by 87.7 per cent of the women who left teaching.

13. Major reasons given by the 26.5 per cent who are non-teachers for not entering the profession were "better salaries elsewhere," "military service" and "marriage."

14. Twelve and six-tenths per cent of those who left teaching returned later. The major reason given for interruption was "better job offered." A majority of the males who returned to teaching, did so to supplement their income from other sources.

15. Major changes deemed necessary by non-teachers before they would enter teaching were "higher salaries," "better facilities and equipment," "improved attitude of laymen toward teachers" and "more secure tenure."

16. The average salary of the male teacher, with their supplemental income included, was exceeded by both the former teachers and those who had never taught. The average non-teacher's salary exceeded the average teachers salary by \$951.00 and when only the professional or contract salary of the teacher was considered a difference of \$1,528.00 existed. The average teaching or professional salary of men in Utah was lower than the average professional salaries of all of the other states except 2.

CONCLUSIONS AND RECOMMENDATIONS

Many of the teachers dropping out of the profession or changing districts were those with less than 4 years' experience. This points out the need of giving more attention to making those first years more successful and satisfactory to the teacher. During the first years of teaching salaries are lower. This was a major reason given for leaving or changing positions. Increasing the beginning salaries and providing more help for the beginning teachers would probably help to lower the dropout rate of the beginning teachers.

It appears that more guidance in the early years of college in regard to the overall supply and demand of certified teachers in the various subject fields would be of value. The demand could then be more fully met and the graduate would not find himself in a position where he would either have to teach outside his major field or go into some other profession.

The number of men leaving the teaching field is smaller than the number of women and the men also remain for a longer period of time. Since excessive turnover in a faculty is undesirable, it is felt that those changes listed by male former teachers and non-teachers as necessary before they would teach should be made, insofar as possible. A general dissatisfaction on the part of the men was found in all categories. Women seemed much more satisfied with present conditions. It was also found that men in the teaching profession retained greater interest in bettering themselves academically. A large portion of them had received advanced degrees and nearly all had taken college courses

since graduation.

Persons holding certificates should be encouraged to keep them valid, thereby making it possible to enter the profession when the opportunity arises; also, the interest in teaching could be kept active in this way. The various teacher training institutions might establish or further encourage a program to bring these individuals into the night school and off campus courses.

It is further suggested that a more complete study be made in regard to grade-point averages of teachers, former teachers, and non-teachers.

It is felt that a similar study should be conducted for the elementary level in order to obtain a complete survey of the education graduates of the Utah State Agricultural College.

APPENDIX A

A STUDY OF FORMER U. S. A. C. GRADUATES WHO APPLIED FOR SECONDARY
TEACHING CERTIFICATES

Because you are a member of the graduating class of either 1948, 1951, or 1954 who applied for a secondary teaching certificate we need your help. The data will be used only to draw conclusions, to formulate ideas for improving the teaching profession, and aiding the School of Education in understanding and meeting the needs of their students. Your honest and frank opinions will be greatly appreciated. All data will be kept confidential.

Directions: Complete the section on general information. If you are presently or have ever been a classroom teacher complete part A. If you have never been a classroom teacher complete part B. If you have any special comments or more space is needed feel free to use the reverse side. Completion time approximately 4 minutes.

General Information:

1. Name _____, Sex _____, Age _____, Marital Status _____.
2. Teaching Major _____, Year Graduated _____, State degrees acquired since graduation _____, Graduate Major _____, and amount of college credit obtained since graduation _____.
3. List your major occupations since graduation:

Years	Occupation	City and State

Part A: (Do not complete this part if you have never been a teacher)

1. Check if you are presently or have ever taught on the elementary level (). Give reason or reasons for not using your secondary certificate:
2. Reasons for remaining in or moving to your present teaching position:
(check any reasons that apply to your case)

a. Health-personal or family _____ b. Desire to settle in this particular community _____ c. Better salary _____ d. Larger district or school system .. _____ e. Smaller district or school system . _____ f. Greater opportunity for professional advancement, prestige, etc..... <input checked="" type="checkbox"/> _____ g. Better tenure _____	h. Poor living conditions _____ i. Change in family residence _____ j. Educational philosophy conflicted with policies _____ k. Too many personality conflicts with former administrator, faculty or school board _____
---	--

