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ABSTRACT

In November 1992, the Ford Foundation published a study entitled "State Higher Education Systems and College Completion," which argued that states that relied heavily on community colleges in their postsecondary educational system, such as California, Florida, Illinois, Indiana, and Wisconsin, were not efficient in producing bachelor degree (BA) graduates. This paper provides a review of the findings, recommendations, and limitations of the Ford Foundation report. Following an overview of the study conclusions, the paper offers a critique of findings in six sections. The first section discusses the study's evaluation of the proportion of high school graduates continuing their education, suggesting that the conclusions of the study did not provide adequate explanation of the data. The second section focuses on the relationship between freshman enrollment at four-year campuses and BA attainment, arguing that the data from the five sample states simply do not support the study's suggestion that a higher proportion of first-time students at baccalaureate campuses leads to a higher proportion obtaining degrees. Section 3, dealing with ethnic enrollment and attainment, highlights the study's inability to draw a conclusion based on the data gathered. Section 4 suggests that the transfer rate formula used was deceptively low and that the study's conclusions were unsubstantiated by any data. Section 5 discusses the effect of the College-Level Academic Skills Tests on BA attainment rates. The final section describes discrepancies arising from the study's investigation of the relationship between funding capacity and bachelor degree attainment. (MAB)

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AND COLLEGE COMPLETION"

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Institutional Research

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Miami-Dade Community College



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"STATE HIGHER EDUCATION SYSTEMS
AND COLLEGE COMPLETION"**

Research Report No. 93-06R

March 1993

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INSTITUTIONAL RESEARCH

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A Review of the Ford Foundation Study Titled:
"State Higher Education Systems and College Completion"

Introduction

On February 16, 1993, an article was published in the *Miami Herald* titled "Study Questions Junior Colleges: Few Students Get 4-Year Degrees." The research for this article was conducted by Gary Orfield of Harvard University and Faith G. Paul of the University of Chicago, and submitted to the Ford Foundation in November 1992. The authors argue that states with a heavy reliance on community colleges (including Florida) are not efficient or effective in producing bachelor degree graduates. With respect to Florida, Orfield told the *Herald* reporter that the two-plus-two system is becoming an educational dead-end because: (1) There are not enough nearby transfer universities; (2) There are too few spaces in university programs that lead to desirable careers (business, nursing, etc.); (3) Community college transfers are not prepared for university material; and (4) The CLAST is a clear obstacle to transfer.

The main findings, recommendations, and limitations of the study are reviewed in this report. Tables from the original report that were used by the authors to support their conclusions are reproduced for your information. In general, this review concludes that the study used poor operational definitions, flawed data, and too small of a sample to draw sweeping conclusions about the community colleges' role in higher education. A copy of the original study is available in the Institutional Research office at Miami-Dade Community College.

Rationale for the Five States Selected for the Study

The authors stated that their research grew out of the findings of previous research in several metropolitan areas. These findings had suggested to them that a state's choice of institutional structures may be an important factor in the attainment of bachelor degrees. Therefore, the main purpose of their research was to determine whether structural differences in the higher education systems of different states were associated

with differences in access and bachelor degree attainment. Five states were selected for this study: Florida, California, Illinois, Indiana and Wisconsin. There were major differences in the reliance on community colleges in the five states studied. At one extreme, Florida and California were characterized by a heavy reliance on community colleges; while at the other extreme, Indiana and Wisconsin were characterized by little or no reliance on community colleges. Illinois was characterized as having a balance between community colleges and four-year public and private institutions.

Enrollment spaces for freshmen in the four-year campuses in Florida and California were reported to be very limited, with Florida accepting only twelve percent of its high school graduates directly into four-year campuses each year, and California accepting thirty percent. Consequently, access to the four-year campuses in these states was reported to be highly selective with an adverse impact on minorities. Problems of access were exacerbated by the fact that Florida required the successful completion of an entrance examination for community colleges and four-year campuses, and another examination (the CLAST) for progression to upper division courses at four-year campuses. The authors stated that Georgia was the only other state in the nation which required similar examinations.

On the other hand, Illinois, with a moderate balance between community colleges and accessible public and private four-year campuses, accepted almost fifty percent of its high school graduates directly into four-year institutions, while Indiana and Wisconsin, with no community colleges, relied essentially on four-year institutions. Wisconsin was further characterized by the development of a network of two-year academic centers which were fully integrated with the four-year campuses, and a separate set of vocational centers.

