

Bulletin

Arizona State Teachers College

GENERAL SERIES

JANUARY, 1945

NUMBER 51

The Problem of College Degrees In Arizona



Tempe, Arizona

The Problem Of College Degrees In Arizona

Arizona has three state institutions of collegiate rank, the state university and two state teachers colleges. All three of these institutions offer four years of undergraduate training leading to the bachelor's degree. Two basic purposes common to these undergraduate colleges are to provide (1) a broad general program of liberal and cultural studies essential to intelligent living and good citizenship and (2) a reasonable program of special studies to meet individual interests and needs and to furnish a foundation for advanced specialization in professional and graduate schools.

Given these two basic purposes, what kind of bachelor's degree should be granted to students who complete a four-year undergraduate program of this type? A sound and straightforward answer to this question is that a degree of **Bachelor of Arts** should be granted.

Authority to grant a single non-professional degree—the degree of Bachelor of Arts—would provide a simple solution to a difficult problem that has faced the teachers colleges in Arizona for a number of years, and it would eliminate the confusion and avoid the misunderstanding and misrepresentation that has grown up around this problem in years past. This simple solution would be in line with modern practice in forward-looking undergraduate colleges throughout the country.

For years a large proportion of the students who have attended the Arizona State Teachers Colleges have been interested in preparation for pursuits other than teaching. The colleges have been offering these students programs of work that meet their needs and interests, but it has not been able to grant those who completed four-year programs a bachelor's degree in harmony with their purposes and objectives. For these students a degree of Bachelor of Arts in **Education** is a misnomer.

In the immediate years ahead, the number of students who will attend the Arizona State Teachers Colleges who are not primarily interested in teacher education will be far greater than in years past. Many returning veterans will wish to take advantage of college training under the G. I. Bill of Rights.

378.791
A718E
A7

They will not all want to become teachers. As state institutions the teachers colleges must stand ready to serve the state. The teachers colleges will continue to meet the needs of the young people of the state and the needs of returning veterans by offering broad programs of liberal and cultural studies and beginning specialized studies fundamental to later advanced training in professional schools. Such programs of studies should lead to the degree of **Bachelor of Arts** and that alone, and not to a multiplicity of bachelor's degrees indicative of a number of highly specialized undergraduate programs within a single college, on the one hand, nor to a number of highly specialized undergraduate programs in a number of different colleges within a university, on the other.

The degree of **Bachelor of Arts** would be as appropriate a bachelor's degree for students who have completed a four-year program leading to the professional preparation of teachers as it would be for students who have completed four-year programs leading to preparation for other professions. The **Bachelor of Arts in Education** does not appropriately meet the needs and objectives of both groups.

If the Colleges are to continue to serve the needs and interests of the growing State of Arizona, and no one doubts that they will, they should be authorized to grant a single, but meaningful degree to graduates of their four-year programs—the degree of **Bachelor of Arts**.

The post war period will bring new problems to higher education. The change recommended here will enable the teachers colleges to meet some of these problems more adequately. **The men who fought on Leyte, Guam, in the Solomons and in the quagmire of France and Germany are not going to be very patient as they register with us for standard arts and science courses when we tell them they can't have the degree to which those courses rightfully entitle them.** What will they think when we tell them they must take the teaching courses even though they have no possible interest in teaching? This is a very real situation which these colleges have confronted hundreds of times.

The following pages contain, with some elaboration, the substance of an address given recently by President Grady Gammage of Arizona State Teachers College at Tempe. The data presented were collected by Dr. Herbert Gurnee of the college faculty.

LACK OF OPPORTUNITY FOR ARTS AND SCIENCE DEGREES IN ARIZONA

The people of Arizona are facing a serious problem in higher education. It can't be solved either by ignoring it or by simply maintaining the status quo. This statement is prepared, not as an "advocate," although I do have convictions in the matter, but in an effort to define and state the problem and contribute to its discussion.

Basic Assumptions

It seems to me there are several basic assumptions upon which all may agree. Among these are the following:

1. The purpose of higher education in Arizona and in Arizona institutions is, or should be, to serve the needs and demands of the people of Arizona.
2. Population centers do or should influence the development of a state's program for higher education and consequently the provision for educational opportunities.
3. It is generally agreed that the population of Arizona will continue to grow. The outline of that growth as to location and extent can now be seen with some clarity if not with certainty. While the matters discussed herein are not contingent upon such growth, plans should be made with these possibilities in mind.
4. Any state program of higher education should remain sufficiently flexible so needed adjustments may be made as conditions warrant. In reverse, no program should become so rigid nor should any interests become so entrenched or dominant as to prevent such changes.
5. The educational standards the people of Arizona have developed, require that Arizona compare favorably with other states in its provision of opportunities for college degrees.

The study of this problem should be conducted in more or less the same manner as the study of a community for city planning or for any other purpose. Our first thought usually is to get an expert or a group of experts and have him or them make a study. This course is expensive and I think is of doubtful wisdom unless other means have been exhausted. An outside survey tends to make a community feel it needs to have

something done to it rather than to work out its own salvation. Unless the community or state has the necessary background and is ready for such a study, it will be wasted quite largely. Evidence of this is the number of surveys which have eventuated in little or nothing. If expert guidance is secured, its purpose should be to help the people involved to study their own problems. Such planning must be lived with and worked with by those who are deeply interested. A serious study, with nothing but the general good in mind by the people concerned is likely to be much more productive than a spectacular and expensive survey. At best the experts can be a necessary guide to local people who are genuinely concerned. At worst they can be an expensive nuisance. Let me make it clear that the institution I represent has nothing to lose but everything to gain from a survey. We do not fear it but we think it would constitute a delaying action at this critical juncture when service men are returning to our colleges.

Local people have their biases and so do "experts." So far as possible, those who attempt an official study of a problem such as opportunity for higher educational degrees in Arizona should have no axes to grind, no vested interests to defend, and no purposes to serve except the common welfare. They should be open-minded, sincere learners without fixed ideas they wish to impose on others. They should be capable of thinking in terms of the needs, interests and possibilities of the state. They may well be conscious of the tax dollar but should not be completely blinded by it.

