UNIVERSITY OF HAWAI‘I SYSTEM

REPORT

Report to the 2006 Legislature
on S.C.R. 183 S.D. 1

REQUESTING THE ESTABLISHMENT OF A TASK FORCE ON ECONOMIC DEVELOPMENT, WORKFORCE DEVELOPMENT, AND THE ROLE OF THE UNIVERSITY OF HAWAII IN THE ECONOMIC FUTURE OF THE STATE.

December 2005

A Report to the Legislature on the Establishment of A Task Force on Economic Development, Workforce Development, and the Role of the University of Hawaii in the Economic Future of the State

December 2005

Background:

Through Senate Concurrent Resolution 183 (Exhibit A), the 2005 Legislature of the State of Hawai`i requested that the University of Hawai`i to form and lead a task force on economic development, workforce development, and the role of the University of Hawai`i in the economic future, and that the task force develop a plan to strengthen the ability of the University of Hawai`i to deliver the high quality education, training, and research necessary to create and sustain a more vibrant and diverse economy.

Project Planning:

As described in the Resolution, the National Center for Higher Education Management Systems (NCHEMS) has facilitated the development of plans in a growing number of states that have evolved from an analysis of comparative state data analysis of existing state policies, the setting of a public agenda for change, and developing a consensus around implementing activities. Recognizing the complexity of the task, and the specialized expertise needed to accomplish the various tasks laid out in the Resolution, the University developed a contract with NCHEMS that resulted in the development of a work plan (Exhibit B).

As the project was getting organized, a number of unrelated but similar planning activities were also being organized to deal with different aspects of Hawai`i's workforce and economic development, and the role of the University. Several of these, including the Hawai`i Jobs Initiative, and the Economic Momentum Commission had formed task forces whose composition paralleled the task force called for in the Resolution. Following a meeting involving the University, NCHEMS, Enterprise Honolulu, and members of the Hawaii Business Roundtable, it was decided that we should make use of the outcomes from these established processes rather than try to establish a new group.

Implementation Activities:

The first three parts of the NCHEMS-UHS work plan have been completed. These include:

- ❑ Completion of the required data analyses
- ❑ Presentation of these data to UHS staff
- ❑ Based on materials prepared for the November 14 meeting and discussions with UHS staff, prepare a revised presentation for use with business and community leaders

In early December, Enterprise Honolulu organized a special meeting with a number of University, business and community leaders who reviewed the data analysis (Exhibit C), discussed related issues, and agreed to continue as a core leadership group for the project.

It is expected the NCHEMS work plan and the final report on the activities requested by the Resolution will completed by June 30, 2006.

Exhibit A

Senate Concurrent Resolution 183 S.D. 1

SENATE CONCURRENT RESOLUTION

REQUESTING THE ESTABLISHMENT OF A TASK FORCE on ECONOMIC DEVELOPMENT, WORKFORCE DEVELOPMENT, AND THE ROLE OF THE UNIVERSITY OF HAWAII IN THE ECONOMIC FUTURE OF THE STATE.

WHEREAS, since 1960, the increasing proportion of jobs paying salaries less than the national average has resulted in a decline in Hawaii’s average per capita personal income relative to the United States national average; and

WHEREAS, Hawaii’s economic, social, and environmental future is dependent upon our ability to reverse the decline in the relative average per capita personal income; and

WHEREAS, in the evolving global economy, knowledge is the ingredient that underlies the competitiveness of regions, nations, sectors, and firms; and

WHEREAS, a region's success in the evolving global economy is increasingly dependent upon access to a more highly educated and skilled workforce; and

WHEREAS, workforce projections from the Department of Labor and Industrial Relations indicate the need to fill approximately twenty-two thousand jobs per year through 2012, with more than half those jobs requiring education and training beyond the high school level; and

WHEREAS, Department of Education reports indicate that there are not enough young people in the educational system to fill the State's workforce needs in the coming decades; and

WHEREAS, an increasing number of businesses in Hawaii are experiencing difficulties in recruiting, hiring, and retaining skilled workers; and