Problems with Definitions and Data

The authors pointed out a number of difficulties in trying to measure bachelor degree attainment. The first was a lack of data at the individual student level. The second was a lack of agreement about the span of years over which degree attainment was

to be measured. A third was the lack of agreement about the target group to be used to measure degree attainment. Data limitations required the authors to use aggregate enrollment in higher education as the student base for computing degree attainment rates.

A state's degree attainment rate was computed by dividing the number of bachelor degrees awarded at the end of an academic year by the total enrollment in higher education in the Fall of that year. The authors claimed that this enrollment data provided degree attainment rates which were similar to the rates estimated using enrollment data lagged for the previous four, six, eight or ten years.

In Florida, the authors state that it was not possible to separate the regular degree credit enrollment from the non-degree credit enrollment. Also, the authors attempted to use both public and private higher education data, but in Florida, only public college and university data were used. Finally, the authors included enrollees seeking two-year terminal occupational degrees in their base for the bachelor degree attainment rate.

These differences in the Florida data clearly lead to problems. Non-degree-seeking credit students are close to one-fifth of the total community college enrollment in Florida. The claim that these enrollments could not be removed for Florida is puzzling. Data in the Florida Community College Fact Book (State of Florida, 1992) clearly separate out non-degree-seeking credit students, as does IPEDS national data for all of the states. The inclusion of students seeking two-year occupational degrees is also problematical. Once again, in Florida, one-fifth of the degree-seeking students are in occupational programs. The authors argue (assume) that the rate of transfer of occupational students is "increasing". A study done at Miami-Dade Community College (Belcher, 1987) found that less than a third of two-year occupational degree students enrolled in the State University System within the subsequent five years after obtaining their occupational degree. States like Florida with a broad mission for their community colleges are penalized when career occupational students and non-degree-seeking credit students are included in a denominator which purports to measure bachelor degree attainment rate.

The count of bachelor degrees for Florida is also underestimated. By using only public college and university data, community college transfers to private universities in Florida do not contribute their bachelor degrees to the final count for the state. At Miami-Dade Community College, fully 17% of A.A. graduates transfer to local private universities (Belcher, 1987). And, there are few private two-year colleges in Florida to add their transfers to the eventual public university bachelor degree count to offset this loss.

National data mirror this picture of community college students in Florida. A survey of community college students conducted in 1988 for the Carnegie Foundation for the Advancement of Teaching indicated that only 36% of respondents nationwide were preparing to transfer to a four-year college or university. Approximately 50% were enrolled in a community college to acquire or update job skills, and the remainder (14%) were attending because of personal interest or to improve basic English, reading, or mathematics skills (Conklin, 1993). It would be more appropriate, therefore, to design studies to evaluate the effectiveness of community colleges in terms of meeting the variety of educational goals of their students.

If obtaining a bachelor degree is the goal for only 36% of the students in community colleges nationwide, then states with relatively high numbers of community colleges will have a larger proportion of their total higher education enrollment not pursuing the bachelor degree. The authors' use of total enrollment in higher education as a base for estimates of bachelor degree attainment rates clearly underestimate rates in Florida and California relative to the other states used in this study.

Summary and Critique of Report Findings

This section provides a summary of the authors' findings on the impact of state institutional structure on the college-going rate and bachelor degree attainment patterns in the five states studied. We were struck by the apparent unreasonableness of some of the constructed data, but these "findings" are very difficult to critique. There is no systematic explanation given by the authors of the source for the data used to compose the rates presented in these tables. While general sources for each state are given at the end of the report, specific references are not given in the tables of the report that would allow one to go to a particular reference page and verify the base data from which these ratios were

formed. (In fact, the report itself was presented in a much less systematic way than this summary and critique of findings would indicate.) Even if the data were correct, some of the conclusions drawn by the authors are not logical. Both types of problems are noted in this summary.

(i) **Proportion of High School Graduates Continuing Their Education**

Among the five states studied, the authors reported that states with the heaviest reliance on community colleges--Florida and California--had a low proportion of high school graduates continuing their education. The states with little or no reliance on community colleges--Illinois and Wisconsin--had the highest proportions of high school graduates continuing their education (Table 19). The authors conclude that college-going rate itself is influenced by the structure of the state higher education system. Low cost accessible four-year campuses presumably provide more incentive for students to continue their education than do community colleges.

It is not clear who is included when the authors say that they examined whether high school graduates went on to some form of higher education. The Florida Statistical Abstract (State of Florida, 1990) indicates that 63% of graduates continue their education either in state community colleges or universities, an out of state college or university, or a technical or trade school. While the authors give a State of Florida reference, they do not cite a page number nor do they indicate whether all forms of higher education were included. This is especially crucial when comparisons are made to a state like Wisconsin that has an elaborate system of two-year academic centers integrated into their university system as well as separate vocational centers. Also, the college going rate of only 44.5% for Indiana seems much too low to be reasonable. Again, one wonders if only a partial data source was used.