1. High cost of living ___
- m. Restrictions on teachers ___
- n. Resentful attitude of laymen toward teachers ___
- o. Too many community responsibilities ___
- p. No contract offered ___
- q. Others (please specify) . ___

3. If you have left the teaching profession state your present occupation:

_____. Check reason or reasons for the change:

- a. Salaries too low ___
- b. Marriage (family responsibilities)..... ___
- c. Military service ___
- d. Retirement ___
- e. Contract not offered ___
- f. Required to teach in field other than my teaching major . ___
- g. Missionary work ___
- h. Further education ___
- i. Dislike teaching ___
- j. Better working conditions elsewhere ___
- k. Teaching load too heavy .. ___
- l. Others (please specify) .. ___

4. If there was a lapse of one or more years between graduation and commencement of teaching check here (). If so, give reasons: _____

5. If you left the teaching profession for any length of time and returned check ().

6. What is your annual income (circle the one that applies in each column:

- | | |
|--------------------------------|-----------------------------------|
| a. Teaching salary: | b. Supplemental income: |
| (1) 2001-3000 (2) 3001-3500 | (1) less than 500 (2) 501-1000 |
| (3) 3501-4000 (4) 4001-4500 | (3) 1001-1500 (4) 1501-2000 |
| (5) 4501-5000 (6) over 5000 | (5) 2001-2500 (6) over 2500 |

Part B: (Do not complete this part if you have been a teacher)

1. Are you employed in your major field of college study: yes () no ().

2. Check reason or reasons for not entering the teaching profession:

- a. Position not available ___
- b. Position not available in desired area ___
- c. Better salaries ___
- d. Further education ___
- e. Better working conditions elsewhere ___
- f. Missionary work ___

- g. Military service ___
- h. Marriage ___
- i. Present teaching conditions
not desirable ___
- j. Took courses in Education
but never seriously
planned to teach ___
- k. Others (please specify) . ___
3. What changes in the teaching profession would you deem necessary before
you would enter it? Check two major changes or reasons:
- a. Higher salaries ___
- b. Personal restrictions on
teachers ___
- c. Attitude of laymen toward
teachers ___
- d. More secure tenure ___
- e. Less clerical work ___
- f. Better facilities and
equipment ___
- g. Others (please specify) ___
4. Is your present certificate valid: yes () no ().
5. What is your total yearly income to the nearest 500 dollars _____.

APPENDIX B

UTAH STATE AGRICULTURAL COLLEGE

School of Education

Logan, Utah

Dear Graduate:

The School of Education at the U. S. A. C. is sponsoring several graduate studies in the field of teacher education. Among these is one being conducted by Blair Low. With our cooperation he hopes to make an analysis of the graduates of three classes who qualify for teaching certificates and find out something about their experiences in and out of teaching.

The accompanying questionnaire has been designed to get the specific information needed and we feel that this will be a very worth-while study. It is our hope that you can cooperate with Mr. Low and return the report as soon as possible. Of course all information will be kept strictly confidential.

Thank you for your help.

Sincerely yours,

John C. Carlisle, Dean
School of Education

APPENDIX C

ALUMNI FOLLOW-UP CARD

Your Help, Please

Dear Friend:

We have lost the USAC Alumnus whose name is on the attached card and would appreciate your assistance in locating the person named.

If you cannot give us the information requested, could you supply us with the name and address of some one who could?

An immediate reply would be gratefully appreciated.

Sincerely yours,

LeRoy A. Blaser
Public Information and
College Development

(FOLD CARD AND MAIL)

WE WOULD APPRECIATE AN IMMEDIATE REPLY, THANK YOU.

Name Married..... When.....

To whom } USAC Grad..... When.....
} Former student..... When.....Children
Ages, Names, Etc.

Present Address

Occupation
Be specific, thus: Engineer for Smith Brothers, Contractors

Give us some News (Your Alumni friends are interested!):

Name and address of a person who will always know address of person named above

PLEASE:

Signature

PLEASE FILL IN COMPLETELY

APPENDIX D

UTAH STATE AGRICULTURAL COLLEGE

School of Education

October 5, 1955

Dear John Doe,

Perhaps the first questionnaire which was sent to you was not received or was lost. For this reason, I am enclosing another.

