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AUTHOR Dupuis, Mary M.
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ABSTRACT

This report offers an extensive review of the current status of teacher education in Pennsylvania and the critical issues facing educators in that state. Research findings and studies by educators provided informed opinions and predictions on the following topics: (1) the characteristics of students K-12; (2) the characteristics of teacher education students and the schools they attend; (3) teacher supply and demand in Pennsylvania; (4) recruitment of teachers needed for the schools; (5) recruitment of minority students into teaching; (6) the characteristics of teacher educators; (7) evaluation of preservice programs; (8) the impact of state regulations on teacher education; and (9) the content of teacher education programs. Recommendations are included and survey results are displayed in tables and graphs. (JD)

THE STATUS OF TEACHER EDUCATION IN PENNSYLVANIA, 1987

MARY M. DUPUIS

Pennsylvania State University

University Park, PA

Presented at the

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Pennsylvania Association of Colleges and Teacher Educators

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The Status of Teacher Education in Pennsylvania, 1987

Mary M. Dupuis

Pennsylvania State University

The status of teacher education in Pennsylvania has become an issue. We find ourselves asking who we are, who our students are (or should be), and where they come from. I am pleased to be the one chosen to present this first annual report. Preparing it has allowed me to identify the major sources of information about Pennsylvania schools and teacher education programs. It also recalled to me those immortal words of Pogo, "We have met the enemy and they are us." Indeed the report which follows suggests that we know the enemy: lack of information and lack of communication. Let us begin to communicate and to share the information available.

Characteristics of Students K-12: Who Will Our Teachers Be Teaching?

Recent reports, including Hodgkinson (1985), have demonstrated that the mix of students in the schools in the next 15 years will be different from today's population. We know that schools will have increasing percentages of minority groups, especially blacks, hispanics, and Asian Americans. These students will be increasingly diverse both socioeconomically and linguistically. Increasing percentages of public school students will be below the poverty line. Figure 1 shows the poverty rate of children in 1983; the 25% of preschool children and 21% of school age children below the poverty line is projected to grow through the rest of this century.

In Pennsylvania, the Pennsylvania Department of Education reports that minorities in Pennsylvania public schools in 1985-86 included 13.2% blacks, 2-13% hispanic, 1.18% Asian. The PDE report continues,

> Since 1976-77, total public school enrollments have declined 23.3 percent, however minority enrollments have declined only 9.8 percent. In 1986-86, Black enrollments comprised 79.4 percent of the total minority public school population, down almost 1 percent from the 1984-85 figure of 80.2 percent. In all, the racial/ethnic mix of the public school enrollment population has had a 2.4 percent increase in minorities since 1976-77. Minority enrollments in 1985-86 accounted for 16.4 percent of th total public school enrollment of 1,683,221. (PDE, 1986b, p. 6)

The Pennsylvania high school class of 1985, totaling 149,666, is almost evenly divided male/female, but smaller in number than in earlier years. As PDE puts it,

> The number of high school graduates, after peaking at 190,093 in 1975-76, has steadily decreased to the present level of 149,666. This represents a decreae of 3.28 percent from the number of graduates reported in 1983-84 and a 21.27 percent decrease from the peak number reported in 1975-76. (PDE, 1986, p. 11)

Figure 2 gives the social/ethnic breakdown of those graduates, showing dramatic drops in the percentage of white (down 4%) and hispanics (down 4.7%), and dramatic rise in the percentage of Asians (up 6.65%) in just one year's time. Projection of these rates of change to the next 15 years suggests that Hodgkinson and other futurists are indeed talking about Pennsylvania when they predcit rises in ethnic minorities in schools.

These figures are compounded when projections of birthrate and migration are joined. The migration out of Pennsylvania, or the flight to the sun, seems to hve lessened and in-migration continues, so that PSEA projects a population loss of fewer than 20,000 per year by the year 2000, based on Census Bureau estimates. Projected growth rates vary widely within the state, but several pockets of change can be noted. Counties projected to have the largest increase in student population by the year 2000 are:

County	% Increase	1982 Actual
Pike	160	1,912
Unian	31	4,441
Tioga	31	7,779
Wayne	29	6,953
Chester	29	51,284
Susquehanna	23	8,655
Snyder	22	5,589
Berks	21	52,255
Monroe	20	13,548
Lancaster	19	56,909
Montgamery	18	79,487
Montour	17	2,585
Philadelphia	16	198,972
Bucks	14	77,899
Dauphin	14	35,518

A quick look at a map verifies that these counties cluster around several metrapolitan areas: Philadelphia, Harrisburg, and northeastern Pennsylvania, where wage-earners commute ta the New Yark and Philadelphia metropalitan areas. It also is easy ta see that a 30% increase in Union and Tioga counties is different fram a 30% increase in Chester County. However, it is na easier far small school districts than large ones ta adapt ta 30% mare students in terms af buildings, teachers, and support services.

It is important, also, ta note those areas af predicted decline in population. The largest predicted declines are in central and western Pennsylvania, in rural and ecanamically depressed areas:

County	% Decline	1986 Actual
Cambria	27	25,355
Lycaming	20	20,776
Farest	19	850
Cameron	18	1,154
Venanga	18	12,996
Fayette	17	25,816
Bedfard	16	9,225
Jefferson	16	8,046

These counties include some very rural areas as well as same hard hit by the lass af coal and manufacturing jobs (PSEA, 1986).

What conclusions can we draw? Urban areas will grow, except for Pittsburgh, where the growth will be modest. Rural areas are declining, with a few exceptions. The predicted total population change is not necessarily the same as the predicted student population change, if the population is largely minority. Because minority birthrates are higher than white, the projected student population is higher in those areas.

While national reports have concentrated on the need for teachers to be trained to deal with minority students, an equally important concern is the declining pool of graduates from which we can recruit prospective teachers.

Teacher Education Students: Who Prepares Them?

What Happens To Them?

We know that 85 institutions in Pennsylvania are approved by the state to prepare teachers in some certificate area. PDE statistics show that teachers are prepared by state universities (the State System of Higher Education, or SSHE), state-related universities (University of Pittsburgh, Temple University, Pennsylvania State University, and Lincoln University), and private colleges and universities. Table 1 gives the number and percentages of teachers prepared by each type of institution for selected years since 1976-77. The number of teachers prepared state-wide has dropped dramatically over this ten-year period. However, the relative percentage of teachers prepared by each of the three types of preparing institutions remained relatively stable until recently, when the large state-related universities' production dropped more than the other two.

A second way to analyze teacher preparation is by the level of certificate. Table 2 shows the distribution of teachers prepared in 1985-86 by level of certificate and type of institution. The totals are the same as those in Table 1. However, the distribution shows some differences. Notice the high proportion of secondary teachers prepared by private colleges (over 44%). Note, too, that the SSHE schools prepare high proportions of combined (58%) and special education

(71%) teachers. It is reasonable to ask whether this is a consistent pattern and whether it represents the optimal pattern for teacher education in Pennsylvania.

These data on the number of teachers certified from approved institutions must be analyzed in light of another set of data: where were new teachers hired in Pennsylvania trained? In 1984, the Pennsylvania School Boards Association (PSBA) conducted a study of its members' new teachers hired in the three years previous. The results show that 2,867 new (first-year) teachers were hired in the 281 school districts reporting. Table 3 shows the colleges and universities from which those new teachers graduated. The top 15 are all SSHE schools and state-related universities. These data are not surprising, when we recall that there are 14 SSHE schools, 4 state-related universities, and 67 private colleges and universities. Thus, despite the large percentage of total teachers produced by private schools, the actual numbers certificated from a given school are small. In 1985-86, the range of graduates from these 67 private schools was 0-173, with an average of 30 per school.

What happens to these certificated teachers? We know how many teachers are certificated each year and where they were prepared, but where do they go to teach? Or what happens to them? Our only data, aside from the PSBA study cited, is the PDE report each year on the "Occupational Pursuits" of teachers certified in a given year. For example, the latest data (PDE, 1987a) shows that of the 5,946 teachers certified in 1985-86, 2,695 are reported to be teaching; 1,360 are reported not teaching; 1,891 show no information; of the 1,360 not teaching, 500 report that they are seeking a teaching position, while 447 are "otherwise gainfully employed" and 290 are continuing their education.

These data are representative of the pattern found in the preceding ten years. The item worth noting is the number of teachers for whom no information is available. PDE reports these data from institutional reports as of November 1, on which reporting officers indicate their June graduates' current employment status. Some institutions routinely indicate "no information," while others estimate

numbers. The only conclusion one can draw is that we have little reliable information on how many newly certified teachers are teaching and where. We also have no useful information on what certificated teachers who are not teaching are doing. Hence, we cannot judge how many of these potential teachers might consider teaching at a later time.

We can develop some hypotheses worth testing, if better data become available. One, it looks as if Pennsylvania schools are still preparing many teachers for other states. Two, it looks as if private schools' certificated teachers may opt not to teach, at least in Pennsylvania, in larger proportions than teachers from other types of preparing institutions. Testing these two hypotheses would help us plan better for the teacher needs to come.

What do we know about the characteristics of teacher education students in Pennsylvania? Few data are accessible, although all sorts of data are known to exist. Two studies surveyed the reading skills, habits and attitudes of preservice teachers at six Pennsylvania universities. The first study conducted in Fall 1983 (Mallery, et al., 1984) reported no differences in student scores among universities or curriculum areas, or between sexes on the Nelson-Denny Reading Test. Colleges and universities included in this study were Penn State, Marywood, Millersville, Pittsburgh, and St. Francis. A follow-up study conducted in Spring 1984 (Mallery and Dupuis, 1985) surveyed students at Penn State, Pittsburgh, Indiana, Millersville, California, and Slippery Rock Universities. Although differences among universities were noted, the mean score of the 358 preservice teachers tested was at the 65th percentile on the Nelson-Denny norms. That result is comforting, given the popular belief that new teachers are not strong students. These results support other researchers who contend that negative reports on the quality of prospective teachers may be overstated. Those students reaching the end of teacher education programs (as opposed to high school students indicating an interest in teaching) score quite well on instruments like the Nelson-Denny (Zais, 1978; Fagan, et al., 1983; Dupuis & Fagan, 1983).