Even if one were to accept the college going rates presented in Table 19, the findings for Indiana and Illinois contribute to a total pattern that runs counter to

the authors argument. That is, Florida and California should have the lowest college going rates. Indiana should have a rate similar to that of Wisconsin since it has few community colleges. Illinois, with a balance between community colleges and four-year campuses should have an intermediate college-going rate. The authors really do not deal with this anomalous data pattern, but simply laud the systems present in Wisconsin and Illinois.

(ii) **Freshman Enrollment at Four-Year Campuses and Bachelor Degree Attainment**

The authors concluded that states with the largest proportional reliance on community colleges--Florida and California--frequently had low freshman baccalaureate enrollment (Table 20) and much lower bachelor degree attainment rates (Table 22).

It is not surprising that states with heavy reliance on community colleges should have a low proportion of freshmen enrolled at four-year campus. This is the way these systems were constructed. The authors' attempt to link the proportion of first-time freshmen enrolled at baccalaureate campuses to the eventual bachelor degree attainment rate for the states has two clear problems: (1) The problems with data definitions discussed earlier lead to an underestimate of the bachelor degree rates for Florida and California. This is apparent when you notice that the proportion of first-time students enrolled in baccalaureate campuses is almost identical for California and Illinois, yet the supposed bachelor degree attainment rate is much lower for California. Florida, with the lowest percentage of first-time freshmen enrolled at baccalaureate campuses has a higher bachelor degree attainment rate than California and a rate comparable to Illinois. (2) This brings us to the second problem with their conclusion. The pattern of the data in the five states simply does not support the argument that a higher proportion of first-time students at baccalaureate campuses leads to a higher proportion obtaining bachelor degrees. Certainly the data for these five states, however flawed, does not show such a clear pattern.

TABLE NINETEEN

Percent of In-State High School Graduates Going On To College in Wisconsin, Florida, California, Illinois, Indiana

	1978	1980	1984	1986	1988
Florida	43.7	46.2	50.2	48.7	55.0
Calif.	58.7	60.2	54.4	60.1	57.1
Illinois	82.0	71.5	73.0	75.2	76.9
Indiana	-	42.5	47.5	44.3	44.5
WISCONSIN	-	59.4	62.3	64.7	73.7

*Source: Florida Department of Education, CPEC, 1987 Update, IBHE, Data Book on Illinois Higher Education, 1979-1989; Indiana Department of Education; Wisconsin Department of Education

TABLE TWENTY

Proportion of Home State First Time Freshmen Enrolled at Baccalaureate Campuses in Wisconsin, Florida, California, Illinois, and Indiana, 1978-1988.

	Fla.	Calif.	Ill.	Ind.	Wisc.
1978	-	29.5	30.5	-	-
1980	33.3	30.1	37.7	73.2	55.3
1984	26.9	35.2	40.9	74.2	55.0
1986	-	35.9	42.5	76.8	53.2
1988	23.3	37.9	39.4	77.0	51.6

*Source: U.S. Department of Education, HEGIS/IPEDS Data.

TABLE TWENTY-TWO

Bachelor Degrees As A Proportion of Total Higher Education Enrollment in Wisconsin, Florida, California, Illinois, and Indiana, 1975-1986

	Florida	California	Illinois	Indiana	WISC.
1975	9.9	6.2	9.7	14.1	-
1980	9.0	6.0	8.9	12.7	7.9
1984	8.9	6.6	9.0	12.8	8.7
1986	7.3	5.8	7.9	12.5	8.6
1988	7.2	5.8	8.1	11.7	9.6

*Source: U.S. Dept. of Educa., HEGIS/IPEDS Data.

*These tables were reproduced from the original report by Gary Orfield and Faith G. Paul.

(iii) **Ethnic Baccalaureate Enrollment and Bachelor Degree Attainment**

The authors drew no firm conclusions about the relationship between ethnicity and degree attainment rates. The data in Table 18 revealed that Indiana had the highest degree attainment rates for each of the ethnic groups compared, while California had the lowest; however, Florida had the second highest degree attainment rates for Blacks and Hispanics, followed by Illinois. It is unfortunate that we do not have data for Wisconsin (the authors state that ethnic data were not available). But given the data that are displayed, Florida and California should have the lowest degree attainment rate, Illinois should be higher than either of these two states, and Indiana and Wisconsin should have the highest rates. The fact that Florida, with a heavy reliance on community colleges, ranks second on this table meant that the authors were unable to draw any conclusions about higher education structure and degree attainment rates of ethnic minorities.