The time is ripe for the people of Arizona and for the educational institutions of Arizona to do some mature and unselfish thinking about opportunity for college degrees in this state. This problem may be quieted for the moment by "sitting on the lid" for things as they are but it can never be settled except in terms of the needs, demands and aspirations of the young people of this state. In facing this sort of problem, leadership **will** and **should** forfeit the confidence of the people unless it can think in terms of their needs on a statewide basis. It is not a question of helping or hurting any institution but of meeting a problem. Arizona is fortunate in that it does not have too many institutions. There is room and need for all we have. With proper adjustments, all institutions will be helped and none injured.

The teachers colleges should be authorized to grant the **Bachelor of Arts** degree. This is in harmony with a forward-looking program based upon the needs of students and the types of educational programs demanded by society—liberal or general education with some recognition of special individual interests.

This problem becomes more acute and pressing under the operation of the G. I. Bill of Rights, under which provisions many newcomers will migrate to this state. These and many of those living here will be entering the colleges. Time is of the essence. Nothing should delay or defeat action on this problem which has already been widely discussed for several years.

WHERE DOES ARIZONA STAND?

I. Arizona Is The Lowest Of The Forty-Eight States In Opportunity For Attaining A Bachelor's Degree In The Arts And Sciences.

The strongest in point of numbers and apparently the most approved institution of higher education in the United States is the college of arts and sciences. It is attended by more students than all other types combined. Out of every one hundred undergraduate students, men and women, enrolled in college in 1937-38, fifty-one were in the arts and sciences, fourteen were in education, seven in business, seven in engineering, twenty-one were scattered through all other degree-granting professional or technological schools, or were in junior college.

Yet Arizona has but one institution which grants a bachelor's degree in the arts and sciences, one to 499,261 people (1940 census). No other state is so extremely deficient. Nevada and Wyoming also have but one, but they are much smaller in population than Arizona.

In order to get a measure of opportunity for attaining the Bachelor's degree in Arts and Sciences suppose we divide the population of each of the forty-eight states, 1940 census, by the number of its institutions which grant this degree. We then find more than two-thirds of the states have at least one such institution to every two hundred thousand people. Only two states have less than one to every three hundred thousand people, Arizona and New Jersey; and New Jersey is a small, highly congested area. Incredible as it

seems, Arizona is almost as far below the forty-sixth state, in ratio of colleges granting arts and science degrees to population, as the forty-sixth state is below the first state.

If Arizona had three institutions granting a bachelor's degree in the arts and sciences, it would rank twenty-third among the forty-eight states, just slightly above the middle. There are fourteen states with populations under a million, and among them it would rank eighth, or approximately at the middle. This is according to the 1940 census; on the basis of the latest figures, its position would be quite a bit lower than this.

Arizona has no other important deficiency in opportunity for attaining degrees in higher education. It has seven professional and technological schools, degree-granting, not including those in education. This is one to every seventy-one thousand people and places it fourteenth among the forty-eight states, ninth among the fourteen states which have populations under a million. It has three teacher-training institutions, all degree-granting. This is one to every one hundred and sixty-six thousand people and gives it a rank of seventh among the forty-eight and sixth among the fourteen states. And it has two junior colleges, one to every two hundred and fifty thousand people, making it eighteenth among the forty-eight and fifth among the fourteen states.

Thus Arizona is well above the average of the forty-eight states in opportunity for every type of higher education degree except the arts and science degree and here it is the very lowest of all.

The latest figures obtainable from the United States Bureau of the Census make this deficiency even more impressive. The estimated civilian population of Arizona on November 1, 1943, was 569,357, an increase of more than seventy thousand over the 1940 report. These figures are computed from ration book registrations and are presumably not as reliable as those of the regular census. Nevertheless, Arizona has certainly grown, and its population must be now well over half a million.

So Arizona has one college granting arts and science degrees for over half a million people! And the average of the other thirteen states in Arizona's population group is one for every hundred and fifty thousand people!

Source: Bulletin 1940, No. 1, Part III, p. 6; Bulletin 1940, No. 2, Chapter IV, pp. 6, 104-9; United States Office of Education. United States Bureau of the Census, 1940 report.