A second approach to the issue of prospective teachers' competence was to compare Pennsylvonio students to students in other stotes. A consortium to ossess students' basic skills included Penn Stote ond Pittsburgh, plus the University of Tennessee, Chottonooga; University of Cincinnoti; Colifornio Stote University, Bakersfield; and University of Wisconsin, Green Bay. Three hundred seventy-five students were tested on o voriety of basic skills tests. Fifteen to thirty percent of the prospective teachers scored below the cut off on the initiol tests. Schools reporting SAT scores yielded on overoge score of 1000, Students in the Pennsylvonio universities did not differ from those in other stotes.

Clearly these studies ore limited in scope ond in coverage of Pennsylvonia prospective teachers. The new Pennsylvonia Teacher Competency Testing Program (PTCTP) may provide more comprehensive information on the competence of prospective teachers on knowledge and basic skills vor'ables, if reseorchers can gain access to the scores ond to other data which can be used to volidote the scores. None of this research speaks to students' performance in the classroom. In addition, no research demonstrates the competence of prospective Pennsylvanio teachers compared to students in other disciplines.

Teacher Supply and Demand

Demand for Teachers

Teacher shortages have been widely predicted, beginning any time now and losting into the next century. The Teacher's Almanac (Horris & Horris, 1986) estimotes shortages of thousands of teachers, based on federal dato (see Table 4). Horris & Harris estimated that 4500 vaconcies occurred in Pennsylvonio for the 1986-87 school year. Given thot we certified over 5900 teachers in 1985-86, it would seem that the shortoge is not yet with us.

Yet we must consider the preponderance of predictions that o shortuge of teachers in all fields is just over the horizon, os we accept the fact that shortages in some teaching oreos are olready acute. Darling-Hammond (1984) predicts o generol

shortage of teachers and presents the data in Figure 3, based on an analysis of federal statistics. She concludes, "all indications are that the shortages of specialized teachers will expand to a more general shortage of qualified teachers within the next few years. Given current trends in school age population, entrants to the teaching profession, and attrition, the supply of new teacher graduates may satisfy only about 80 percent of the demand for additional teachers by 1988 (1984, p. 6).

ASCUS, the Association for School, College, & University Staffing, predicts the level of demand for particular teaching fields, based on surveys of teacher placement officers. Its 1987 Job Search Handbook for Educators shows considerable teacher shortages in math, physics, chemistry, bilingual education and some special education categories. Some teacher shortage is found in computer science, data processing, earth science, general science, biology, Spanish, reading and other special education categories. A few fields still have a surplus of teachers (home economics, driver education, art, social studies and health). Other areas have a balanced supply and demand. These lists are for national needs.

When ASCUS turns to regional needs, some differences are noted. Pennsylvania is placed in a region which includes New York, New Jersey, Maryland, Delaware and the District of Columbia. All the areas listed above as having shortages are also listed in our region, but, in addition, these teaching fields have current shortages in our area: agriculture, business, home economics, industrial arts, and speech pathology and audiology. Our region has begun to feel the shortages predicted, even though general shortages have not yet arisen.

What can we predict about long term needs for teachers? It seems safe to predict a growing and generalized need for teachers. The Pennsylvania Department of Labor & Industry offers its analysis of occupational trends in Pennsylvania. In 1984, Pennsylvania Occupational Trends & Outlook predicted annual job openings for teachers at over 6900 by 1990 (See Table 5), despite a general drop in the number of

teachers employed in the State. The startling figure is the predicted retirement rate (listed as "due to labor force separation"). The question of who will retire and when becomes a critical one, since the estimate of student population is that it will increase, but ever so little. Clearly, most of the jobs for new teachers in the next 15 years will be due to retirement of current teachers.

PDE provides us with a wealth of data on the current teaching force from which we can draw some conclusions about impending retirements. Two recent publications (PDE, 1987; Wolensky, 1986) provide the data we need. Table 6 reports the data as of 1985-86. Wolensky draws these conclusions:

- By 1990, 11,178 teachers will have 30+ years of experience;
- By 1995, 24,449 teachers will have 30+ years of experience;

- By 1990, 21,717 teachers will have reached age 55;
- By 1995, 34,098 teachers will have reached age 55.

Since the Pennsylvania legislature has provided early retirement options at the combination of age 55 and 30 years experience, we can predict that a high proportion of these teachers will retire sometime in the next seven years. If we graduate/certify 6,000 teachers a year, as we are now, we'll have sufficient teachers <u>if</u> they all teach, they all stay in Pennsylvania, and they will teach where we need them. Past data suggests they don't all teach, at least not right away; they don't all stay in Pennsylvania, and more may leave as shortages in other states grow; and they don't want to go where many jobs are: small rural districts and inner cities/urban areas. Hence, it seems reasonable to conclude that we do have a teacher shortage in some teaching fields and in some areas of the state, and that the shortages will broaden and deepen in the next few years.

One area of great concern nationally and in Pennsylvania is the number of minority teachers who are now teaching and the number of minorities who are training to become teachers. Teachers are widely perceived to be role models for

students. This is underscored for minority students, since the teacher may be the only professional with whom a minority child has contact. An unstated goal has been to have the percentage of teachers from a minority group equal the percentage of students from the same group. Table 7 gives 1986-87 figures showing the numbers of teachers and students in the two largest minority groups in Pennsylvania, blacks and Hispanics. We simply must increase the number of minority teachers in Pennsylvania schools, since the demographic data presented earlier indicate that the proportion of minority students will rise markedly in the next 15 years. The only conclusion possible is that Pennsylvania, and the nation, have a large and growing demand for teachers from all minority groups represented in our population. More about the supply of minority teachers later.

Supplying the Teachers Needed

Some teacher educators and even more college administrators are wary of the predictions of large teacher shortages, fearing that these are short-lived and ephemeral. If that were the case, massive investments in additional faculty and expanded programs would not produce long-term returns. What can we do to clarify teacher education needs and appropriate responses to them? How can we prepare to supply the teachers needed in Pennsylvania and to place teacher education as a worthwhile and productive career goal for prospective students?

It is important to remind ourselves that just ten years ago Pennsylvania certified 11,769 teachers in all categories (PDE, 1987a). As the demand for teachers fell, our enrollments fell, so that in 1986-87, Pennsylvania certified 5,850 teachers. That is, we have dropped our number of new teachers certified by 50% in ten years. Some people will be surprised by the enormity of that drop. With the decline in numbers has come a resultant decline in the number of teacher educators, a reduction of resources, and a general paralysis of decision-making in colleges and universities regarding the training of teachers. Only in the last few years, especially since the 1986 Holmes Group and Carnegie reports, has it been

appropriate at colleges and universities in Pennsylvania to discuss revitalizing teacher education programs. Witness the changes currently underway at the University of Pittsburgh, Penn State University (Trueblood, 1987) and Temple University (Engbert, 1987). The new Academy for Teacher Education, part of the SSHE system, is another response to the renewed demand for teachers. It is naive to believe, in my judgment, that these efforts would now be joined if the evidence of a teacher shortage were not significant. More on the teacher educator's perspective later. This section is devoted to the issue of the teacher supply.

Two issues are foremost in the discussion of teacher supply: who is entering teacher education programs? Who should be entering teacher education? One organization with a serious investment in teacher supply issues is the National School Boards Association. Their 1987 monograph, Good Teachers: An Unblinking Look at Supply and Preparedness, is co-issued by the Pennsylvania School Boards Association. Along with the 1984 PSBA study, this report gives us the employer's (and consumer's) view of teacher supply.

It is clear that those entering teacher education programs are a significantly smaller percent of college freshmen, when 1970 and 1985 data are compared. Table 8 indicates that the fall in percent of freshmen indicating a probable career in teaching was most dramatic in the early 1970's. The nadir, however, was 1982, when only 4.7% indicated that teaching was their goal. This is the college class which graduated in 1986 or 1987. In fact, many of us can attest that we have seen these students, including many of the 95.3% who did not indicate teaching as a goal when they were freshmen. We see them as transfers into our teacher education program as sophomores, juniors, even seniors, sometimes extending their college careers as much as two or three semesters. One of the great unknowns, at this time, is just who is in the pipeline? Why do students change career goals in midstream and enter teacher education programs? This area needs serious study by PAC-TE and other researchers in the next few years.

Darling-Hammond (1984) and others have discussed the reasons why students do not select teaching as a career goal, including reflection on the changing and broadening opportunities for women and minorities for whom teaching was once the most upwardly mobile professional goal. (See Figure 4 for women's figures). Such opportunities will not go away in the next generation. Thus, one of our serious questions is how to recruit able young people into teaching. Clearly, a critical factor is the models provided by the current teaching force.

It has become a cliche that, increasingly, teachers are dissatisfied with their jobs. This dissatisfaction ranges from salaries to working conditions, from attitudes of parents to attitudes of students. The unvarnished fact is that many teachers now teaching would not teach again if they had the chance. NEA statistics, quoted by Darling-Hammond, document the dramatic rise in teachers' dissatisfaction (See Figure 5). Darling-Hammond notes:

> Between 1971 and 1981, the proportion of respondents saying they would not teach again more than tripled, rising from about 10 percent to nearly 40 percent. Less than half of the present teaching force say they plan to continue teaching until retirement (1984, p. 11).

This dissatisfaction is widely reported to come from teachers' sense that they have little control of their working situation, too little support, and too little financial reward for their work. Figure 6 shows, in addition, that teachers with academic majors (bachelor's or master's degrees in an academic major plus a teaching certificate) are more dissatisfied than those with education majors. Darling-Hammond continues:

> Academic majors have typically taken substantially more college coursework in their area of specialization than education majors, and they also tend to be the teachers who hold more advanced degrees. These highly qualified individuals are the kinds of teachers that many would like to attract to and retain in teaching, yet they are the ones most frustrated by the profession's current work environment. They are also much more likely than other teachers to say they plan to leave teaching (1984, p. 13).