(iv) **Transfer Students and Bachelor Degree Attainment**

Table 21 purports to show "transfers from the two-year colleges to the public and private baccalaureate campuses". Note that the authors used a "transfer rate" that is constructed by dividing the number of community college transfers by total higher education enrollment. This gives a "transfer rate" that is deceptively low and that would very likely mask any patterns that actually exist. Also, the data for Florida include transfers to public universities only. Recall that at Miami-Dade fully 17% of two-year graduates transfer to private universities in the local area (Belcher, 1987).

It is difficult to know what to say about this table. The measure is very peculiar. It appears as if few students transfer to baccalaureate campuses in Florida. And yet, 77% of all students in upper division at the State University System in Florida had their origin in a community college (Belcher, 1991). Whatever this table is trying to argue, the actual transfer contribution in Florida is very high. The transfer rate of two-year graduates into public universities is approximately 70% within the year following graduation.

TABLE EIGHTEEN

Bachelor Degrees as a Percent of Total Enrollment by Ethnicity in
Florida, California, Illinois, and Indiana, 1975-1986

	Florida	California	Illinois	Indiana
ASIAN				
1975		7.4		
1980		7.0		
1984		6.3		
1986		5.9		
1988		6.9		
BLACK				
1975	6.3	3.3	5.6	7.8
1980	7.6	3.0	5.3	6.2
1984	6.8	3.4	5.0	7.1
1986	5.7	3.4	3.5	6.9
1988	4.8	3.0	4.3	6.5
HISPANIC				
1975	7.8	3.2	6.3	11.2
1980	6.7	3.4	5.4	9.0
1984	6.3	3.6	5.1	10.7
1986	6.0	3.5	3.0	10.3
1988	5.5	3.5	3.0	9.3
WHITE/oth				
1975	10.6	6.7	8.8	14.5
1980	9.4	6.6	9.5	13.2
1984	9.5	7.3	9.7	13.1
1986	7.7	6.4	9.0	12.9
1988	7.7	6.4	9.1	12.0

*Source: U.S. Dept. of Educa., HEGIS/IPEDS Data.

*This table was reproduced from the original report by Gary Orfield and Faith G. Paul.

TABLE TWENTY-ONE

Transfers From the Two-Year Colleges to the Public and Private
Baccalaureate Campuses in Wisconsin, Florida, California,
Illinois, and Indiana, 1980-81 to 1988.

	1981	1984	1986	1988
Florida				
Pub. Univ.	3.50	3.20	2.20	2.20
California				
Overall	4.99	4.20	5.73	6.32
U. of Calif.	0.57	0.58	0.73	0.82
C.S.U.	3.60	3.30	4.10	4.20
Privates	0.82	0.32	0.90	1.30
Illinois				
Overall	3.5	4.0	4.4	4.2
Pub. Univ	2.4	2.8	2.9	2.7
Privates	1.1	1.7	1.5	1.5
WISCONSIN				
Overall	6.9	9.0	9.6	9.9

*Source: Fact Books, State University System of Florida; CPEC, 1987 Update; IBHE, Data Book on Higher Education; The University of Wisconsin Student Statistics, Wisconsin Association of Independent Colleges and Universities.

*This table was reproduced from the original report by Gary Orfield and Faith G. Paul. Transfers are expressed as a percent of total higher education enrollment.

The authors state that students at community colleges face a variety of problems associated with transferring. These include a lack of knowledge of the general transfer requirements of baccalaureate campuses or specific programs, uncertainties about financial aid, and the type of welcome they will receive on the transfer campus. The authors also argue that community colleges cannot match the depth and breadth of programs at four-year campuses. Thus "students at community colleges are required to make up an [academic] deficit with an educational experience that does not often provide the context for doing so. This has reduced the number of students eligible for the baccalaureate pool at the upper division level, and, therefore, the number eligible for the bachelor degree." Moreover, they state that students who stood to benefit the most from obtaining a bachelor degree -- racial minorities, students of low socio-economic background, or low academic ability--were the least likely to transfer, and also the least likely to begin at a four-year campus.

The conclusions presented above are not substantiated by any data. The authors present no evidence that the community college academic experience places students, especially underprepared students, at a disadvantage. Most evidence in the literature suggests the contrary. Moreover, the transfer and access problems discussed by the authors could be resolved by strengthening and enforcing articulation agreements or by expanding community colleges to four-year campuses. This should lead to an increase in bachelor degree attainment rates overall, and among ethnic groups in particular, since a larger proportion of the minorities in higher education started at community colleges.