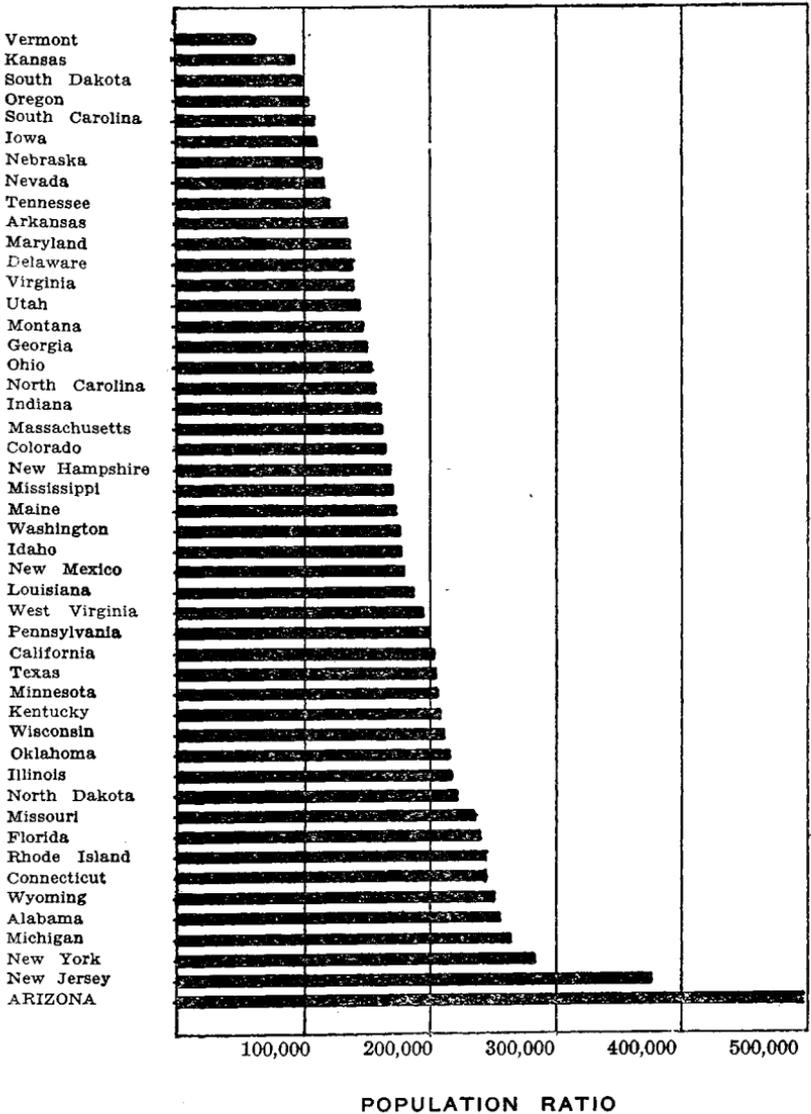


Fig. 1. Opportunity for obtaining a bachelors degree in the arts and sciences, in terms of population ratio. The length of the bar indicates the result of dividing the population of the state by the number of its institutions which grant a bachelors degree in the arts and sciences. Thus Vermont, the first state, has one such institution to every 59,872 people; Arizona, the last state, has one to 499,261 people. Populations are according to the 1940 census. Source: Bulletin 1940, No. 2, Chapter IV, pp. 104-5, United States Office of Education; 1940 Report, U. S. Bureau of the census.

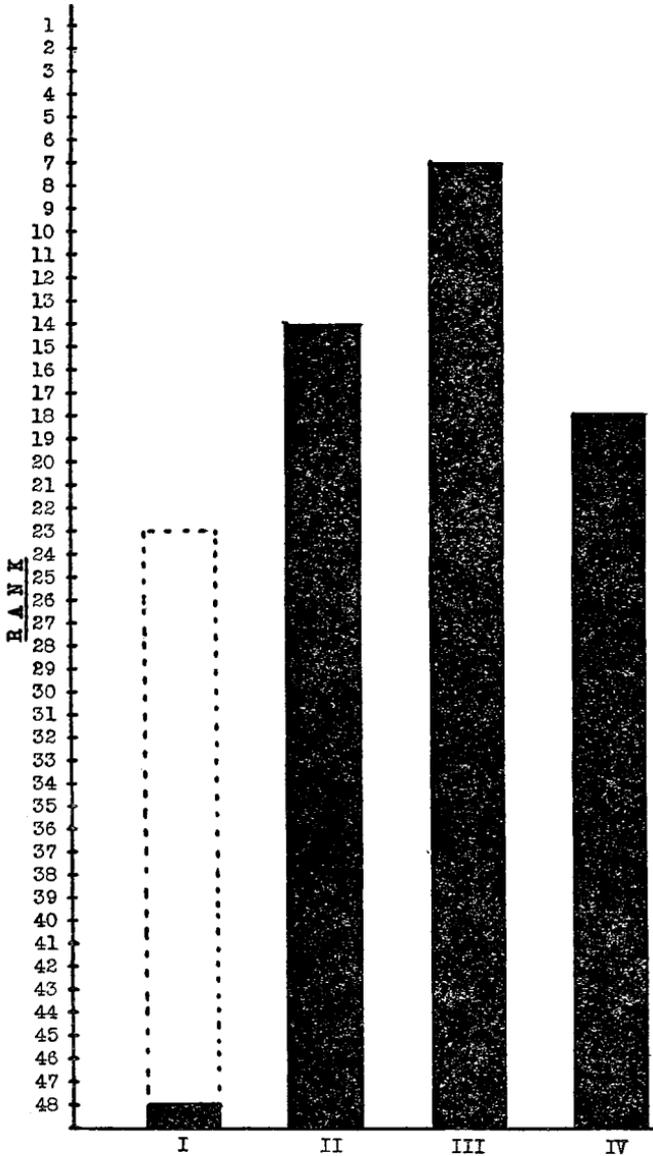


Fig. 2. Arizona's position in higher education among the forty-eight states. I, arts and science degree. II, professional and technological training. III, teacher training. IV, junior college training. The dotted line indicates where Arizona would stand with three colleges granting a bachelors degree in the arts and sciences. These postions are based on ratio of institutions to population, 1940 census.