These data are of special importance in Pennsylvania because a substantial percentage of our teachers are prepared with academic majors. Over 2,000, about 34%, of the teachers certified in 1985-86 came from private institutions with academic majors. Other teachers are certified with academic majors from other institutions. The question remains whether these certified teachers will remain in teaching or become defectors who leave teaching soon after receiving their degree. In fact, we know that some percentage of newly certified teachers, unknown at this time, never teach at all.

Teachers' salaries have been widely discussed in Pennsylvania, where the starting salary ranges from $9,200 in a small rural district to $21,700 in suburban Philadelphia. This tremendous difference, and the problem of attracting teachers to the smaller, rural districts which have the lower salary scales, has prompted state legislators to propose an $18,500 minimum starting salary. Indeed, Secretary of Education Gilhool (1987) has indicated that the current state administration is proposing an increase in the state subsidy to school districts which they will be encouraged to use to increase teacher salaries. As Gilhool reports, 6.3% of current Pennsylvania teachers make less than $18,500. The increase of starting salaries is not an important issue to many practicing teachers, who prefer to bargain for salary increases for experienced teachers. The State, PSBA, and PAC-TE, on the other hand, recognize that recruiting able young people is highly influenced by beginning salary levels.

The salary differences among the professions have been widely discussed in the reform reports. Daring-Hammond quotes federal data and NEA statistics in the development of Figure 7. She goes on to say that:

> The situation is made worse by the fact that teachers' salaries have lost ground relative to other occupational salaries over the past ten years. Although there is a common perception that teachers' salaries have improved as a result of collective bargaining, average salaries for teachers actually declined by nearly 15 percent in real dollar terms between 1971 and 1981, even though the

> average experience level of the teaching force increased over that period, as did the average education level. The majority of teachers now have at least a master's degree and about 13 years of experience.

These data suggest a rather gloomy picture of teachers and teaching for our purposes of recruiting new people into the profession.

Despite the negative numbers, many school districts in Pennsylvania have recognized this problem and are acting to provide incentives to recruit able young teachers. One young elementary teacher I know recently was hired for $18,520 as a new teacher, promised full financial support to attend college and receive a master's degree, and shown a salary schedule under which he will earn nearly $25,000 his third year and can be earning almost $30,000 in 5 years' time. These are positive signs, and they show that Pennsylvania districts are preparing attractive packages for new teachers.

The problem remains one of the relative wealth and nature of individual school districts. In fact, it seems clear that without state intervention, the rich-get-richer syndrome will quickly exacerbate the differences among Pennsylvania schools. The poorer districts will lose further ground in their competition with richer districts for the new teachers we prepare. A cynical prediction is that richer districts, with packages like the one quoted above, will hire "the best and the brightest" we prepare, while poorer districts will make do with the rest, or with emergency and non certified teachers, especially in critical areas like math and science.

Recruitment begins, obviously enough, in the secondary schools of the Commonwealth. We must become concerned about the way secondary students perceive teaching as a career and the teachers who teach them. A recent Gallup poll of high school seniors (Clark, 1987) suggests that students' perceptions of teachers is favorable. "Asked to assign grades to their teachers, 26% of high school seniors gave their teachers an A and 48% gave them a B. Only one in 20 assigned a grade of D or F" (p. 503). This is in a survey of 1,712 high school seniors in 421 high

schools nationwide. An interesting finding is that 22% of these seniors indicated an interest in teaching, compared to the 6.2% of entering college freshmen who indicated such an interest. Table 9 underscores the conclusion that many of these seniors, including a large percentage of women, black and hispanic students, would like to become teachers. Does that suggest some of the recruitment problems? Why cre these students not showing up at teacher training institutions? Perhaps it is financial support to attend college; perhaps it is the pervasive negative attitude among the public and some educators toward teaching as a career ("Those who can, do; those who can't, teach"). Clearly, we need further research on this topic.

A recent issue of Action in Teacher Education (Summer, 1987) focused on "The Influence of the News media in Education." Among the issues discussed is the pervasive negative image of teachers and teacher education in the media. Haberman (1987) suggest that negative headlines, while de rigeur for the news media, are constant surprises to educators. Our recent tilt with the TELLS test results would support Haberman. The reaction of many educators both in and out of Harrisburg was surprise. I was not surprised, since my prophecy of 1983, while we were building the TELLS test, was that if 89% of a district's students passed the test, the local headlines would read "11% of District Students Fail Test." We must become more attuned to public opinion and the impact of our behavior on the public.

A further concern Haberman discusses at length is the public impression, based on media reports, that minority students are the source of most school problems (crime, drugs, discipline) and that those problems are largely urban. This translates in Pennsylvania into the issue of Philadelphia and Pittsburgh. The urban character of Harrisburg, Allentown and Erie is not widely known beyond their borders. However, when this public perception is matched with the demographics given earlier, a clear area of study and action emerges: the problems of public perception center on the geographic areas of greatest growth and the minority populations growing at the fastest rate. These areas will need new schools, more teachers, in short, more money in the next 20 years. We have a selling job to do.

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In the same issue, Gunderson & Haas (1987) describe the stereotypes of teachers rampant in the media. They begin with "Our Miss Brooks" and come to the present, reporting that these stereotypes have changed little in 30 years. They list as the most common characteristics of teachers on TV the following:

- o Bumbling
- o Involved with very few students on a personal basis;
- o Often at odds with the administration;
- o Right, while the administration is wrong;
- o Able to work miracles (cure chemical dependance, stop gang wars, do psychotherapy and relationship counseling)
- o Not seen as an expert in anything in particular (the subject matter a teacher handles is rarely even mentioned);
- o Rarely portrayed actually teaching.

They go on to discuss the almost total lack of actual teaching in a TV teacher's life. They note that the doctors on MASH are seen operating on patients; the lawyers on LA Law always go to trial; but teachers don't teach in Kotter or Room 222. By comparing the changes in stereotypes of women and blacks over the same 30 years, Gunderson & Haas suggest that teachers need to be active in promoting changes in teacher stereotypes, as well.

For our purposes, the major problem is that the media enhance negative images of teachers. Therefore, parents and students are less willing to see teaching as a career, and current teachers feel unsupported and devalued by the public. Teachers' negative attitudes, their dissatisfaction with their jobs as well as their sense that the public devalues their jobs, makes them encourage their students not to enter teaching. This can take the form of overt discouragement or just a negative role model of teaching. "The classroom teacher is a key actor in either recruiting or discouraging students" from becoming teachers. "There seems to be a serious morale problem among the teachers in public schools: they feel alienated,

unrewarded and misused. They feel that no one will listen to their complaints, and so they complain to their classes. Their students do listen and they learn that one lesson well: Do not become a public school teacher" (Southeastern Regional Council for Educational Improvement, 1985, quoted in NSBA, 1987, p. 15).

We have widely differing views here regarding teachers' and students' attitudes toward teaching careers. No data are immediately available to apply these data to Pennsylvania. However, it is reasonable to assume that some of both is happening in Pennsylvania. This remains an area worth studying in Pennsylvania schools, under the rubric of identifying effective recruitment procedures for us to use in recruiting future teachers.

Let us turn now to a specific subset of the recruiting issue: recruiting minority students into teaching. This issue looms larger when the predicted population in Pennsylvania is remembered: a marked increase in minority students by the year 2000.

Pennsylvania schools recruit a very high percentage of their teachers from Pennsylvania colleges and universities. Conversely, Pennsylvania colleges and universities send a significant number of newly certified teachers out of state. The need for minority teachers in Pennsylvanic is tied to two sets of data: minorities graduating from Pennsylvania high schools and minorities entering college and subsequently teacher education programs. We can discuss the first set of data. The second is largely unknown.

The most recent set of data on Pennsylvania high school graduates is for 1985 (PDE, 1986b). The figures in Table 10 report that 51% of the 1985 graduates were headed for some kind of college or university, inside and outside Pennsylvania. The numbers of minority graduates attending college is encouraging. However, consider these figures. If 10% of these students become teachers (a high prediction, given earlier data), then we can anticipate that, if all these students complete baccalaureate degrees, the following minorities would be certified in 1989:

Blacks	554
Hispanics	64
Asians	96
Total	714

If we certify 6000 teachers in 1989, this could represent almost 12% of the teachers. However, colleges report that a retention rate to graduation of 60% is high; hence, we must expect that only 428 of these students will graduate as teachers, or just over 7% of our 6000 teachers certified. If we compare this number of new teachers to the rising percentage of minority students in the school, it seems clear that unless we change these data, we will continue to lose ground in our quest for the same percentage of minority teachers as there are students.

Much more could be presented vis a vis the minority teaching force. However, it suffices for this report that the recruitment of minority teachers requires a significant change from present practice if we are to achieve the goal.

What can we conclude from the foregoing discussion of the teacher supply in Pennsylvania? First, that we have too little information on how many teachers are now in training to be teachers. What information is available varies in its credibility and does not help us identify the minority figures with confidence.

Second, we can conclude that a careful but effective recruitment campaign is needed to assure that Pennsylvania's needs for teachers will be supplied in the years to come. This campaign needs to begin in junior high schools and to focus on current teachers as role models and as sources of inspiration for future teachers.

Third, we can conclude that we need a careful study of where Pennsylvania teachers end up teaching and some analysis of the quality of those trained as teachers. We need to know why and when students select teaching as a career: before, during or after their baccalaureate training.

Teacher Educators: Who Are They?*

Teacher educators are important in this paper, first, because they are us, and second, because we perceive that many teacher educators may be nearing retirement age, just as teachers are. The initial problem in discussing teacher educators is to define who we are.

