The last decade has seen a 250 percent increase in the production of master's degrees. An outstanding force in this increase has been the need for college teachers, whose numbers increased 281,506 in the past 10 years. Those holding master's degrees now constitute the primary manpower pool for college teachers, with 56 to 60 percent of new college teachers coming from that source. These trends will probably continue, though the percentage of college teachers with doctorates has been slowly increasing over the last 20 years in the 4-year colleges and universities. The percentage of doctorates in 2-year colleges has remained small, while the number of those with master's has increased. The number of 2-year colleges has increased substantially since 1960 and probably will continue to increase. Their sources of new faculty have been former high school teachers, the graduate schools, college and university classrooms, and the business occupations. This will probably not change in the near future, with the percentage of doctorates remaining small, and with programs in professional education supplying at least 30 percent of the faculty. It would be advisable to establish a master's degree for college teachers and recruit students for that purpose. (AF)
DEAN ARLISS R. ROADEN: Thank you, Mr. Chairman. Ladies and Gentlemen: Dean J. P. Elder observed more than ten years ago that the master's degree is a bit like a streetwalker, all things to all men and at different prices. That analogy is even clearer today with undergraduate deans publicly denouncing the degree,
but privately frequenting it.

(Laughter.)

Let me put that analogy to bed—(laughter)—by noting that the degree is being awarded at an accelerated tempo and there is no indication of master's abatement.

(Laughter.)

The master's degree as preparation for college teachers is a revisit of the topic which was dealt with most ably by Dean Elder more than a decade ago. At that time he was worried about meeting a projected demand for college teachers which he projected as being around 450,000 by 1970 with an estimated production of 135- to 235,000 Ph.Ds during the ten-year period.

He recommended at that time a year and a half master's program in which the candidate would, when appropriate, one, read one foreign language; two, write respectable English; three, concentrate on his subject and on methods of research during the first year of graduate study; and four, in the second year take another seminar, do some supervised teaching, and write a master's essay.

Dean Elder concluded with the question of:
"Who will buy the product if we do turn out a goodly number of well-trained master's? Will college presidents hire them in preference to those who possess the meritorious roster of an inferior doctorate?"

In this presentation this evening I shall state what is the case regarding master's degree holders engaged in college teaching and attempt to deal with what ought to be the case.

During the past decade we have increased our production of master's degrees by more than 250 percent from 74,000 in 1959-60 to something over 190,000 estimated in 1969-70. Although the projected rate of increase for the next decade is not as great, the number increase is very great and it will likely be around 100,000 at least. Some projections put it much higher.

This rate of increase in the production of master's degrees has been astounding and projections for the future, whether one accepts the conservative projection of an increase of 100,000 or the more recent projection of 150- to a 200,000 increase, none of them are modest.

My review of the literature suggests that there has been a long-standing worry about uniformity of
quality and the usefulness of master's degrees. However, there truly has been no moratorium for study along the way.

There are many forces which account for the increase in production of master's degrees, but an outstanding force has been the need for college teachers. The estimated number of instructional staff members—that's F.T.E. in 1969-70—was 362,000. That was an increase from 200,850 in 1959-60.

If one doesn't deal with F.T.E., but takes numbers, the number in '69-'70 was 509,000. That is a number increase from 281,506 ten years ago.

Dean Elder's predictions that a significant proportion of college teachers in 1970 will not hold the doctorate has been substantiated. In 1966 the proportion of college teachers whose highest degree was the master's was as follows: For all four-year institutions it was 39 percent; for all two-year institutions it was 73 percent; and all universities was 28 percent.

For persons holding doctorates, to relate those whose highest degree was a master's to those that held a doctor's, the proportion holding doctorates were, for the four-year institutions, 47 percent; two-year
institutions, 6 percent; and universities, 54 percent.

The proportion of new college teachers employed whose highest degree was the master's—that's new college teachers that were employed whose highest degree was the master's—has been on the order of 56 to 60 percent of the total employed each year over the past decade. Approximately 40 percent have only the master's, and 20 percent have had the master's plus at least one year, but less than the doctorate.

The percentage of new faculty holding the doctorate has ranged from 25.8 in 1960-61 to a percentage of 28.5 in '66-'67.

I have pointed out that graduate schools are producing master's degrees in abundance. Further, those holding master's degrees constitute the primary manpower pool for college teachers with 56 to 60 percent of new college teachers coming from this source.

Although the data must be used guardedly, it appears that 8 to 10 percent of our annual production of master's enter college teaching.

What of the future? Will we continue the accelerated rate of producing master's? All data would indicate that the answer to that unquestionably is yes.
Will we continue the trend of employing holders of master's degrees for college teaching? Or will the publicized oversupply of Ph.Ds fill those jobs? Or will holders of new degrees, for example the D.A., M.P.H., MACT and C.P.H. fill the jobs? The answer here is not as clear, although I predict—and I will discuss more fully later—I predict little change from trends over the past decade.