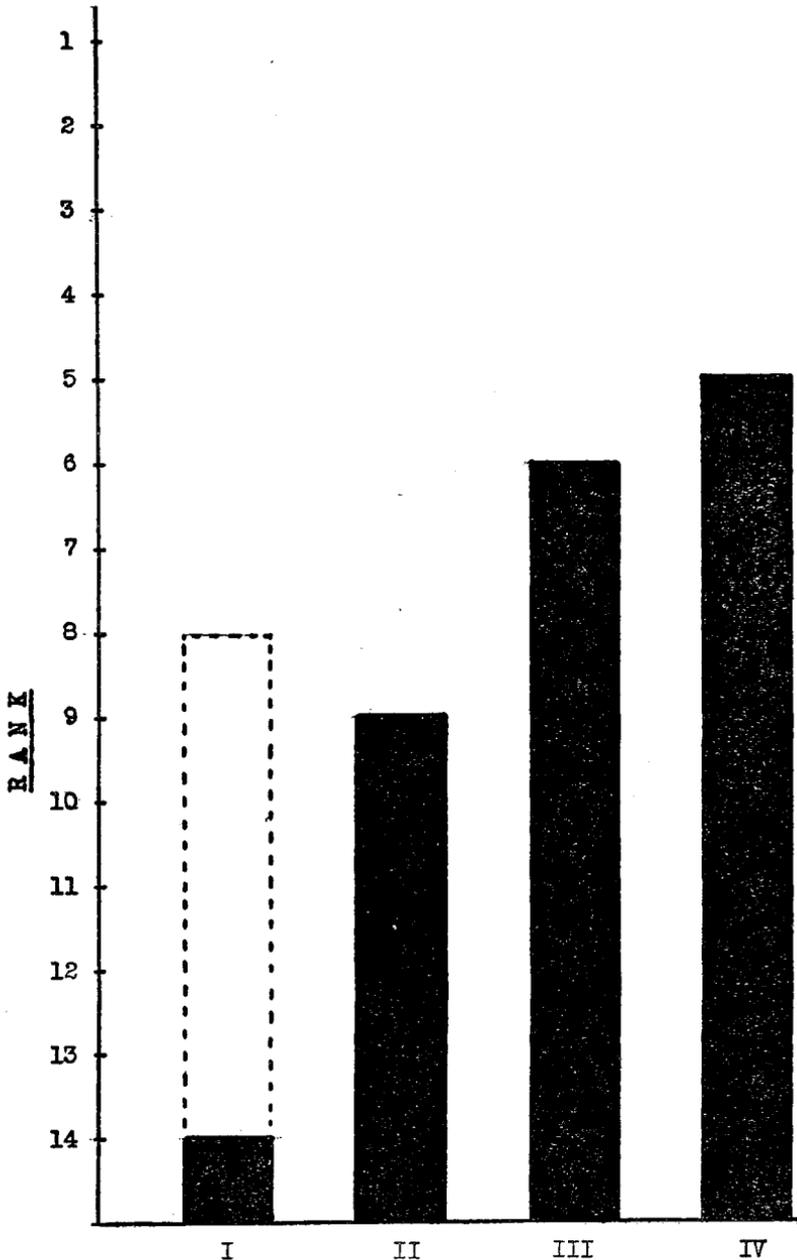


Fig. 3. Arizona's position in higher education among the fourteen states with population under a million. I, arts and science bachelor's degree. II, professional and technological training, degree-granting. III, teacher training. IV, junior college. The dotted line indicates where Arizona would stand with three colleges granting a bachelor's degree in the arts and sciences. These positions are based on ratio of institutions to population, 1940 census.

II. Arizona Is The Only State Which Does Not Have Opportunity For An Arts And Science Degree Within One Hundred Miles Of The Region Of Greatest Population Density.

Accessibility of higher education is in considerable part a matter of geographical nearness. The most favorable state is obviously the one which has the greatest number and variety of institutions in closest proximity to the greatest number of people.

What is the accessibility of colleges offering arts and science degrees in the forty-eight states? A simple measure is the distance between the center of greatest population density and the nearest college which grants a bachelor's degree in the arts and sciences. The center of greatest population density may be taken, for all practical purposes, as the largest city in the most populous county.

Here are the results of such an investigation. The distances include only accredited colleges available to both men and women, and are in airline miles.

From the largest city in the most populous county to the nearest institutions granting a bachelor's degree in the arts and sciences:

Over one hundred miles, one state, Arizona;

Fifty to one hundred miles, two states, Montana and North Dakota;

Thirty to fifty miles, three states, Virginia, West Virginia, Wyoming;

Ten to thirty miles, eight states, Idaho, New Jersey, Oklahoma, Arkansas, Kansas, Maine, Nevada, New Hampshire;

Zero to ten miles, thirty-four states, Alabama, California, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Washington, Wisconsin.

Thus approximately three-fourths of the forty-eight states have provisions for degrees in arts and science within ten miles of the region of greatest population density.

And Arizona is the only state which does not have provis-

ions for a degree in arts and science within a hundred miles of the region of greatest population density.

Source: United States Bureau of the Census, 1940 Report. The College Blue Book, 1939, pp. 485-579.



Fig. 4. Accessibility of arts and science degree in the forty-eight states. The length of the bar indicates the approximate airline miles from the largest city in the most populous county to the nearest accredited college granting a bachelors degree in the arts and sciences. Source: U. S. Census, 1940; The College Blue Book, 1939, pp. 485-579.

III. In Comparison With Students In The Other Forty-seven States, Too Few Students In Arizona Have Been Obtaining Bachelor's Degrees In The Arts And Sciences In Proportion To The Number That Have Been Obtaining Bachelor's Degrees In Education.

Arizona is the only one of the forty-eight states that grants less than half as many bachelor's degrees in the arts and sciences as in education.

Here are the facts, obtained from data in the bulletins of the United States Office of Education. We shall average figures for several years before the war (1934-36-38), so as to get the most reliable indication of the trend.

Arizona's averages for this period were 112 bachelor's degrees in the arts and sciences, 372 bachelor's degrees in education. This is roughly a proportion of **two to seven in favor of education.**

The averages of all forty-eight states were 1455 bachelor's degrees in the arts and sciences and 600 in education. This is roughly a proportion of **five to two in favor of the arts and sciences.**

Thus Arizona is far out of line with the national trend. Only three other states granted more degrees in education than in the arts and sciences, New Mexico, North Dakota, and Oklahoma, and their proportion was not over three to two while Arizona's was seven to two. New Mexico has since changed the Normal University at Las Vegas to New Mexico Highlands University and has liberalized the offerings of this university in the arts and science direction. North Dakota and Oklahoma are low in opportunity for arts and science degrees as measured by population ratios, but they are nowhere near as low as Arizona.

What does this mean? Either it means that the young people of Arizona have decidedly different interests in higher education than the young people of the rest of the nation, or it means that most of them are being forced to take a degree that they would not take if they were given at least equal opportunity to choose otherwise. The second of these explanations is the more reasonable, and there is evidence to show that it is correct. Thus in 1938 a survey made at the State Teachers College at Tempe revealed that only thirty-four percent of the students had, upon entering, decided upon teaching as their main vocational aim.

But if most of the students in the teachers colleges really want arts and science degrees why do they go to a teachers college that does not offer this degree? There are at least four good reasons.

1. Most young people prefer to remain near home if they can, and they are influenced to do so by their parents. This is a normal psychological reaction on the part of both parent and child. As a result, quite a large number of them will take a degree from a nearby college even if it is not what they primarily want.

2. Attending a nearby college enables many students to commute, and this is a distinct economic advantage. Of more than six hundred questioned at Tempe in 1938, approximately a third commuted. For some of them a college degree would have been otherwise impossible.

3. There are often greater opportunities for part-time employment near home. A young man, or woman, knows more people who will be interested in helping him work his way through college.