Lanier (1984) and Cruickshank (1984) provide detailed descriptions of the term teacher educator. Both authors identify three major groups of university teachers engaged in the process of teacher education:

1. "Education professors"--instructors teaching methodology courses in the college of education.
2. "Academicians"--teachers presenting subjects of the student teachers' expertise; they work in academically specialized areas, in various departments.
3. "Field supervisors"--the coordinators or supervisors of student teachers. (Cruickshank, 1984, p. 44)

Lanier notes that "those who supervise field work in the schools are probably the only faculty, as a group, who publicly identify themselves as teacher educators" (p. 8). She stresses that the coursework in pedagogy represents only a small percentage (20%) of the teacher education program; therefore, she refers to the term "teacher educator" as an umbrella term for most university faculty involved in the teaching of undergraduate students. In Lanier's terms the difficulties of identifying teachers preparing teachers are an indication of "the lack of cohesion and identity among the 'real' teacher educator population" (p. 8). Teacher education seems to be practically every university professor's obligation, and yet no one claims it as a responsibility or priority. As a result, faculty engaged in teacher education has to negotiate on academic matters across departments or schools. An ongoing struggle for control over the requirements of the teacher education program may characterize such negotiations (Lanier, 1984).

*This section prepared in part by Gabriele Bauer.

Present research underscores Lortie's research (1975) on demographic features of teachers which also apply to the profession of teacher educators (Carter, 1984; Lanier, 1984; Troyer, 1986). Carter and Lanier reveal that most teacher educators come from a low to middle social class background. They attended predominantly rural or suburban schools with an ethnically homogeneous student body. Most of them experienced a high degree of parental support throughout school. They had successful academic and social experiences, and they were personally satisfied with themselves during their pre-collegiate years (Carter, 1981). Generally, during their undergraduate studies they decided to pursue a teaching career. They did not specifically want to be teachers, but they happened to drift into the field (Carter, 1984).

Lanier (1984) attributes the "attraction" of a teaching career to its personification of upward social mobility. Citing Prichard, Fen and Buxton (1971), Lanier states that the lower-social class background inhibits the promotion of an intellectual atmosphere; thus, engagement in scholarly research is not the major professional priority of this particular population. Lanier further supports this idea on the grounds of historical research. She indicates that there is a relationship between "low status, humble social origins, and low-level knowledge and skills" (p. 18), and she stresses their impact on the professional performance of teacher educators.

Compared to the amount of research in the area of demographics hardly any investigations have been undertaken in defining personal characteristics of teacher educators. Cruickshank (1984), in his inquiry model in preservice teacher education, describes seven aspects of "personal characteristics and abilities" (p. 45):

1. Activity/energy level
2. Physical/mental status
3. Expectations of self, program, teaching
4. Self-confidence

5. Academic success

6. Social success

7. Values/attitudes. (p. 45)

With regard to the "activity and energy level", Ducharme and Agne (1982) and Mager and Myers (1983) discovered n their studies that teacher educators devoted more than forty hours per week to their professional work. They carry between three and four courses per academic period (Troyer, 1986). Most teacher educators spend considerable time on student advisement and have more graduate students assigned to them than other faculty members (Carter, 1981; Schwebel, 1982, cited in Troyer, 1986).

The physical and mental status of teacher educators; their expectations of themselves, the program, their teaching; their self-confidence; their academic success; and their social success have been neglected research areas. Katz and Raths' study (1982) reveals that teacher educators believe personality factors such as enthusiasm, warmth, and caring are essential to their success as educators. Unfortunately, such characteristics are difficult to demonstrate in a systematic inquiry.

Teacher educators seem to be caught between providing students with techniques that may theoretically apply and introducing them to methods that may be relevant in the actual classroom setting (Sandberg, 1978). This conflict may be rooted in the reward system of the higher education institutions: research and scholarly work offer more rewards than effective teaching (Katz & Raths, 1982).

Joyce, et al., (1977, cited in Troyer, 1986), contradict Katz and Raths' findings. They report that most teacher educators prefer teaching and working with students to doing research. Ducharme and Agne (1982) found that fifty-two percent of the teacher educators surveyed reported an article accepted in the previous year, and seventy-six percent published at least one article in their professional careers. On the basis of these studies, it may be inferred that the majority of teacher

educators, although involved in all of the faculty roles, primarily devote their time and energy to teaching (Carter, 1981; Wisniewski, 1986).

When we turn to discuss teacher educators in Pennsylvania, we discover that we know very little about ourselves. I was unable to locate information in any state agency or professional organization which described the teacher education faculty in Pennsylvania. It is true that each of our approved programs has submitted reams of paper to PDE, including vitae on each faculty member. However, it is also true that those reports are filed somewhere and no one has synthesized data describing us, across the state. This must surely be a high priority in the next year for PACTE.

We have some models to follow in generating such a study, including those mentioned above. Michael Fullan and F. Michael Connelly (1987) recently completed such a study for the province of Ontario. Their data shows that up to 28% of the teacher education faculty in Ontario may retire by 1992. If such figures exist in Pennsylvania, and a look around suggests they may, we need to be concerned about training teacher educators as much as we care about training teachers. I have taken a quick count of the faculty at Penn State, University Park, looking only at faculty engaged in preservice teacher education in the College of Education, and I find 25% in a position to retire by 1995.

We need to look, as well, at the issues of definition mentioned earlier. In some colleges, the education faculty <u>per se</u> is rather small, yet the number of faculty involved in preparing teachers is much larger. How do we define teacher educators? In other words, how do we define ourselves? This question goes to the heart of the ownership issue: who commits him/herself to the task of training teachers? Who will <u>call</u> him/herself a teacher educator?

<u>Evaluating Pre-Service Programs</u>

We know ourselves and our programs rather distantly in Pennsylvania. Our preference is to allow each other to live and let live. We know that profound differences in size, resources, mission and student population exist among our 85

preparing institutions. As a result, we have not conducted any careful evaluation which compares pre-service programs. Each program evaluates itself and is evaluated against the appropriate state standards. Many of us serve on evaluation teams to review other programs. However, the resulting reports are, by definition, not comparative.

The Pennsylvania School Boards Association asked such questions in its survey of newly hired teachers in 281 school districts. Table 11 shows the responses to the question of which Pennsylvania colleges do the best job of teacher preparation. A large number of colleges are mentioned, but Indiana, among State Universities; Penn State, among state-related universities; and Westminster, among private schools, show considerably more support than the others listed. However, regional preferences defined in the report color the results. Clearly, school districts are inclined to prefer colleges near them. One hypothesis is that school districts prefer teachers from colleges that place student teachers with them.

The PSBA survey also asked respondents whether graduates of Pennsylvania teacher preparation programs were significantly better or worse prepared than those from other states. The respondents reported:

Better - 51

Little Difference - 2

Worse - 1

No difference - 96

Cannot compare - 54

These figures are heartening, but they do not provide such comparative data on our status vis a vis nearby states. A regional study, especially of New Jersey, Maryland, and Delaware, might assist us in making more definitive comparisons of our programs' effectiveness.

The Impact of State Regulations on Teacher Education

Our lives as teacher educators are governed largely by state regulations. Since education is a function of the state, this is appropriate. However, this control by the state often rankles, and it sets us off from our colleagues across the college/university. We are not so autonomous as they, since we feel we must answer to several masters: state regulations, professional groups like NCATE, and specific discipline-oriented groups like the National Science Teachers Association or the National Council of Teachers of English. I have identified six major areas in which state regulations impact on teacher education programs.

Program approval standards are of primary concern to us. They determine our teachers' curriculum and, therefore, our teaching load. They determine our students' required coursework, but we frequently have problems with our non-education colleagues' understanding of and sympathy for our students' needs. While the state defines thee standards as minimums, they are too frequently the maximums, because we do not choose to demand more of our students than the minimum required for certification. How true this assertion is for Pennsylvania programs is unknown; another subject for research. Later I will compare one program across several colleges, to begin the process of comparison.

Teacher testing, in the form of PTCTP, has become a well-known component of the Pennsylvania State regulations. These new tests are designed to force us to comply with the program standards for curriculum by threatening to fail our students if we don't prepare them carefully and completely. These tests, developed largely by us, are reducing our teacher education curriculum to a series of multiple-choice questions. If we are content to require only the minimum, then teaching to these tests is a real possibility. We are too early in the tests' history to know how this issue will evolve. It seems important for PAC-TE to initiate a serious and continuing study of the impact of these tests.

One potential impact is already on our minds: the impact of these tests on the recruitment and certification of minority teachers. Several national studies have suggested that competency tests like the PTCTP hit hardest on minority students, especially linguistic minorities (Garcia, 1985; Goertz & Pitcher, 1985; Markle, et al., 1986; George, 1985; Rebell, 1986). Given that Pennsylvania needs additional minority teachers to teach our increasing numbers of minority students, we must consider this a central concern. Our questions should center on how we can minimize the negative effect of the tests, how we can prepare all our students to succeed on the tests, how we can screen our students to provide differential instruction and assistance based on their needs, and how we can ensure that the tests are both valid and reliable.

Increased high school graduation requirements have had a major impact on teacher education programs by increasing the demand for math and science teachers, two groups already in short supply. In a more subtle way, these requirements are affecting how we train math and science teachers. We have traditionally allowed math and science people to believe that they will not have to deal with below average students once they secure a high school teaching job. Unlike their less fortunate friends in English and social studies, high school math and science teachers can deal less with the unmotivated, uninspired and uninterested. The new graduation requirements of three years of science and math beyond 8th grade require that most math and science teachers will sometime deal with the lower half of the student population. Thus, our teacher education programs in math and science must deal substantively with teaching these below average students. Additional areas of certification such as computer science, English as a second language, or teaching the gifted, may cause us to add program areas and demand additional resources.

Student testing programs, such as TELLS and EQA, impact on our teacher education programs in their emphasis on accountability. The fear is that these tests

narrow our students' focus to their students' achievement on multiple-choice tests that they emphasize failure rather than success. Inappropriate use of test results, such as publishing them in newspapers, can contribute to the negative climate, influencing our recruitment, our students' feelings of self-worth, and the atmosphere in the schools.

State Economic and Education policy-making has potential for great impact on teacher education programs. Governor Robert P. Casey made education an important element in his platform. He advocated, at that time, that many elements of the Carnegie Report be implemented state-wide, including:

1. requiring a baccalaureate degree in a discipline plus a master's in professional studies for an initial teaching certificate;
2. an internship or mentorship plus continuing professional development; and
3. higher entry and exit requirements for teacher education programs.