WHEREAS, the increasing gap between personal income and the cost of housing makes it more difficult to recruit and retain skilled workers from outside Hawaii; and

WHEREAS, the growing deficit in skilled workers places severe limits on the Hawaii economy to innovate, grow, and compete in the global marketplace; and

WHEREAS, high-paying jobs require some form of post-secondary education or other specialized training and an increasing number require post-secondary academic degrees or certifications; and

WHEREAS, sustaining the growth of living wage jobs in emerging industries such as health care, bio-sciences, information technologies, and digital media is critical for Hawaii's economic future and requires access to an educated and skilled workforce if these industries are to attain a larger segment of the Hawaii economy; and

WHEREAS, it is important that an increasing proportion of Hawaii's residents acquire the education and training necessary for employment in living wage jobs in emerging industries; and

WHEREAS, the presence of responsive high quality post-secondary institutions of higher learning are key to the development and sustainability of a globally competitive economy and workforce; and

WHEREAS, the University of Hawaii system is the State's primary provider of research, education, and training, and its future success is a key element in the development of a globally competitive economy; and

WHEREAS, the National Center for Higher Education Management Systems (NCHEMS) has facilitated the development of plans in a growing number of states that have evolved from an analysis of comparative state data analysis of existing state policies, the setting of a public agenda for change, and developing a consensus around implementing activities; now, therefore,

BE IT RESOLVED by the Senate of the Twenty-third Legislature of the State of Hawaii, Regular Session of 2005, the House of Representatives concurring, that the University of Hawaii is requested to form and lead a task force on economic development, workforce development, and the role of the University of Hawaii in the economic future; and

BE IT FURTHER RESOLVED that the task force be comprised of representatives of the business community, the University of Hawaii and the community colleges, the executive and legislative branches of government, and community-based organizations, including those involved in economic development; and

BE IT FURTHER RESOLVED that the task force develop a plan to strengthen the ability of the University of Hawaii to deliver the high quality education, training, and research necessary to create and sustain a more vibrant and diverse economy; and

BE IT FURTHER RESOLVED that the task force is requested to report its findings, conclusions, and recommendations at least twenty days prior to the convening of the Regular Session of 2006; and

BE IT FURTHER RESOLVED that certified copies of this Concurrent Resolution be transmitted to the Governor, the President of the Senate, the Speaker of the House of Representatives, the Interim President and the Chair of the Board of Regents of the University of Hawaii, and the Director of Business, Economic Development, and Tourism.

Report Title:

TASK FORCE; ECONOMIC DEVELOPMENT; POST SECONDARY EDUCATION

Exhibit B

NCHEMS-UHS Work Plan

It has been agreed that NCHEMS will conduct the following activities:

1. Complete the required data analyses. As previously noted, NCHEMS has already completed many of the required data analyses. The required step is to pull together results and organize them in a way that helps "tell a compelling story" about the needs of the state.

   These analyses will serve to identify subpopulations within Hawaii not being served by the UHS and therefore target audiences for training programs that respond to workforce development gaps. The same analyses will help strategic planning at UHS by pointing out gaps in access that the System needs to address. They may also point to targets of opportunity for economic development activities.

   Completion date: November 10, 2005.

2. Present these data to UHS staff in a full-day meeting devoted to discussing the key findings, and identifying the (small number of) key issues facing the state (school completion, acquisition of necessary skills, college participation, college completion (degree or certificate), adult literacy, appropriate program capacity, etc.) with attention being paid to regional and subpopulation variations. At the end of this conversation, the outline of a "public agenda" that can inform planning efforts at UHS should emerge.

   It is anticipated that the results of this discussion will be a first cut at:
   - Statements to be incorporated as key components as key components in the UHS strategic plan.
   - Identification of target audiences for workforce training.
   - Key programmatic areas requiring focus and creation of additional capacity.

   Completion date: Proposed meeting date, November 14, 2005.

3. Based on materials prepared for the November 14 meeting and discussions with UHS staff, prepare a revised presentation for use with business and community leaders that:

   a. Incorporates, as appropriate, recommendations of the EMC, workforce development initiatives, and materials prepared as background materials for UHS planning activities.

   b. Leads to identification of a limited number of key statewide priorities (a public agenda for higher education) that can serve as the linchpin that connects external, statewide priorities to the UHS Second Decade plan.