4. Three areas can provide more opportunities for part-time employment than one. This is obvious.

The Phoenix area has been especially advantageous to students at the State Teachers College at Tempe. Approximately two-thirds of those questioned in 1938 earned some of their college expenses by part-time labor. It is doubtful if many of them would have fared so well in a smaller community with a larger college population, where the number of available jobs would have been fewer and the demand greater.

In any event, there is obviously something decidedly wrong with the higher educational picture in Arizona. It cannot be that three and a half times as many students want a degree in education as want a degree in the arts and sciences. **The reason must lie in the relative accessibility of the two kinds of degrees.** If there were as many colleges offering a bachelor's degree in the arts and sciences as there are offering a bachelor's degree in education, the proportion of the two kinds of degrees would certainly be much nearer that of the other forty-seven states than it is now.

Source: Bulletin 1935, No. 2, Chapter IV, pp. 88, 96, Bulletin 1937, No. 2, Chapter IV, pp. 78-9, 86; Bulletin 1940, No. 2, Chapter IV, pp. 104-107, United States Office of Education. M. L. Bunte, The Granting of a Non-Teaching Bachelor's Degree at the Arizona State Teachers College at Tempe, 1940; a Master of Arts thesis on file at the college.

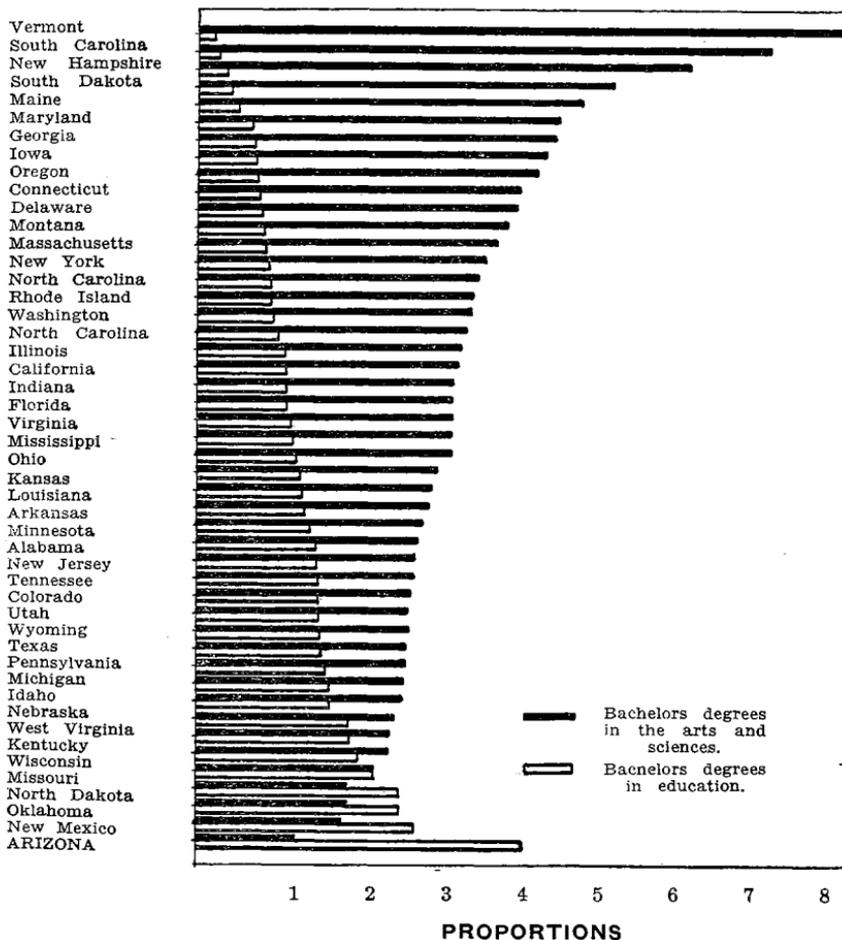


Fig. 5. Proportion of bachelors degrees in education to bachelors degrees in the arts and sciences, average of years 1934, '36, '38. White bars signify education degrees, black bars arts and science degrees; thus the proportion for Vermont was 0.2 to 7.9, respectively, or approximately one to forty in favor of the arts and sciences. The proportion for Arizona was 4.0 to 1.2, or twenty to six in favor of education. Nevada granted no degrees in education. Source: Bulletins 1935, '37, '40, No. 2, Chapter IV, Statistics in Higher Education, United States Office of Education.

IV. The Trend Of The Nation Is Definitely Towards Broadening The Degree Granted By The Teachers Colleges.

Forty of the forty-eight states have teachers colleges, and thirty-one of the forty, or seventy eight percent have authorized one or more of these colleges to grant B. A. or B. S. degrees, in place of or in addition to the bachelor's degree in education. The number of such states has been increasing steadily. California took the step in 1935, Minnesota in 1939, South Dakota in 1942, Illinois in 1943. These are states which had no deficiency in opportunity for the arts and science degrees such as exists in Arizona.

The nine states which, according to available information, have not yet broadened the degree-granting power of their teachers colleges are as follows: Arizona, Connecticut, Maine, Massachusetts, Montana, New Hampshire, Oregon, Pennsylvania, Washington. None of these except Arizona has less than three institutions granting a bachelor's degree in the arts and sciences. Oregon only very recently converted its normal schools to teachers colleges. Five of the nine are in the north-east and have old, well-established liberal arts colleges in addition to universities.

Thus, Arizona will be following a widely approved course if it broadens the meaning of the degree granted by its teachers colleges where adequate courses in arts and sciences are already given. To limit an institution to one narrow type of degree when it could give a broader degree or an additional degree without expansion and at no extra cost is not a defensible policy. Especially is this true when the second of the two degrees is shown to be definitely **more in demand** than the first.

Source: Directory of Colleges and Universities in the United States, 1940 edition, American Council on Education; also college catalogues of various states.

V. Arizona Must Have Greater Provisions For An Arts And Science Degree In Order To Meet Effectively The Educational Needs Of The Men Returning From The Armed Forces.