The Governor's new Economic Development Partnership program places education in the middle, as a significant contributor to economic growth. We should applaud this effort. Even so, we should know that changes in teacher education will be necessary, just as changes in basic education, in order to reach new clienteles. How such changes come about--by joint planning or by administrative fiat--may depend on how well we communicate our views to the state decision-makers.

Alternative certification procedures are the final area in which state regulations impact on teacher education programs. The impending teacher shortage described earlier should warn us that quick ways to fill empty classrooms will be arising in Pennsylvania, as they have in New Jersey and other states. The current internship programs are but one example. The warning reads if we don't train enough teachers, the state will find bodies for the classrooms in some other way. We fear that those "other ways" will be less thorough and less rigorous than our regular programs.

The impact on our programs is and will be of two types. First, we must be inclusive rather than exclusive in our programs. We must respond to the needs of minorities and geographic areas so that we prepare teachers responsive to the schools' needs. We must prepare more teachers than we have in the last few years, and we must do it with greater rigor. Second, we must be willing to make our programs flexible and apply them flexibly to prospective teachers who come from a broad array of backgrounds. We will have fewer "regular" college students and more "returning adults." We must respect these students' experience and training, though it is not in education, and allow them to demonstrate their competence in different ways. It would be useful for PAC-TE to explore alternatives to the standard teacher education program which do not sacrifice depth and rigor.

The Content of Teacher Education Programs

It doesn't seem appropriate to conclude a report on the Status of Teacher Education in Pennsylvania without some mention of the content of teacher education programs. We know that the state standards for Teacher education programs were revised in 1985 and that all 85 programs are in the process of updating their requirements to meet those standards. We also know that reform reports have complained that teacher education programs have too little substance and too much pedagogy. The purpose of this report is not to argue that issue but to present data and suggest some directions for study.

First, the data. Because 85 is too many programs to survey and 35 is too many certificate areas to study all at once, this report includes an unscientifc non-random study of one certification program with which the author is familiar. I compared the certification programs in Secondary English from the institutions of PAC-TE's current board members. Table 2 shows the results of this brief survey. Included in the results are 2 state-related universities (Pittsburgh and Penn State), five members of the State System of Higher Education (Indiana University of Pa.; California, Slippery Rock, Kutztown, and Bloomsburg Universities), and two private

liberal arts colleges (Carlow and Westminster). The data suggest some interesting observations.

1. Except for Pittsburgh, which as recently gone to a five-year Master's level program for initial certification, the programs are remarkably similar, requiring 125-129 credits. Imagine that! Eight very different institutions, and the range is 4 credits!

2. The content of the programs was analyzed by NCATE categories. Consider first the substance of the program, according to the reform reports: the Content of the Teaching Specialty. According to my analysis, the total ranges from 36 credits at Westminster, a liberal arts college, to 61 credits at Bloomsburg, a state university. Is this the stuff of which reform reports are made?

3. General studies, or the general education component of the program, has also received wide attention, because teachers don't get enough of this broad-based education. This analysis shows quite a range, from 45-46 credits (California, Penn State and Pitt) to 60 (Slippery Rock, Kutztown, and Carlow).

   You'll notice, too, that adding the credits for General Studies to the total in the Professional Studies does not equal the total credits required for a degree in the Penn State and state system columns. It seems that many programs double-count some general education coursework in the teaching program when it fits the program requirements. In Penn State's English program, as an example, we can double-count 3 courses (9 credits): a theatre course also counts as an Arts requirement; literature survey also counts as a humanities course; and basic psychology also counts as a social science course. Students who plan carefully can take advantage of this opportunity and end up with 9 fewer credits in their total program. Is this a good thing to do?

4. Practicum (student teaching) credits are now almost uniform. However, Humanistic and Behavioral studies vary, as does Teaching and Learning Theory. These two categories are difficult to distinguish from catalogs and check sheets, so it is possible that this analysis is not accurate. Taken together, these categories show a wide variation, from 16 credits (Carlow) to 35 credits (Bloomsburg). Content of these categories varies widely, too. Perhaps a systematic study of these elements of our programs is appropriate.

5. Within the English specialty courses, the divisions are intriguing. The categories come from the National Council of Teachers of English Standards which NCATE uses, and from the Pennsylvania State Standards for English certification programs. Noteworthy are the differences in literature requirements, the traditional English field; the credits required in writing; the relative paucity of requirements in Theatre/Film/Journalism, or the media.

This mini-study shows us that the programs for prospective English teachers are remarkably similar, yet different in particular ways. Serious study of the programs would be useful. Data showing such comparisons are not currently available. The Pennsylvania Department of Education keeps reports of all programs on file, but it does no compiling of requirements across programs.

It might also be appropriate for professional associations in Pennsylvania, such as the Pennsylvania Council of Teachers of English, to conduct a study of the content segment of teacher educction programs in their area to compare them to national standards. As long as all Pennsylvania teacher education programs do not seek NCATE accreditation, we have no way to compare ourselves as a state with national norms. We can only do it for individual institutions.

Clearly a great deal more can be said regarding the content of teacher education programs. This review suggests that we have much in common, as well as differences, and that we need to know more about each other.

Conclusions and Recommendations

This paper has demonstrated, if nothing else, the enormity of the enterprise we call teacher education. It is complex and varied. Yet within Pennsylvania, the 85 teacher education programs have some remarkable similarities.

The changing nature of the student population, with its marked increase in minorities, will cause us immediate concern. We must address ourselves to training teachers who will be responsive to the needs of these students.

An important corollary of these demographics is the need for a coordinated recruitment effort, beginning early in junior high school, to attract good students of all sexes, races and ethnic groups to become teachers.

The teacher supply and demand data, while mixed and somewhat fuzzy, suggests that demand will outstrip supply, based on current figures, into the next century. We must develop better data on what the demand is and will be, how many prospective teachers are in the pipeline, and what types of students are choosing teaching. We know far too little about both the number of teachers coming into our programs and their characteristics. While the PTCTP may help us with some aspects of teacher preparation, we need to know far more than test scores about them.

It was surprising to discover that little information comparing Pennsylvania to nearby states is readily available. Surely this is important to Pennsylvania. We need to be competitive with surrounding states and we need to be sure we can keep our good teachers home! It may be attractive to provide good teachers to other states, but we must be concerned with filling the classrooms in Pennsylvania. Clearly, all of us need to be concerned about where our graduates go. A systematic follow-up of our teacher graduates should be put in place and coordinated so that we can see the whole picture.

How little we know about ourselves! Perhaps the highest priority for PAC-TE is to find out who Pennsylvania's teacher educators are and to consider how we wish

to replace ourselves, to perpetuate our programs. A study of teacher educators in Pennsylvania is a priority of the first order.

We know that professional growth is essential for the teaching force, yet we know little about continuing professional development in Pennsylvania. It is reasonable to hypothesize that many opportunities exist; many institutions provide programs, as do intermediate units and school districts. However, we have no accessible compendium to show teachers who need such services. As the number of novice teachers grows, so will the need for these services. We should start now to build this data base.

Finally, it is clear in this report, as always, that education is a political activity. We see it at the local, state and national level. Most of us learn to live with government standards, regulations, tests, and reports. We in teacher education have worked well with the state, especially the Pennsylvania Department of Education, to revise standards, set policies, build tests. Yet our relationship to the state is essentially reactive. We answer when the state calls. We challenge when the state asserts. We argue when the state requires. Perhaps, as Lortie and Lanier might argue, this is in the nature of teachers and teacher educators. Yet as we chafe at TELLS and PTCTP, it may be time for teacher educators to be more assertive, time for us to establish an agenda and seek to carry it out. There are many potential entries for that agenda. I look forward to the dialogue regarding priorities and studies appropriate to the task of preserving and improving the educational system in Pennsylvania.

References

Association for School, College and University Staffing. (1987). The ASCUS Annual 1987 Job Search Handbook for Educators. Madison, WI: Association for School, College and University Staffing.

Carbone, M.J. and Wonsiewicz, A. (1987) Excellence in Teacher Education through the Liberal Arts. Allentown, PA: Muhlenberg College.

Carter, H.L. (1981). Teacher educators: A descriptive study. Report No. 9006. Austin, TX: Research and Development Center for Teacher Education, The University of Texas at Austin.

Carter, H.L. (1984). Teachers of teachers. In: L.G. Katz & J.D. Raths (Eds.), Advances in teacher education: Vol. I (pp. 125-145). Norwood: Ablex Publishing Cooperation.

Clark, D.L. (1987). High school seniors react to their teachers and their schools, Phi Delta Kappan, 68:7, March, 503-509.

Cruickshank, D.R. (1984). Toward a model to guide inquiry in preservice teacher education. Journal of Teacher Education, 35 (6), 43-48.

Dalton, S., Thorp, R., Blaine, D. (1987). Pre-service education for teachers of minorities: The Hawaii University/Schools partnership program. Paper delivered at the annual meeting of the American Educational Research Association, Washington, DC, April.

Darling-Hammond, L. (1984). Beyond the Commission Reports: The Coming Crisis in Teaching. Santa Monica, CA: The Rand Corporation.

Ducharme, E.R., & Agne, R.M. (1982). The education professiorate: A research based perspective. Journal of Teacher Education, 33(6), 30-37.

Dupuis, M.M. & Fagan, E.R. (1983). Basic skills of Prospective Teachers: How well do they read/write/speak? The Journal of Classroom Interaction, 18:2, Summer, 20-27.

Englert, R.M. (1987). Implementing the Recommendations of the Holmes Group and the Carnegie Forum in Pennsylvania: An analysis of a proposed policy. Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C.

Fagan, E.R. & Dupuis, M.M. (1984). Consortium to Assess the Reading/Writing Skills of Prospective Teachers: First report. ERIC #ED242691.

Fullan, M. & Connelly, F.M. (1987). Teacher Education in Ontario: Current Practice and Options for the Future. Toronto: Ontario Ministry of Education,

Garcia, P.A. (1983). A Study on Teacher Competency Testing and Test Validity with Implications for Minorities and the Results and Implications of the Use of the Pre-Professional Skills Test (PPST) as a Screening Device for Entrance into Teacher Education Programs in Texas. Edinburg, TX: Pan American University.