There seems to be among us an assumption, unwarranted I think, that employers of college teachers prefer a faculty of Ph.Ds completely if only they were available. Suggestions for reform of graduate programs to prepare college teachers are frequently premised on a shortage of Ph.Ds.

The implicit assumption here seems to be that the best preparation for college teachers is the Ph.D. and if only there were enough to go around.

For example, Dean Elder predicted in his statement ten years ago, he predicted that the universities will "gobble up doubtless in a fairly cut-throat competition the Ph.Ds from the graduate schools of arts and sciences, or at least most of the good Ph.Ds."

I continue quoting him: "What then is
left for the faculty of the small liberal arts college which in many ways is the hard backbone of our humane education?"

Well, the response to Dean Elder during the past ten years has been that the liberal arts colleges seem to have held their own fairly well with the universities.

The percentage of faculty members in public and private colleges holding the doctorate was 27 percent in 1950-51. This is both four-year and two-year colleges. It was 32 percent in 1954-55; 33 in '58-'59; 35 percent in '62-'63; 38 percent in 1966. So you see the percentage has ranged there from 27 to 38 percent.

For the public and private universities the percentage of doctorates on the faculty for the same years was 37, 40, 41, 45 and 54.

In the 1965 N.E.A. study of college teacher supply and demand the authors reported that: "As might be expected, the typical junior college teacher has not progressed as far in his graduate studies as his counterpart in the typical university of college. This report contains clear evidence that universities and colleges are engaged in a struggle, in many instances
unsuccessful, to maintain equality in scholarship of their teaching staffs.

"The year-by-year records since 1953-54 shows that a great many degree-granting institutions have been forced to accept new teachers with less than the desired preparation, and in the open competitive manpower market, the junior colleges have been similarly limited."

The limited factual data that we have don't bear out the suggestions of cut-throat competition for Ph.D. graduates.

The community and technical colleges, as consumers of non-Ph.D. graduate school products, have emerged to the forefront of our attention.

I reported in 1966 73 percent of the faculty of two-year institutions held the master's as their highest degree; only 6 percent held the doctorate, and 20 percent held the bachelor's and lower, while another 1 percent held professional degrees.

The percentage of new faculty members holding the doctorate in two-year institutions has varied very little from the level of 6.2 in 1957-58. The percents of new teachers having completed at least one year
from the master's degree were 22.1 in 1957-58; 18.6 in '58-'59, and I won't go through all of those, but they are 22.1, 18.6, 17.7, 17.1, 18.4, 20.7, 19.0, and 20.7 over those years you see a very modest variation in those percents.

The percents of new teachers holding the master's degree without a year beyond were 43.6, 45.8, 47.8, 48.5, 53.6, 51.5, 49.6, and 51.3.

The percents of new teachers with the bachelor's degree or less decreased almost proportionately to the master's degree increase. That was 28.1 down to 21.8, and that was projected in the increase of those with the master's but without studies beyond.

Certainly the phenomenal growth of two-year colleges deserves our attention. The Carnegie Commission reported that by 1960, more than 600,000 students were enrolled in two-year institutions, and by 1969 their numbers had grown to almost two million, nearly 30 percent of all undergraduates and 25 percent of all students in higher education. The number of such institutions is now over a thousand and enrollment projections for 1980 are at 3.1 to 4.4 million.

Staffing these two-year colleges is a
tall order for graduate schools in the years ahead. Where do the teachers come from now who staff these two-year institutions? During the period '57-'58 through '64-'65, about 30 percent came directly from high school classrooms.

Next in frequency as a source of supply was the graduate school, directly from graduate school. That was 20.1 percent in '57-'58 and it was 23.7 percent in '64-'65. The percentage coming from university and four-year college classrooms ranged from a low of 15.4 in 1958-59 to 17.1 percent in 1964-65. There was actually a drop. The high was 17.6 percent in 1957-58.

So, the source of supply for teachers in two-year colleges, first of all, about 30 percent come from high school classrooms; 20 to 24 percent come directly out of graduate school; and 15 to 17 percent come out of college and university classrooms; and another 11 percent come from business occupations. Those were the major sources of teachers for two-year institutions over the past several years.

My analyses of these and other data related to two-year colleges lead me to some cautious generalizations for the future. And when one is dealing
with data that have been generated in higher education, when I am dealing with them I am always very, very cautious because it's a very shaky data base to say the least, and one has to deal with it very cautiously.

My first generalization is that the preparation of two-year college teachers as measured by degrees, by degrees held, is unlikely to change perceptively in the next eight to ten years. There is little reason to think that Ph.Ds will be employed in proportions substantially greater than the current level of six to seven percent.