Twenty-four percent of the men in the armed forces have had two or more years of college, and forty-one percent have finished high school. Many of these men will resume or begin a college career when they are discharged. If even one-fourth of them take advantage of the financial arrangements set up

by the Federal Government, it will mean an increase in enrollments beyond anything our colleges have ever known and Arizona will be caught short unless it provides greater opportunity for an arts and science degree than is now offered.

What kind of higher education degree will these men want? We have no way of knowing precisely, but the safest prediction we can make is on the basis of college enrollments just before the war. Nationwide figures at that time indicated a definite preference for an arts and science degree. For example, out of every one hundred undergraduate men enrolled in the colleges of the continental United States in 1937-38, **forty-six were in the arts and sciences, eleven were in engineering, ten in business, eight in education, and twenty-five in all other colleges combined.**

The implications of this are clear. Arizona is now extremely weak in provisions for the one kind of higher education degree for which the returning service men are likely to show the greatest need. It has but one college which grants a bachelor's degree in the arts and sciences. To be up with the average of the forty-eight states it ought to have at least three and can have three without additional cost or expansion.

The Federal Government will provide generous economic assistance for those discharged fighting men who, being qualified, may wish to enter college. It is the responsibility of the states to provide adequate educational facilities. **Arizona cannot expect to fulfill its responsibility in this matter unless it provides greater opportunity for an arts and science degree.**

The teachers colleges would be satisfied with authority to grant only one bachelor's degree if that were a straight **Bachelor of Arts** with opportunity for students to select from present courses according to their special interests. This would permit acquirement of the degree without a student's being forced to take teaching courses.

Another type of education for which there is almost no provision at present is that represented in some states by the technical institute. New York has plans for establishing 15 such institutes. Other states are authorizing the teachers colleges to assume this responsibility and making appropriations therefor.

If Arizona and the other states do not take care of the young people who want this type of vocational education, the

Federal Government will take over and establish federal institutions or organize another version of the N. Y. A. work camp.

Source: Bulletin 1940, No. 2, Chapter IV, pp. 15, 43, 86; United States Office of Education.

VI. The One Great Weakness In Higher Education In Arizona Can Be Remedied With No Additional Cost To The Taxpayer By Authorizing A Degree Or Degrees In Harmony With The Teachers College Programs.

The colleges at Tempe and Flagstaff have the necessary buildings, equipment, and faculty. They are already accredited by the North Central Association of Colleges and Secondary Schools, as well as by the American Association of Teachers Colleges. Only certain adjustments in curriculums would be necessary. To suppose that this would materially increase the tax burden of the state is an unwarranted fear.

The experience of California is strikingly pertinent. In 1935 this progressive neighbor to the west liberalized the offerings of its seven teachers colleges to include a bachelor's degree in the arts and sciences. Some persons predicted an abnormal rise in the expenditures of these institutions as a result. What actually did happen? In 1933-4, the year before the change, the seven teachers colleges combined spent \$1,724,957 for educational and general purposes, and in 1937-8 they spent \$1,960,835. This was an increase of fourteen percent. That it was not an abnormal rise is shown by the experience of those states which had not authorized any of their teachers colleges to grant an arts and science degree. There were at this time eleven such states, and they had in all forty-three teachers colleges. These teachers colleges increased their educational and general expenditures during this interval on the average approximately twenty-one percent, or seven percent more than the teachers colleges of California. At the same time the average differences in enrollment were negligible. There are certainly no grounds here for apprehension on the part of the taxpayer and this position is not supported by the facts.

The fundamental purpose of a teachers college requires that it also be a college of arts and science. It is impossible for it to be a standard teachers college without giving the arts and science courses. A check of arts and science courses of

the Arizona teachers colleges against those of liberal arts colleges will show the teachers colleges are already offering the necessary courses.

If this is found to be true, then how can granting permission to elect certain courses instead of others already offered cost anything? Compelling students to take the teaching courses is not only more expensive but is positively wasteful and harmful for the state, for themselves, for teacher education classes, and for pupils where they do their practice teaching.

Source: Bulletin 1935, No. 2, Chapter IV, pp. 286, 298, 326; Bulletin 1940, No. 2, Chapter IV, pp. 238-41; U. S. Office of Education

VII. The University Stands To Gain More Than It Can Lose If The Colleges Are Authorized To Grant The BACHELOR OF ARTS Degree.

The University of Arizona now has seven professional and technological colleges and a graduate school. Nothing in this proposal can be construed as endangering any one of these units. On the contrary, there is excellent reason to believe that certain of them will definitely benefit from the change. Professional and graduate students are obtained largely from arts and science colleges; indeed, no source of graduate material can even approach in importance the college of arts and sciences. This is a recognized fact.

It is also a recognized fact the more colleges that feed into university graduate schools, the stronger and more serviceable that university becomes. This has been the development of every leading university in America. Therefore, the University of Arizona's professional and graduate services to the people of Arizona will be enhanced rather than impaired, if additional opportunities for an arts and science degree are provided in the state.

But what will be the effect of such a development on the University's College of Liberal Arts? Will it not suffer a serious drop in enrollment? California's experience gives a clear answer to this question. In 1935 the seven teachers colleges of California were converted to state colleges and they were authorized to grant a degree in arts and sciences. Some apprehensive people predicted the University would suffer as a consequence, especially in its arts and science divisions. As

a matter of fact, those divisions of the University gained in enrollment even more than did the seven state colleges. For example, in 1933-34, the year before the change, the University had 12,049 regular arts and science students; in 1937-38 it had 13,715, an increase of 1,666 or **fourteen percent**. During the same interval the state colleges went from 10,135 to 10,280 students, an increase of less than **two percent**. If they drew students who might otherwise have gone to the colleges of arts and sciences of the University, it certainly does not appear in the figures. We are all interested in the University and want to see it grow more and more into the greater institution which it is destined to become in fulfilling its rightful place in a great and growing state; saner and more appropriate degree-granting powers of the teachers colleges will in no way injure this development.