George, P. (1985). Teacher testing and the historically black college, Journal of Teacher Education, (36:2), Nov-Dec, 54-57.

Gilhool, T.K. (1987). Interview with Thomas K. Gilhool, Pennsylvania Secretary of Education, Pennsylvania Teacher, 9:4, July-August, 7-8.

Goertz, M.E. & Pitcher, B. (1985). The Impact of NTE Use by States on Teacher Selection. Princeton, NJ: Educational Testing Service.

Harris, S. & Harris, L.B. (1986). The Teacher's Almanac. New York: Facts on File Publications.

Heger, H. & Salinger, T. (1985). Responding to teacher candidate testing through program development, Journal of Teacher Education, (36:2) Nov-Dec, 58-60.

Hodgkinson, H.L. (1985). All One System: Demographics of Education, Kindergarten through Graduate School. Washington, DC: Institute for Educational Leadership.

Howey, K.R., Hummel, T.J.. Strom, S.J. (1984). Assessment of Aptitude and Achievement of Education Majors. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA, April.

Katz, L.G., & Raths, J.D. (1982). The best of intentions for the education of teachers. Action in Teacher Education, 4(1), 8-16.

Lanier, J.E. (1984). Research on Teacher Education. Occasional Paper No. 80, The Institute for Research on Teaching, Michigan State University, East Lansing, MI.

Lortie, D.C. (1975). Schoolteacher: A sociological study. Chicago, IL: The University of Chicago Press.

Mager, G.M., & Myers, B. (1982). If first impressions count: New professors' insights and problems. Peabody Journal of Education, 59(2), 100-106.

Mallery, A.L., Wallace, D., Dupuis, M.M. (1984). Assessment of Preservice Teachers in Six Pennsylvania Colleges and Universities. Reading Research to Reading Priorities, 3rd Yearbook of the American Reading Forum, G.H. McNinch, ed. Athens, GA: The American Reading Forum.

Mallery, L.L. & Dupuis, M.M. (1985). Reading Skills, habits, and Attitudes of Preservice Teachers at Six Pennsylvania Universities. Teacher Education and Practice, 2:2, Fall, 17-28.

Markle, G., Armstrong, B., Hamant, N. (1986). The relationship between students' NTE scores and assessed performance in specific elements of their teacher preparation program. Paper presented at the Annual Meeting of the Association of Teacher Educators, February.

Minnis, D.L. (1986). Who shall (should, can) educate our teachers? Teacher Education Quarterly, 13(1), 27-31.

Moore, K.M. (1982). The role of mentors in developing leaders for academe. Educational Record, 63, 23-29.

National School Boards Association. (1987). Good Teachers: An Unblinking Look at Supply and Preparedness. Available from Pennsylvania School Boards Association, New Cumberland, PA.

Pennsylvania Department of Education. (1987a). The Preparation and Occupational Pursuits of Teachers 1985-86. Harrisburg, PA: Pennsylvania Department of Education.

Pennsylvania Department of Education (1987b). Public and Nonpublic School Enrollments 1986-87. Harrisburg, PA: Pennsylvania Department of Education.

Pennsylvania Department of Education. (1987c). Public School Professional Personnel 1986-87. Harrisburg, PA: Pennsylvania Department of Education.

Pennsylvania Department of Education. (1987d). A Summary of enrollments in public schools of Pennsylvania 1986-87. Harrisburg, PA: Pennsylvania Department of Education.

Pennsylvania Department of Education (1986a). Projections & Selected Education Statistics for Pennsylvania to 1990-91. Harrisburg, PA: Pennsylvania Department of Education.

Pennsylvania Department of Education (1986b). Status Report on Education in Pennsylvania. Harrisburg, PA: Pennsylvania Department of Education.

Pennsylvania School Boards Association (1984. PSBA Study Committee on Teacher Preparation and Certification: A Special Report. Harrisburg, PA: Pennsylvania School Boards Association.

Pennsylvania State Education Association (1986). Projections. Harrisburg, PA: Pennsylvania State Education Association.

Rebell, M.A. (1986). Disparate impact of teacher competency testing on minorities: Don't blame the test-takers or the tests. Yale Law & Policy Review, 4:2, 375-403.

Rudner, L.M., Project Director (1987). What's Happening in Teacher Education: An Analysis of State Teacher Testing Practices, Washington, DC: U.S. Department of Education.

Salinger, T.S. & Heger, H.K. (1986). Meeting the Challenge of Teacher Competency Testing, University of Texas at El Paso. Paper presented at the Annual Meeting of the Association of Teacher Educators.

Troyer, M.B. (1986). A synthesis of research on the characteristics of teacher educators. Journal of Teacher Education, 37(5), 6-12.

Trueblood, C.T. (1987). Implementation Plan for the Restructuring of the Teacher Education Program. University Park, PA: The Pennsylvania State University.

Wisniewski, R. (1986). The ideal professor of education. Phi Delta Kappan, 68(4), 288-293.

Wolensky, K. (1986). A General Profile of Pennsylvania's Teaching Force. Harrisburg, PA: Pennsylvania Department of Education.

Table 1

Teachers Prepared by Type of
Irstitution for Selected Years

Year	State Universities (SSHE)		State-related Universities		Private Colleges & Universities	
	#	%	#	%	#	%
1976-77	6,344	53.9	2,263	19.2	3,162	26.9
1979-80	4,716	55.9	1,682	19.9	2,046	24.2
1982-83	3,419	53.3	1,224	19.1	1,771	27.6
1985-86	3,015	50.7	913	15.4	2,028	33.9

Table 2

Teachers Prepared by Level of Certificate and Type of Institution

(1985-86)

Level of Certificate	Total	State Universities		State-related Universities		Private Colleges and Universities	
		#	%	#	%	#	%
Total	5,946	3,015	50.7	913	15.4	2,018	33.9
Elementary	2,446	1,206	49.3	356	14.6	884	36.1
Secondary	1,530	553	36.2	297	19.4	680	44.4
Combined (K-12)	1,146	668	58.3	171	14.9	307	26.8
Special Education	824	588	71.4	89	10.8	147	17.8

Table 3

Colleges and universities from which newly hired teachers graduated (ranked according to the number of school districts which cited each):

Penn State — 105
Indiana University — 80
Millersville — 75
Bloomsburg — 60
West Chester — 53
Shippensburg — 50
Mansfield — 48
Kutztown — 44
Clarion — 42
Edinboro — 42
California — 39
Lock Haven — 38
Slippery Rock — 37
Univ. of Pittsburgh — 30
East Stroudsburg — 26
Temple Univ. — 22
Grove City — 18
Susquehanna — 17
Marywood — 16
Duquesne — 14
Lebanon Valley — 12
West Virginia Univ. — 11
Westminster — 11
Messiah — 10
Elizabethtown — 9
Univ. of Delaware — 9
Albright — 8

Seven school districts indicated the following colleges and universities: Drexel; Gettysburg; Gwynedd-Mercy; Lehigh; Moravian College; Univ. of Pennsylvania; Wilkes College.

Six school districts indicated the following colleges and universities: Beaver; Bucknell; LaSalle; Misercordia; Seton Hill.

Five school districts indicated the following colleges and universities: Cedar Crest; Dickinson; Geneva; Ithaca (NY); Juniata; Mercyhurst; Ohio State; Trenton (NJ); Univ. of Maryland; Univ. of Scranton.

NOTE: 182 other higher education institutions were named by four or fewer school districts.

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Table 4

Trends in Teacher Surpluses and Shortages (numbers in thousands)

Fall of Year	Total Teachers Needed	Demand for New Teachers			Estimated Supply of New Teacher Graduates	New Teach. Graduates as Percent of Demand for New Teachers
		Total	Elementary	Seconday		
1980	2,463	134	76	58	144	107.5
1981	2,430	115	71	44	141	122.6
1982	2,445	161	107	54	143	88.8
1983	2,462	164	98	66	146	89.0
1984	2,457	143	84	59	146	102.1
1985	2,467	158	96	62	146	92.4
1986	2,483	165	109	56	144	87.3
1987	2,505	171	125	46	142	83.0
1988	2,517	162	124	38	139	85.8
1989	2,543	177	130	47	139	78.5
1990	2,580	188	136	52	139	73.9
1991	2,630	204	138	66	138	67.6
1992	2,687	215	135	80	137	63.7
1993	2,737	211	125	86	133	63.0

SOURCE: National Center for Education Statistics, *The Condition of Education*, 1985 edition.