   This presentation would be given to UHS and to a group convened by Enterprise Honolulu at a meeting currently scheduled for December 8-9.

4. Conduct a "policy audit"—reviewing key policies and procedures that impede or promote the capacity (and willingness—the incentives) for the UHS to address these priorities.

Among the topics to be reviewed would be such things as:

- Program approval/initiation procedures
- Funding for basic capacity and rapid response to employer needs
- Alignment of K-12 exit standards with UHS and employer entering skill requirements
- Affordability and student financial aid
- The mechanisms for delivering adult literacy/basic skills education
- Accountability mechanisms—especially those defined in terms of workplace competencies
- Determination of institutional missions and their capacity to respond to needs of employers and individual students.

This activity will require review of legislation and policies and procedures of the UHS. Acquisition of these materials will be arranged during the visit to Hawaii associated with Activity 2 above.

The result of this work will be a summary of barriers (statutory, policy, and procedural) to achieving improvements identified as necessary by UHS staff as well as suggestions by NCHEMS staff regarding new policies that might be necessary.

Completion date: January 20, 2006.

5. Meet with UHS staff to review these findings and get their comments and feedback on NCHEMS interpretations regarding these conditions. Have the key policy roadblocks been identified? Are there others?

   Completion date: February 15, 2006.

6. Conduct community meetings on all the islands, meeting with:
   - K-12 and higher education officials (including Board members)
   - Employers
   - Political leaders
   - Economic development professionals
   - Media
   - Others as appropriate

The purposes of these meetings will be to:

- Share the results of the analyses as a way of checking interpretation and, more important, building understanding and consensus about the nature of the issues to be addressed and their importance to the state.

- Hear about policy barriers (and needs) from those individuals closest to the action. We often find that it is a **perceived**—not real—policy that stands in the way of desirable behaviors.

NCHEMS will rely on UHS staff to organize these interviews around mutually agreed-upon schedules and listing of interviewees. At the end of this series of interviews, NCHEMS staff will meet with UHS staff and others to present an initial indication of changes that might be needed to priorities for action—either targets of opportunity to be pursued or policy changes needed to allow desirable strategies to be implemented.

Completion date: March 15, 2006.

7. Summarize these findings and make a set of recommendations for action steps that might be undertaken by UHS. These recommendations will focus on:

   a. Additional/expanded populations to be served.

   b. Priorities for expansion of UHS capacity needed to address priority state needs.

   c. Policy changes needed:

      - At the state level

      - Within UHS

   Completion date: April 15, 2006.

Exhibit C

NCHEMS

A Public Agenda
For Higher Education
In Hawai`i

[INSERT NCHEMS POWERPOINT SLIDES – ATTACHED]

A Public Agenda for Higher Education in Hawaii

Dennis P. Jones

Honolulu, Hawaii

December 9, 2005

National Center for Higher Education Management Systems
3035 Center Green Drive, Suite 150 Boulder, Colorado 80301-2251

NCHEMS

Public Agenda:

Priority Needs of the State to

Which the University of Hawaii

Can Be Expected to Respond

The Bottom Line

- Enhance the State's Stock of Human Capital
  - Improved Competencies of High School Graduates
  - Increased Skills of Adults with Less than a High School Education
  - Improve Graduation Rates of College Students

(continued)

The Bottom Line (cont.)

- Provide Skilled Workers in Critical Need Areas
  - Nursing/Allied Health
  - Teachers
  - Science Technologies
- Help to Expand and Diversify the State's Economy
  - Technology Transfer
  - Rapid Response to Employer's Training Needs