What actually happened in the teachers colleges of California was not a big gain in enrollment, therefore; it was rather a shift of a large proportion of the student body to the new arts and science division. Of the students enrolled in the seven colleges in 1937-38, two years after the conversion, sixty percent were candidates for an arts and science degree as over against forty percent for an education degree. This is clear indication that most of them previous to the change were being forced to take a college degree that did not appeal to them even though they continued with the same courses. There is every reason to believe that essentially similar results would follow a similar change in the teachers colleges of Arizona.

California already had twenty-five institutions which granted a bachelor's degree in the arts and sciences. Arizona has but one. If the University of California did not suffer from the change of the degree in the teachers colleges in that state, it is difficult to see how the University of Arizona can be expected to suffer by merely authorizing the teachers colleges to grant a nonteaching bachelor's degree. The teachers colleges cannot honestly function by granting only a **Bachelor of Arts in Education**.

So the professional and graduate schools of the University of Arizona have much to gain by this proposal and there is no evidence that the Liberal Arts College of the University will have anything to lose. In the meantime, countless deserv-

ing young people are being denied the type of degree which they need and want, and which they are unlikely to get until the teachers colleges are authorized to grant an arts and science degree.

Source: Bulletin 1935, No. 2, Chapter IV, pp. 120, 132; Bulletin 1940, No. 2, Chapter IV, pp. 132-3; United States Office of Education.

In this discussion I have covered seven points and have given supporting data to establish them. They are as follows:

- I. Arizona is the lowest of the forty-eight states in opportunity for attaining a Bachelor's degree in the arts and science.
- II. Arizona is the only state which does not have opportunity for an arts and science degree within one hundred miles of the region of greatest population density.
- III. In comparison with students in the other forty-seven states, too few students in Arizona have been obtaining Bachelor's degrees in the arts and sciences in proportion to the number that have been obtaining bachelor's degrees in Education.
- IV. The trend of the nation is definitely towards broadening the degree granted by the teachers colleges.
- V. Arizona must have greater provision for an arts and science degree in order to meet effectively the educational needs of the men returning from the armed forces.
- VI. The one great weakness in higher education opportunity in Arizona can be remedied with no additional cost to the taxpayer by authorizing a degree or degrees in harmony with the teachers college programs.
- VII. The University stands to gain more than it can lose if the colleges are authorized to grant the bachelors of arts degree.

TABLE I. Rank of states in opportunities for higher education, in terms of population ratios*. Based on 1940 Census.

Column I—Institutions granting a bachelors degree in the arts and sciences.
 Column II—Degree-granting professional and technological institutions, except education.
 Column III—Teacher-training institutions, college, university and normal.
 Column IV—Junior colleges.

	I	II	III	IV
Alabama	44	38	25	41
Arizona	48	14	7	18
Arkansas	10	34	33	20
California	31	30	42	6
Colorado	21	6	32	22
Connecticut	42	24	17	14
Delaware	12	13	21	47
Florida	40	39	43	36
Georgia	16	40	48	13
Idaho	26	16	8	8
Illinois	37	29	44	29
Indiana	19	25	27	40
Iowa	6	31	47	1
Kansas	2	10	23	2
Kentucky	34	44	34	9
Louisiana	28	18	22	33
Maine	24	45	3	30
Maryland	11	22	31	32
Massachusetts	20	15	13	31
Michigan	45	41	39	34
Minnesota	33	42	24	25
Mississippi	23	47	41	3
Missouri	39	23	28	11
Montana	15	3	11	21
Nebraska	7	5	12	24
Nevada	8	1	5	45
New Hampshire	22	35	18	17
New Jersey	47	48	38	35
New Mexico	27	17	9	19
New York	46	32	36	43
North Carolina	18	43	35	12
North Dakota	38	7	2	23
Ohio	17	21	40	44
Oklahoma	36	28	14	4
Oregon	4	4	6	27
Pennsylvania	30	33	37	42
Rhode Island	41	20	30	48
South Carolina	5	26	46	37
South Dakota	3	8	4	7
Tennessee	9	27	26	28
Texas	32	37	45	10
Utah	14	2	10	5
Vermont	1	9	1	26
Virginia	13	12	16	16
Washington	25	19	29	15
West Virginia	29	46	15	38
Wisconsin	35	36	20	39
Wyoming	43	11	19	46

*Note: By "population ratio" is meant the population of a state divided by the number of institutions of a certain type which it has. Comparisons are best made between states of about the same general size, since there is a tendency for a state as it grows to meet the increasing need for higher education in part by expanding the institutions it already has; nevertheless this tendency is definitely secondary, as evidenced by the fact that the twelve largest states have in all 368 institutions which grant a bachelors degree in the arts and sciences, whereas the twelve smallest states have 38 such institutions, or only about one-tenth as many.

TABLE II. Number of institutions of higher learning, by states.

Column I—Institutions granting a bachelors degree in the arts and sciences.

Column II—Professional and technological institutions, degree-granting, except education.

Column III—Teacher-training institutions, college, university and normal.

Column IV—Junior colleges.

Source: Bulletin 1940, No. 2, Chapter 4, pp. 6-7, 104-105; and No. 1, Part III, p. 6; U. S. Office of Education.

	I	II	III	IV
Alabama	11	21	9	3
Arizona	1	7	3	2
Arkansas	15	16	5	7
California	35	67	11	50
Colorado	7	21	3	4
Connecticut	7	18	7	8
Delaware	2	4	1	
Florida	8	14	3	3
Georgia	21	23	2	15
Idaho	3	7	3	3
Illinois	37	77	12	19
Indiana	22	35	10	4
Iowa	24	24	2	36
Kansas	20	29	6	21
Kentucky	14	16	7	16
Louisiana	13	30	8	5
Maine	5	4	8	2
Maryland	14	20	5	4
Massachusetts	27	58	20	10
Michigan	20	36	10	10
Minnesota	14	19	9	8
Missouri	16	41	11	21
Montana	4	13	3	2
Nebraska	12	26	7	4
Nevada	1	3	1	
New Hampshire	3	4	2	2
New Jersey	11	16	8	7
New Mexico	3	7	3	2
New York	47	125	29	6
North Carolina	23	24	8	19
North Dakota	3	12	7	2
Ohio	45	82	13	3
Oklahoma	11	23	10	18
Oregon	11	25	7	3
Pennsylvania	52	91	20	7
Rhode Island	3	9	2	0
South Carolina	18	19	2	3
South Dakota	7	12	6	4
Tennessee	25	29	9	8
Texas	33	49	9	36
Utah	4	14	3	4
Vermont	6	6	4	1
Virginia	20	41	11	12
Washington	10	22	5	8
West Virginia	10	8	8	3
Wisconsin	15	24	12	4
Wyoming	1	4	1	0

TABLE III. Population data by states, based on the 1940 census.