I have had a fair return from your class, but I need an additional fifteen per cent to validate my study.

Your prompt reply to this questionnaire would be greatly appreciated.

Sincerely yours,

W. Blair Low

Enc.

APPENDIX E

Personal note written at the top of the questionnaire or added to the mimeographed second cover letter shown in Appendix D.

Sample:

Dear Jim,

Perhaps you have not received the previous copies of this questionnaire. They were mailed in late August and September and I have had a very good return thus far. I only need another 5 per cent to validate the study. I would certainly appreciate hearing from you. Thanks.

Sincerely,

Blair

APPENDIX F

Table 29. Classification of major and average amount of graduate credit taken by the male graduate of 1948, who held a secondary teaching certificate

Graduate Major	Teachers		Former Teachers		Non-Teachers		Graduate Major	
	Number	Average Hours	Number	Average Hours	Number	Average Hours	Total	Per Cent
Agriculture	3	33.0	3	32.3	0	0.0	6	9.7
Biochemistry	1	190.0	0	0.0	0	0.0	1	1.6
Botany	1	100.0	0	0.0	0	0.0	1	1.6
Counseling	1	45.0	0	0.0	0	0.0	1	1.6
Dentistry	0	0.0	0	0.0	1	195.0	1	1.6
Education								
Administration	14	41.5	2	29.5	2	55.5	18	29.0
Elementary	0	0.0	2	14.0	0	0.0	2	3.2
General	0	0.0	0	0.0	1	12.0	1	1.6
English	3	27.1	0	0.0	0	0.0	3	4.8
Forest Management	0	0.0	1	30.0	0	0.0	1	1.6
Industrial Arts	9	29.2	0	0.0	0	0.0	9	14.5
Music	0	0.0	1	90.0	0	0.0	1	1.6
Physical Education	9	47.2	1	135.0	0	0.0	10	16.1
Physical Therapy	0	0.0	1	50.0	0	0.0	1	1.6
Psychology	0	0.0	1	40.0	2	49.0	3	4.8
Pre-Medical	0	0.0	0	0.0	1	125.0	1	1.6
Zoology	0	0.0	1	200.0	0	0.0	1	1.6
Totals	41	^a 43.6	11	63.7	7	77.3	62	

^a average number of hours taken by those graduates taking graduate credit

Table 30. Classification of major and average amount of graduate credit taken by the male graduate of 1951, who held a secondary teaching certificate

Graduate Major	Teachers		Former Teachers		Non-teachers		Graduate Major	
	Number	Average Hours	Number	Average Hours	Number	Average Hours	Total	Per Cent
Agriculture	4	5.2	0	0.0	0	0.0	4	5.4
Art	1	22.0	0	0.0	0	0.0	1	1.4
Biology	1	5.0	0	0.0	0	0.0	1	1.4
Botany	1	27.0	0	0.0	0	0.0	1	1.4
Business								
Administration	0	0.0	0	0.0	1	15.0	1	1.4
Dentistry	0	0.0	1	100.0	2	97.5	3	4.1
Economics	0	0.0	0	0.0	1	45.0	1	1.4
Education								
Administration	18	32.7	3	25.6	4	79.7	25	33.8
History	1	15.0	0	0.0	0	0.0	1	1.4
Industrial Arts	10	20.6	2	14.0	0	0.0	12	16.2
Mathematics	1	6.0	2	27.5	1	3.0	4	5.4
Music	3	30.6	0	0.0	1	45.0	4	5.4
Physical Education	7	30.3	1	50.0	0	0.0	8	10.8
Political Science	2	30.0	0	0.0	0	0.0	2	2.7
Physical Therapy	0	0.0	0	0.0	2	92.5	2	2.7
Sociology	0	0.0	1	3.0	0	0.0	1	1.4
Speech	0	0.0	0	0.0	1	44.0	1	1.4
Wildlife Management	0	0.0	0	0.0	1	50.0	1	1.4
Zoology	0	0.0	1	36.0	0	0.0	1	1.4
Totals	49	245.8	11	23.3	14	33.6	74	