Address These Issues

as Appropriate in

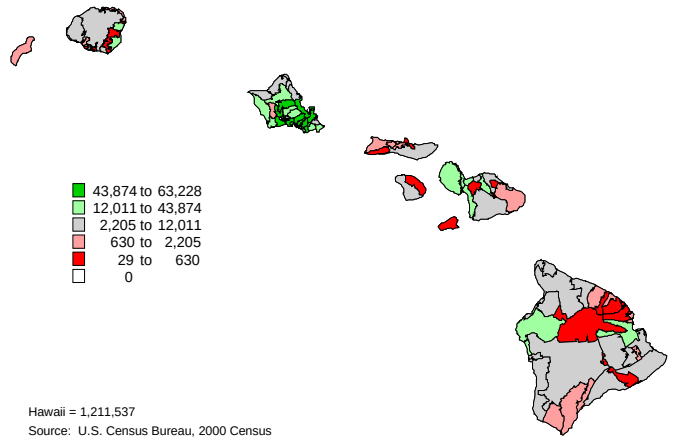
All Parts of the State

5

The Context

6

Total Population, 2000



Hawaii = 1,211,537

Source: U.S. Census Bureau, 2000 Census

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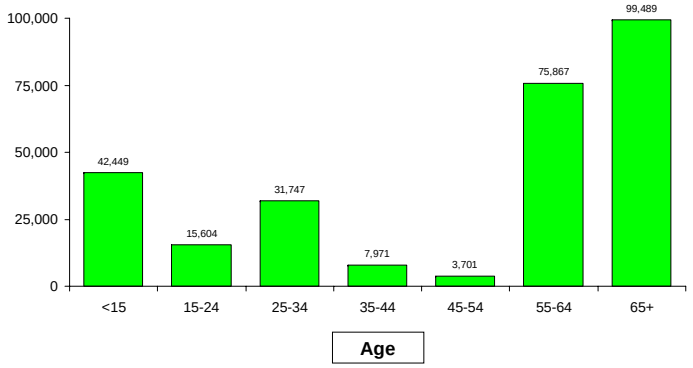
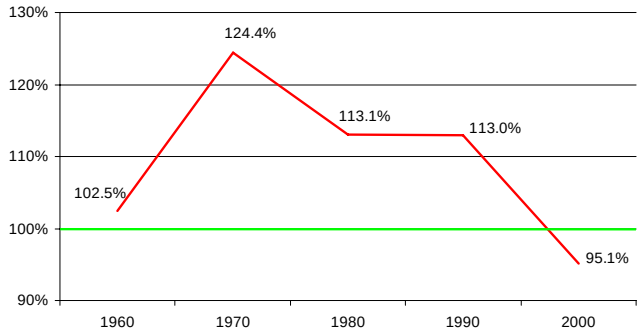
Projected Change in Population by Age Group from 2000 to 2020



Source: U.S. Census Bureau's Population Projections and Census 2000

8

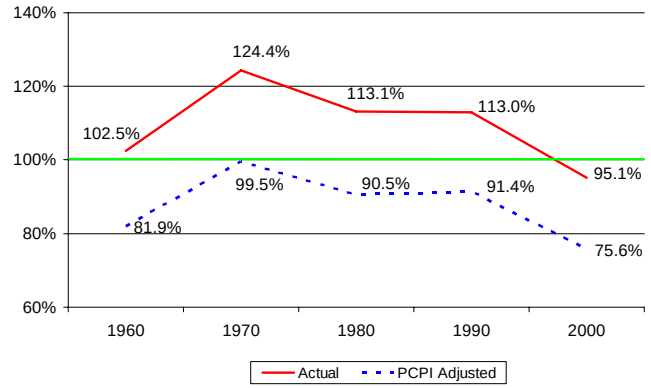
Per Capita Personal Income as a Percent of U.S. Average—Hawaii, 1960-2000



Source: U.S. Census Bureau

9

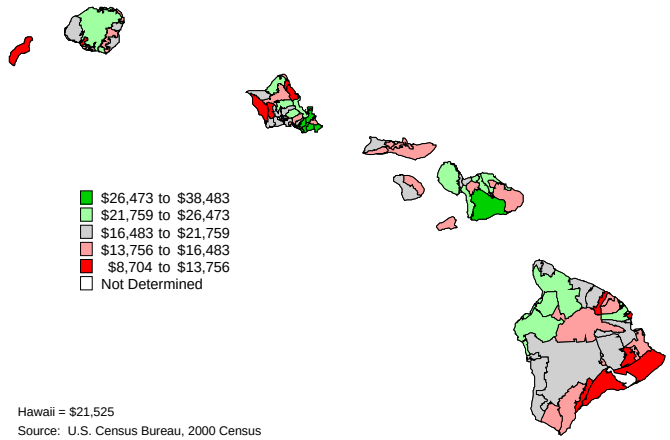
Declining Per Capita Personal Income in Hawaii as a Percent of U.S. Average—1960-2000