Column I—Number of people to each institution granting a bachelors degree in the arts and sciences.

Column II—Number of people to each degree—granting technological or professional school.

Column III—Number of people to each teacher-training institution.

Column IV—Number of people to each junior college.

Column V—Total population of the state, 1940 census.

	I	II	III	IV	V
Alabama	257,542	134,903	314,774	944,320	2,832,961
Arizona	499,261	71,327	166,420	249,630	499,261
Arkansas	129,959	121,837	389,877	278,484	1,949,387
California	197,354	103,095	627,944	138,148	6,907,387
Colorado	160,471	53,490	374,432	280,824	1,123,296
Connecticut	244,177	94,958	244,177	213,655	1,709,242
Delaware	133,252	66,626	266,505		266,505
Florida	237,177	135,529	632,471	632,471	1,897,414
Georgia	148,749	135,814	1,561,861	208,248	3,123,723
Idaho	174,958	74,982	174,958	174,958	524,873
Illinois	213,439	102,562	658,103	415,644	7,897,241
Indiana	155,354	97,937	342,780	856,949	3,427,796
Iowa	105,761	105,761	1,269,134	70,507	2,538,268
Kansas	90,051	62,104	300,171	87,763	1,801,028
Kentucky	203,259	177,852	406,518	177,852	2,845,627
Louisiana	181,837	78,796	295,485	472,776	2,363,880
Maine	169,445	211,806	105,903	423,613	847,226
Maryland	130,089	91,062	364,249	455,311	1,821,244
Massachusetts	159,878	74,426	215,836	431,672	4,316,721
Michigan	262,805	146,003	525,611	525,611	5,256,106
Minnesota	199,450	146,963	310,255	349,038	2,792,300
Mississippi	167,984	242,644	545,949	121,322	2,183,796
Missouri	236,541	92,309	344,060	180,222	3,784,664
Montana	139,864	43,035	186,485	279,728	559,456
Nebraska	109,653	50,609	187,976	328,958	1,315,834
Nevada	110,247	36,749	110,247		110,247
New Hampshire ...	163,841	122,881	245,762	245,762	491,524
New Jersey	378,197	260,010	520,021	594,309	4,160,165
New Mexico	177,273	75,974	177,272	265,909	531,818
New York	286,790	107,833	464,798	2,246,524	13,479,142
North Carolina	155,288	148,818	446,453	187,980	3,571,623
North Dakota	213,978	53,495	91,705	320,968	641,935
Ohio	153,502	84,239	531,355	2,302,537	6,907,612
Oklahoma	212,403	101,584	233,643	129,802	2,336,434
Oregon	99,062	43,587	155,669	363,228	1,089,684
Pennsylvania	190,388	108,793	495,009	1,414,312	9,900,180
Rhode Island	237,782	79,261	356,673		713,346
South Carolina	105,545	99,989	949,902	633,268	1,899,804
South Dakota	91,851	53,580	107,160	160,740	642,961
Tennessee	116,633	100,546	323,982	364,480	2,915,841
Texas	197,419	130,915	712,758	178,189	6,414,824
Utah	137,577	39,308	183,437	137,577	550,310
Vermont	59,872	59,872	89,808	359,231	359,231
Virginia	133,889	65,312	243,434	223,148	2,677,773
Washington	173,619	78,918	347,238	217,024	1,736,191
West Virginia	190,197	237,747	237,747	633,991	1,901,974
Wisconsin	209,172	130,733	261,466	784,897	3,137,587
Wyoming	250,742	62,686	250,742		250,742

TABLE IV. Number of bachelors degrees granted per year, average of years 1934-36-38.

Source: Bulletins 1935, No. 2, Chapt. 4, pp. 88, 96; 1937, No. 2, Chapt. 4, pp. 78-9, 86; 1940, No. 2, Ch. 4, pp. 64-71; U. S. Office of Educ.

	Arts and Science	Education
Alabama	903	458
Arizona	112	372
Arkansas	445	198
California	4858	1644
Colorado	647	359
Connecticut	1122	214
Delaware	84	17
Florida	644	223
Georgia	1298	203
Idaho	165	108
Illinois	3961	1252
Indiana	1797	616
Iowa	1775	302
Kansas	1326	506
Kentucky	1011	799
Louisiana	1001	439
Maine	493	52
Maryland	980	155
Massachusetts	4090	951
Michigan	2352	1483
Minnesota	1592	735
Mississippi	725	266
Missouri	1157	1152
Montana	199	43
Nebraska	734	487
Nevada	112	
New Hampshire	732	42
New Jersey	1115	611
New Mexico	91	137
New York	9126	2297
North Carolina	2080	540
North Dakota	194	260
Ohio	4032	1604
Oklahoma	1028	1394
Oregon	588	105
Pennsylvania	4577	2775
Rhode Island	557	153
South Carolina	1303	46
South Dakota	973	76
Tennessee	1189	655
Texas	3588	2103
Utah	416	240
Vermont	359	9
Virginia	1401	529
Washington	1220	343
West Virginia	723	561
Wisconsin	1501	1260
Wyoming	74	43
Average	1455	600

ARIZONA STATE TEACHERS COLLEGE—TEMPE

TABLE V. Enrollment of undergraduate college students in the continental United States, academic year 1937-38.

Type of College	Men and Women		Men	
	Number	Percent	Number	Percent
Arts and Sciences	689,290	51	374,147	46
Education	189,625	14	61,898	8
Business and commerce	96,736	7	79,430	10
Engineering	89,440	7	89,015	11
All others	285,814	21	199,403	25
Total	1,350,905	100	803,893	100