From Harris and Harris, 1986, p. 102

Table 5

Pennsylvania Occupational Trends and Outlook
for Total Civilian Employment, 1980 and Projected 1990

Teacher	Est. 1980 Employment	Proj. 1990 Employment	Change #	Change %	Average Annual Job Opening Due to Growth	Average Annual Job Opening Due to Labor Force Separation[1]	Average Annual Job Opening Avg. Total
Elementary	74,778	78,273	3,495	4.7	350	3,421	3,771
Secondary	79,154	70,018	-9,136	-11.5	-913	2,096	1,183
Preschool/Kind.	862	819	-43	-5	-3	32	29
Adult Ed.	6,285	7,538	1,253	19.9	125	241	366
Voc. Ed./Training	6,338	7,504	1,166	18.4	117	167	284
College/Univ. Teachers	49,705	49,774	69	0.1	7	1,199	1,206
All Teachers	216,925	212,908	-4,017	-1.9	-401	7,318	6,917

Office of Employment Security, Department of Labor and Industry, Spring '84

[1]Labor force separation: resignation, retirement, death

Table 6

Retirement Predictions of Current Teachers
Based on Age and Years of Service
as of 1985-86

Years of Service	No. of Teachers
1-5	10,377
6-10	16,650
11-15	26,406
16-20	23,780
21-25	13,271
26-30	7,480*
31-35	2,857**
36 +	841**

Age of Teachers	No. of Teachers
under 20	28
20-24	1,021
25-29	5,699
30-34	14,668
35-39	26,570
40-44	19,581
45-49	12,381
50-54	9,365*
55-59	7,582**
60-64	3,728**
65 +	1,042**

*Will probably retire in the next 5-7 years

**Will probably retire in the next 5 years

Table 7

Minorities in Pennsylvania Schools:
Teachers teaching, students in school, 1986-87

Teachers	Elementary		Secondary		Combined (K-12)		Special Education	
	#	%	#	%	#	%	#	%
Black	3832	9.9	1312	3.1	239	4.1	1201	11.1
Hispanic (Spanish surname)	139	.4	89	.2	11	.2	21	.2
Total	38,884		42,853		5,896		10,834	

Pennsylvania Department of Education

Students	Elementary		Secondary	
	#	%	#	%
(total)	856,962		817,199	
Black	118,036	13.8	101,273	12.4
Hispanic	21,732	2.5	15,095	1.8

(Public & Nonpublic School Enrollments 1986-87, Pennsylvania Department of Education)

Table 8

Percent of Freshmen Indicating Elementary or Secondary Teaching as their Probable Career, United States, 1970-85

Fall of Year	Percent
1970	19.3%
1971	15.4
1972	12.1
1973	8.8
1974	7.7
1975	6.5
1976	8.0
1977	6.9
1978	6.2
1979	6.4
1980	6.0
1981	5.5
1982	4.7
1983	5.1
1984	5.5
1985	6.2

Source: Valena White Plisko (National Center for Education Statistics), *The Condition of Education*, 1983 Edition. Updated with data from *The American Freshma...: National Norms* for 1983, 1984 and 1985. Found in: *Classrooms Without Teachers?*

National School Boards Association
1987, p. 15

TABLE 9

Percent of High School Seniors Who Would Like to Become Teachers

Student Category	Yes %	No %
Public school students	23.0	77.0
Nonpublic school students	17.1	82.9
Male	17.0	83.0
Female	27.2	72.8
Black	26.4	73.6
Hispanic	30.8	69.2
White	21.8	78.2
Average grade of student		
A/A−	22.6	77.4
B+/B/B−	24.1	75.9
C+/C	20.6	79.4
C−/D	15.3	84.7
Vocational plans		
Four-year college	25.6	74.4
Graduate school	26.7	73.3

From Clark, 1987, p. 504

Table 10

Post-High School Activity of 1985 Graduates of Pennsylvania High Schools (Public & Nonpublic)

Total Graduates

public	127,226
nonpublic	22,440
	149,666

Total going to College: 76,838 51%

Attending college	Outside PA #		Inside PA #	
public	10,451		50,559	
nonpublic	3,795		12,033	
Total	14,246		62,592	
Black				
public	987		3,635	
nonpublic	258		676	
Total	1,245	10%	4,301	33.7%
Total Graduates: 12,781	5546 going to college (43.3%)			
Hispanic				
public	83		379	
nonpublic	64		115	
Total	147	.9%	494	31.3%
Total Graduates: 1579	641 going to college (40.6%)			
Asian				
public	165		616	
nonpublic	69		134	
Total	234		750	
Total Graduates: 1264	984 going to college (77.8%)			

Table 11

Pennsylvania colleges which do the best job of teacher preparation:

- Not institution but individual — 33
- Depends on program/certification - 23
- State colleges — 17
- Liberal arts colleges — 7
- No difference — 19
- No opinion/no preference/cannot determine - 61

SPECIFIC COLLEGES

State Universities				State-Related	
Indiana	25	Lock Haven	5	Penn State	20
Bloomsburg	11	Kutztown	3	U. of Pittsburgh	12
Shippensburg	11	West Chester	3	Temple Univ.	4
Slippery Rock	11	California	2		
Clarion	10	E. Stroudsburg	2		
Edinboro	9	Mansfield	2		
Millersville	7				

OTHER COLLEGES AND UNIVERSITIES

Westminster	12	Mercyhurst	2	Lafayette	1
Bucknell	5	Swarthmore	2	Moravian	1
Duquesne	3	Bryn Mawr	1	Muhlenberg	1
Grove City	3	Cabrini	1	Scranton Univ.	1
Messiah	3	Carnegie-Mellon	1	Thiel	1
Cedar Crest	2	Gettysburg	1	Ursinis	1
Lehigh	2	Haverford	1	Youngstown Univ.	1
Geneva	2	Gwynedd-Mercy	1	West Virginia	1
Marywood	2	Immaculata	1		

Pennsylvania School Boards Association
1984, p. 32

Table 12

Analysis of Teacher Education Programs in English

	Penn State	Pitts-burgh	IUP	Cali-fornia	Slippery Rock	Kutz-town	Blooms-burg	Carlow	West-minster[6]
Total Credits Reg.	129	BA+30	125	129	128	128	128	129	126
General Studies	46-7	45-75	52	45	60[3]	60	54	60	54
Professional Studies	93	81	83	90	77	99	108	69-70	71
Content of Teaching Specialty	48	42	50	48	48	45	61	41-42	36
Humanistic/Behavioral Studies	12	6	10	12	6	12	18	10	7
Teaching & Learning Theory (with Clinical Exp.)	18	21	11	18	11	10	17	6	17½
Practicum (Student Teaching)	15	12	12	12	12	14	12	12	10½
English Specialty									
Literature	24	9[1]	27[2]	30[2]	24[4]	18[2]	34	13[5]	33
Language/Grammar	6	3	4	6	6	6	6	3	3
Writing	9	3	13	6	12	12	12	7	--
Speech	6	3	3	6	6	6	6	3	--
Theatre/Film/Journalism/Media	3	6	3	--	--	3	3	--	--

[1]plus 18 credit concentration in literature, theatre, rhetoric, or media

[2]includes 9 credits of electives

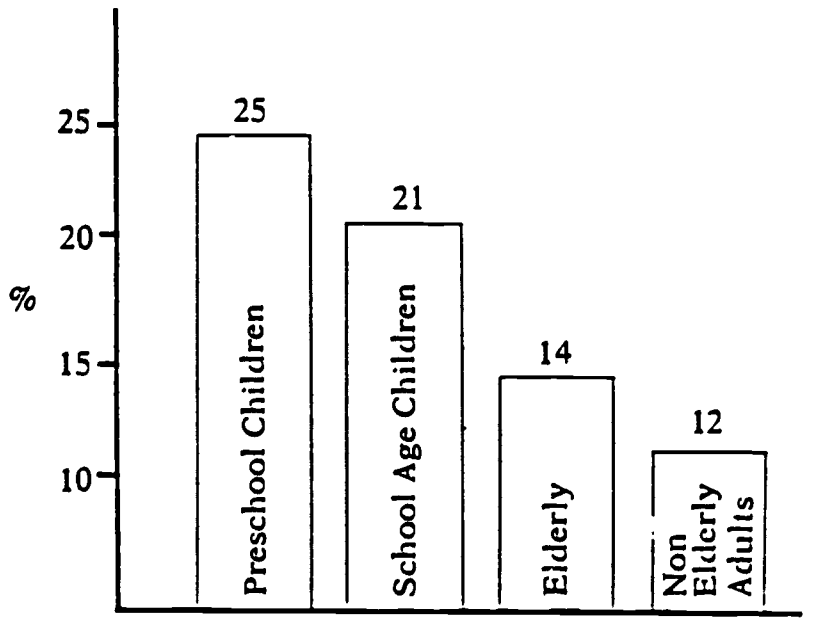
[3]includes Basic Skills instruction

[4]includes 6 credits of electives

[5]plus 15-16 credits in literature or writing

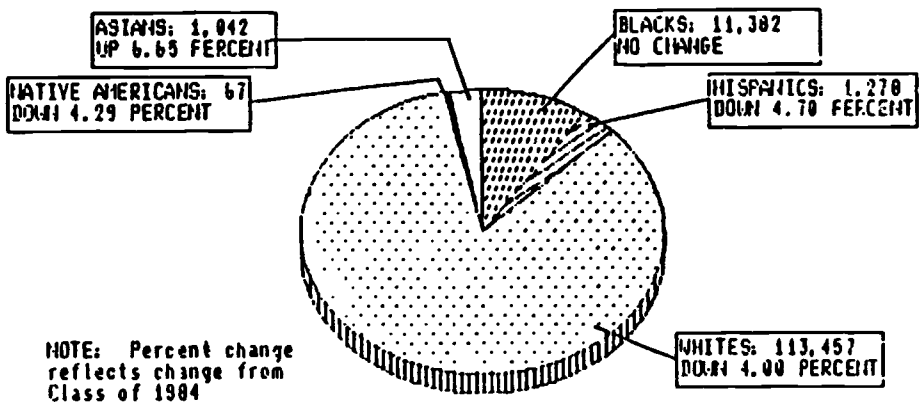
[6]credits equivalent to semester hours; Westminster measures programs by courses; each course equals 3½ credits