A survey of California administrators of two-year institutions substantiated that these administrators don't seek Ph.Ds for junior college teaching. Further, whatever impact the D.A. degree might have--and I think there will be some impact--but whatever it is will be many years ahead.

My second generalization is the sources of new faculty for two-year colleges will probably not vary appreciably. Experienced teachers will be recruited from the ranks of high school teachers with those coming directly from master's degree programs in graduate schools at about the same rate as in the past, and a good
number of experienced teachers—I suspect there may be an increase there—will be coming from university and four-year colleges.

I suspect further that the technical institutes will continue to draw a significant portion of their faculty from business and industry. I do suggest a continuing decreasing proportion of those employed in two-year institutions who hold the bachelor's or less.

Now, so far the only data that I have suggested to substantiate those generalizations have been historical. But I am a believer in historical research, I think it is very useful as we look back over the past and look ahead. I could probably have cited some organizational theory or some sociological theory which would suggest that massive changes in staffing of two-year institutions is unlikely to transpire at any rapid rate at least.

Laying all those aside, there is the matter of economics. It has been suggested that Ph.D.s would prefer to work in Ph.D.-granting institutions. I think there is little doubt about that, there is an ample empirical base to substantiate it. But why, with Ph.D.s wanting to get into Ph.D.-granting institutions,
why have we not employed them at greater rates over the past several years? We have found for one reason that we can get the job done far more economically by utilizing teaching assistants and teaching associates and other lower-priced manpower, and I doubt if we are being realistic by thinking that there will be a massive change in the employment of Ph.Ds in two-year institutions when there clearly has been no massive change in the employment of Ph.Ds in the institutions that granted them.

Three: Although proportions of two-year faculty members will not likely change in terms of degree levels and supply sources, quantitative needs will be severe. Also, the qualitative dimension is a matter for our immediate attention. Again I quote from Dean Elder's earlier comments on this matter: "The truth is," he said, "that either institutions of liberal arts will supply the needed teachers, the Master of Arts who, in the past in our country were such stalwart supports, or else professional schools of education will hungrily jump in with the same celerity that enabled them to found and staff normal schools in order to supply the late 19th century's need for elementary and secondary schoolteachers when, be it remembered, the liberal arts colleges in an indifferent snobism abdicated this venerable privilege
and duty."

It appears, in response to his projections, that at least 30 percent of the faculty of two-year institutions are coming from programs in professional education. I have been unable, however, to find any evidence of overpowering hunger or celerity on their part. Most of them have their hands full, more than full, with problems of urban elementary and secondary education.

Finally, four, Dean Elder's ten-year old recommendation for the master's degree program for preparing college teachers still makes a lot of sense to me. The year and a half program, heavy in subject matter and culminating with a supervised internship is sound.

Further, I think that some formal ties with professional schools of education with our institutions can be profitable. There are some new and exciting developments in such areas as learning, microteaching, simulation, non-verbal communication, and teacher-pupil interaction. In my judgment the time is past for us to lay aside such recommendations as the one expressed by the 1957 A.G.S. committee on policies in graduate education that a course directly concerned with teaching, they said, should be taught only by members of the
student's department.

Alternatives to ties with professional schools of education is the employment of teaching specialists by the basic departments. This has been done in more than a dozen departments in my university; or the establishment of university-wide learning resource centers which I prefer, but which aren't being developed at a very rapid rate.

Let me reiterate. I think the D.A. degree will make a difference, but the impact is several years away.

The specially tailored master's degree is something that can be done now, and I acknowledge that some institutions have developed some very exciting programs along these lines.

I offer two very general concluding observations regarding the topic of preparing college teachers.

First, studies in career development suggest that career decisions are made much earlier than we once thought. Perhaps we should study the job that needs to be done in college teaching and recruit from lower division undergraduate ranks students who possess...
appropriate aptitude, academic ability and motivation for college teaching. We then have a latitude of reshaping aspects of the undergraduate program, as well as the first year or two of graduate work.

Now, that proposal was made a few years ago by Dean Carmichael, but as best I can determine there have been few innovations along those lines. This does seem to me to be an exciting alternative to tinkering with the master's degree program and then worrying about the marketability of our products.

Simply stated, we should prepare college teachers on purpose and recruit students for that purpose, not accidentally.

My second—and I assure you, final observation—goes beyond my charge for this program. The public spotlight is on the improvement of undergraduate teaching. I am therefore optimistic that we would be properly stimulated and motivated to do the job, though we may be a bit awkward and engage in some trial and error processes. Let us define the job that must be done and move ahead with it.

I am worried about another fundamental mission of graduate education that is not in the public
eye currently. That's the generation of new knowledge. We have fumbled badly in all of our training and action programs in the years ahead unless we exert our strength toward extending and improving our bases of knowledge at the same time we are improving our training and action programs.