(v) **The College-Level Academic Skills Test (CLAST) and Bachelor Degree Attainment**

The authors pointed out that in Florida and Georgia, every undergraduate, whether enrolled at a community college or public university, must pass an examination to proceed from lower division to upper division. In Florida, this examination is known as the CLAST or College-Level Academic Skills Test. The authors also reported that this test made the exit from community colleges more selective in these two states than almost anywhere else in the country. Moreover, there was

evidence that the CLAST has had a disproportionately adverse effect on low-income and minority students. The view was expressed by individuals interviewed by the authors that CLAST requirements for community college graduation and transfer to upper division university programs serve to reduce the eligible pool of students for baccalaureate programs and decrease bachelor degree attainment rates in Florida.

The reviewers concur with the above observations. Considering the adverse effects on low income and minority students, and the fact that this test is required in only a few of the nation's fifty states, further consideration should be given to whether this test should be abandoned. Moreover, there is no evidence that the CLAST is a fair and valid predictor of college performance.

(vi) **Funding Capacity and Bachelor Degree Attainment**

The authors concluded that differences in funding did not determine degree attainment rates. They reported that states such as Florida and California, had the highest tax capacity, the largest higher education appropriation per student, the lowest tuition as a percent of appropriation plus tuition, and the lowest bachelor degree attainment rates. On the other hand, states such as Illinois, Indiana, and Wisconsin had lower appropriations, higher tuition, and higher bachelor degree attainment rates.

The authors highlight the findings for tax capacity, even though data are presented that show that Florida's tax effort (actual tax revenues as a percent of capacity) is the lowest of the five states studied. In fact, Florida's tax effort is 44th in the nation, while Wisconsin's is 4th (Research Associates of Washington, 1992).

It should also be noted that the Higher Education Appropriation per student (Table 29) quoted for each state is the statewide average across community colleges and universities. Use of such figures gives a particularly misleading picture of the plight of community colleges in Florida. Funding per student in Florida universities compares more favorably to national norms than does funding per student in

TABLE 25

Tax Capacity: Dollars Per Capita

	1977-78	1980-81	1983-84	1986-87	1989-90
Florida	\$ 748	\$ 866	\$1,156	\$1,453	\$1,846
California	810	1,004	1,294	1,692	2,063
Illinois	806	969	1,096	1,356	1,748
Indiana	705	849	986	1,224	1,549
Wisconsin	698	862	962	1,246	1,582

*Source: State Profiles: Financing Public Higher Education 1978-1990, pp. 99, 105, 108, 144.

TABLE 29

Higher Education Appropriations Per Student

	1977-78	1980-81	1983-84	1986-87	1989-90
Florida	\$ 1,821	\$ 2,458	\$ 3,398	\$ 4,298	\$ 5,673
California	2,339	2,911	2,748	4,923	5,099
Illinois	1,869	2,265	2,695	3,462	4,099
Indiana	2,027	2,402	2,654	3,607	4,044
Wisconsin	2,236	2,688	3,056	3,570	4,411

*Source: State Profiles: Financing Public Higher Education 1978-1990, pp. 100, 106, 109, 145.

TABLE 30

Tuition As A Percent of Appropriations Plus Tuition

	1977-78	1980-81	1983-84	1986-87	1989-90
Florida	24.7	20.4	19.3	18.5	17.4
California	6.5	6.9	12.5	9.4	8.5
Illinois	16.7	16.9	21.2	19.2	20.2
Indiana	27.6	28.8	35.9	33.2	32.1
Wisconsin	25.9	27.5	26.5	30.2	30.4

*Source: State Profiles: Financing Public Higher Education 1978-1990, pp. 100, 106, 109, 145.

*These tables were reproduced from the original report by Gary Orfield and Faith G. Paul.

Florida community colleges, which ranks in the lowest 30% nationwide (Jones & Brinkman, 1990).

Also, the Florida data for Higher Education Appropriations per student are simply incorrect from 1983-84 onward. The state switched to a 40 credit FTE after 1980, and the State Higher Education Finance Officer (SHEFO) reported "reduced" FTE totals rather than re-converting back to 30 credits as had been requested. This inflated the dollars per FTE reported. The reviewer confirmed this with both Research Associates of Washington (the source of the data), and the current Florida SHEFO. When the data are converted, the Florida number for 1989-90 is about \$4,300. Thus, California and Wisconsin have the highest appropriation per student.

The authors were not aware of this error in FTE. Given that Wisconsin's tax effort is 4th in the nation and that it ranks above Florida in higher education appropriations per student, it is possible that funding is related to degree attainment.

Herman I. Brann/Cathy Morris:ab

3/31/93

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