Figure 1
Poverty Rate 1983



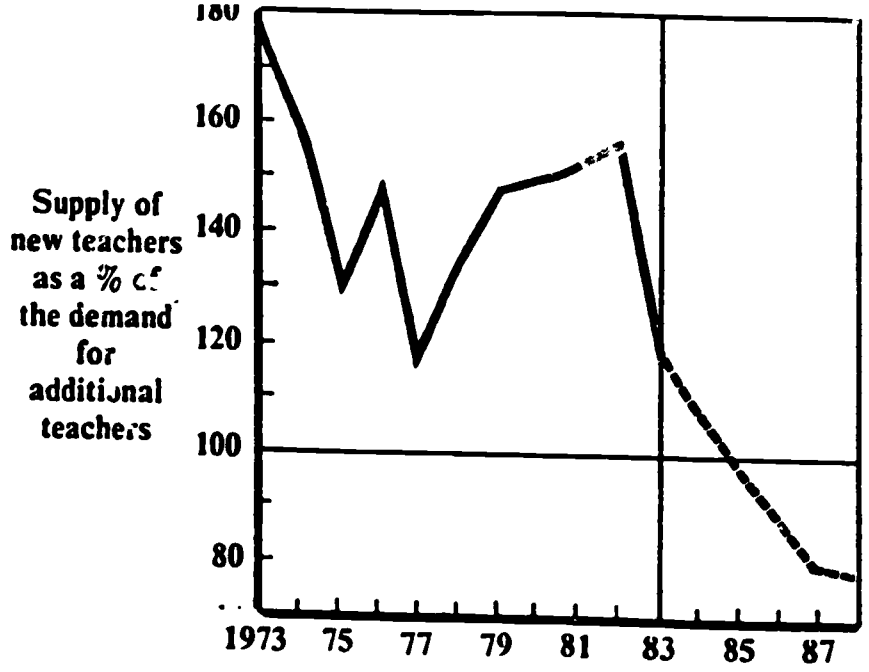
From Hodgkinson, 1985, p. 8

Figure 2
PUBLIC HIGH SCHOOL GRADUATES
BY RACIAL/ETHNIC CATEGORY, 1984-85



CLASS OF 1985

From Pennsylvania Department of Education 1986b, p. 11



A General Shortage of Teachers Is Imminent

Figure 3
From Darling-Hammond, 1984, p. 9

Bachelor's and First Professional Degrees for Women — 1970-1980

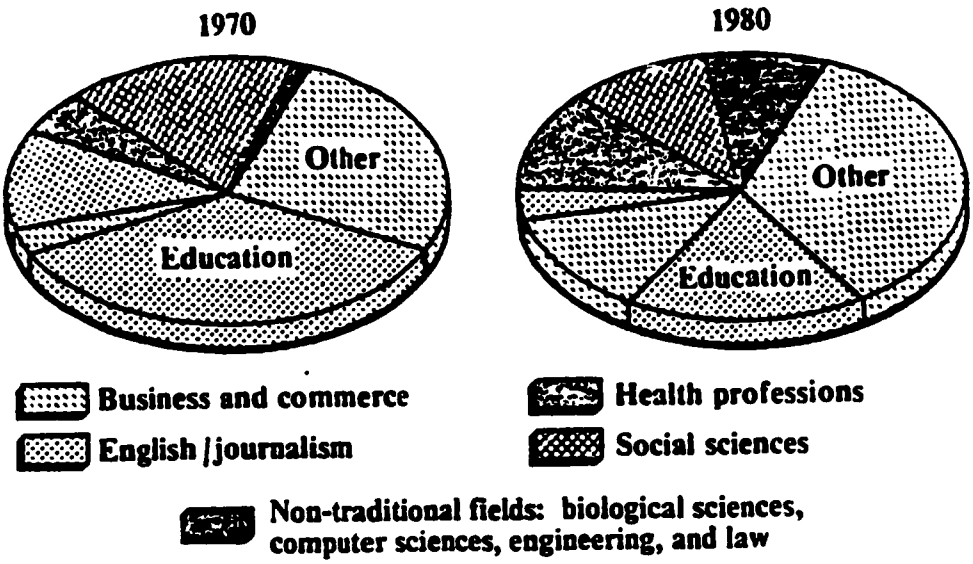
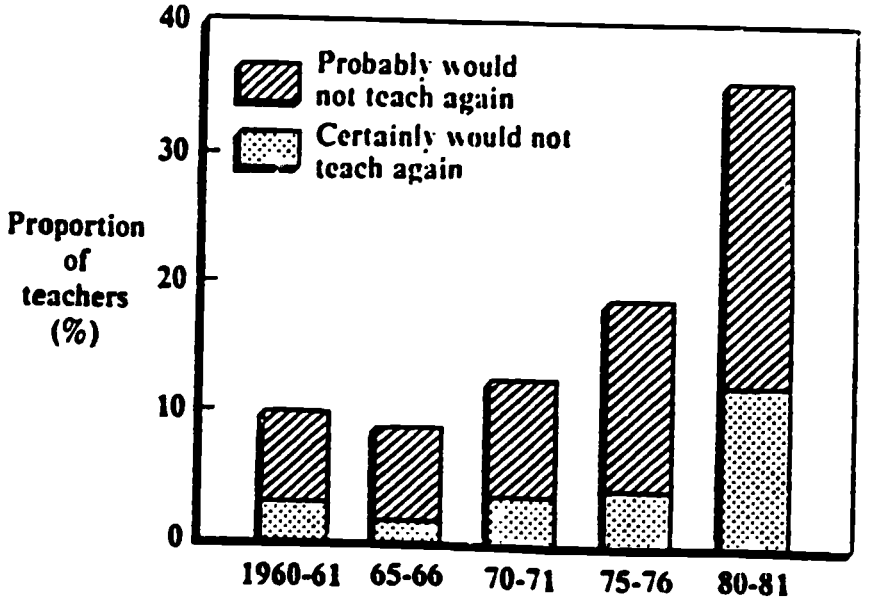


Figure 4

From Darling-Hammond, 1984, p. 9



Percent of Teachers Who Would Not Teach Again — Teacher Dissatis-faction Has Increased...

Figure 5

From Darling-Hammond, 1984, p. 11

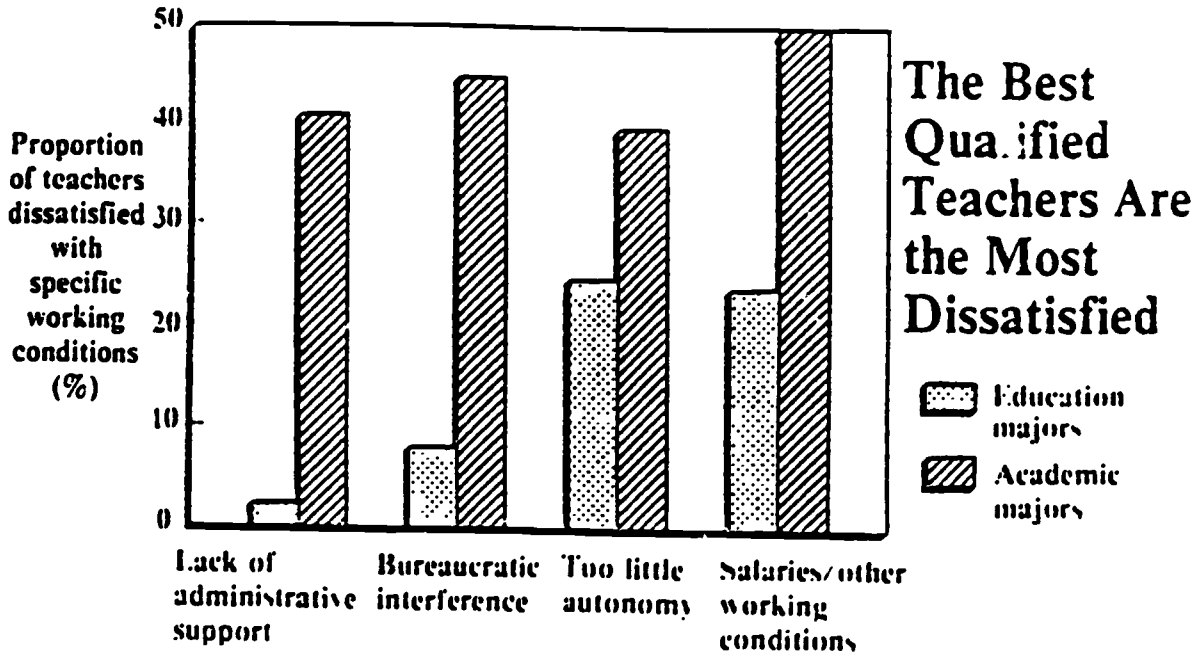
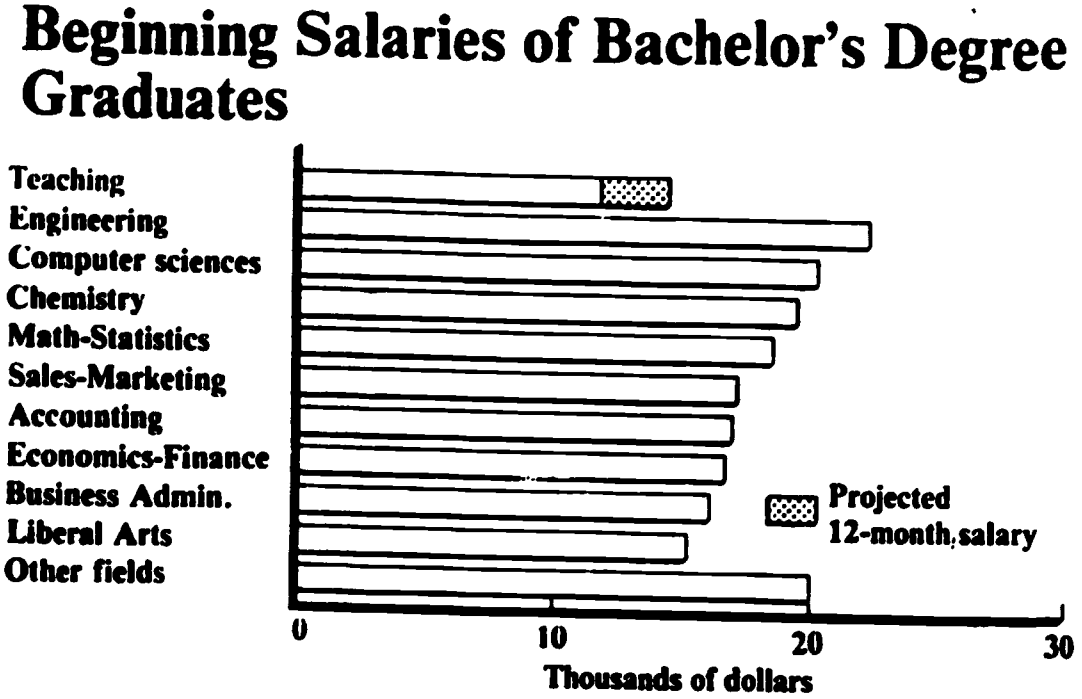


Figure 6

From Darling-Hammond, 1984, p. 14

Figure 7



From Darling-Hammond, 1984, p.10