^a average number of hours taken by those graduates taking graduate credit

Table 31. Classification of major and average amount of graduate credit taken by the male graduate of 1954, who held a secondary teaching certificate

Graduate Major	Teachers		Former Teachers		Non-teachers		Graduate Major	
	Number	Average Hours	Number	Average Hours	Number	Average Hours	Total	Per Cent
Agriculture	3	6.0	1	5.0	0	0.0	4	10.5
Business	0	0.0	1	5.0	0	0.0	1	2.6
Dentistry	0	0.0	0	0.0	1	50.0	1	2.6
Education								
Administration	11	19.5	0	0.0	2	46.0	13	34.2
English	2	4.0	0	0.0	0	0.0	2	5.3
Horticulture	0	0.0	0	0.0	1	55.0	1	2.6
Industrial Arts	0	0.0	1	10.0	0	0.0	1	2.6
Mathematics	0	0.0	0	0.0	1	14.0	1	2.6
Music	2	9.0	0	0.0	0	0.0	2	5.3
Physical Education	1	3.0	0	0.0	2	33.3	3	7.9
Psychology	0	0.0	0	0.0	1	18.0	1	2.6
Physical Therapy	0	0.0	0	0.0	1	45.0	1	2.6
Seminary	1	34.0	0	0.0	0	0.0	1	2.6
Sociology	1	9.0	1	37.0	1	60.0	3	7.9
Speech	2	4.0	0	0.0	0	0.0	2	5.3
Zoology	0	0.0	0	0.0	1	36.0	1	2.6
Totals	23	^a 37.2	4	14.2	11	32.5	38	

^a average number of hours taken by those graduates taking graduate credit

Table 32. Location of those graduates from the Utah State Agricultural College for the years 1948, 1951, and 1954, who held Utah secondary teaching certificates

Location	Teachers	Former Teachers	Non-Teachers	Total	Per Cent
Arizona	1	2	1	4	1.0
California	13	9	10	32	7.8
Colorado	1	2	2	5	1.2
Florida	1	0	0	1	.2
Idaho	34	17	4	55	11.0
Illinois	0	1	3	4	1.0
Indiana	1	1	0	2	.5
Iowa	2	0	0	2	.5
Kansas	0	0	1	1	.2
Maryland	1	0	1	2	.5
Massachusetts	0	0	1	1	.2
Michigan	0	1	1	2	.5
Minnesota	1	0	1	2	.5
Missouri	0	2	1	3	.7
Montana	1	0	1	2	.5
Nevada	7	2	3	12	2.9
New Jersey	0	1	2	3	.7
New Mexico	0	1	2	3	.7
New York	2	1	3	6	1.5
North Carolina	0	0	1	1	.2
Ohio	0	0	1	1	.2
Oregon	6	1	2	9	2.2
Pennsylvania	0	1	0	1	.2
So. Dakota	1	0	1	2	.5
Texas	1	1	3	5	1.2
Utah	117	48	43	208	50.6
Virginia	0	1	0	1	.2
Washington	2	7	8	17	4.1
Wyoming	5	1	2	8	1.9
Alaska	0	0	2	2	.5
Austria	0	0	1	1	.2
Canada	1	0	2	3	.7
Finland	0	0	1	1	.2
Germany	0	1	3	4	1.0
Japan	0	0	1	1	.2
Korea	0	0	1	1	.2
Puerto Libertador	0	1	0	1	.2
Totals	198	104	109	411	

APPENDIX G

Calculations for Fisher's FNotation used: X_1 =teachers X_2 =former teachers X_3 =non-teachers

Required data for calculations:

$X_1 = 272.1447$

$X_2 = 58.0526$

$X_3 = 129.6163$

$N_1 = 146$

$N_2 = 32$

$N_3 = 69$

$\bar{X}_1 = 1.8640253$

$\bar{X}_2 = 1.8141437$

$\bar{X}_3 = 1.878497$

$X_1^2 = 533.31987407$

$X_2^2 = 110.73408753$

$X_3^2 = 254.01145135$

Analysis of variance for group

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square
Total sum of squares	246	42.0682243	
Between means	2	.092564	.046282
Within groups	244	41.975660	.17203139

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