Source: U.S. Census Bureau

10

Per Capita Personal Income, 1999



Hawaii = $21,525

Source: U.S. Census Bureau, 2000 Census

11

Workforce and the Economy

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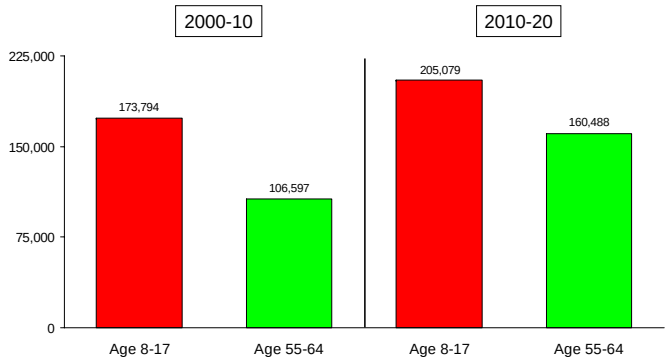
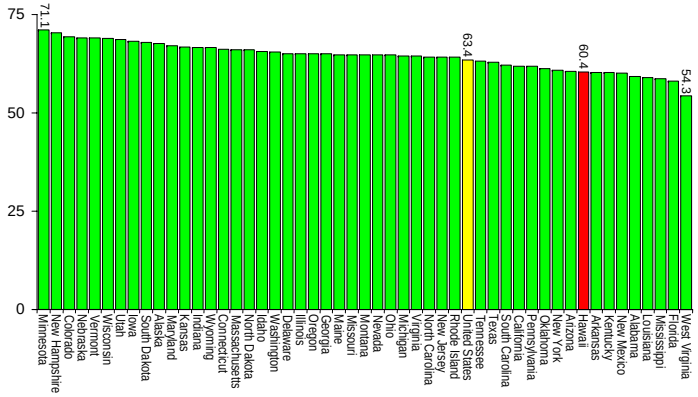
Number of Workers Entering and Leaving the Workforce in Hawaii



Source: U.S. Census Bureau Population Projections

13

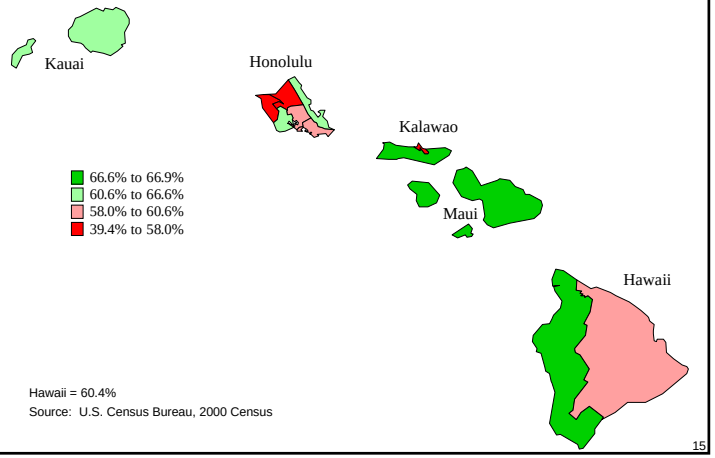
Percent of Civilian Population Participating in the Workforce, 2000



Source: U.S. Census Bureau

14

Percent of Civilian Population Age 16 and Older Participating in the Workforce, 2000



Hawaii = 60.4%

Source: U.S. Census Bureau, 2000 Census

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Hawaii Civilians Age 16 and Older in the Workforce by Education Attainment, 2000

	In Civilian Workforce		Not in Civilian Workforce	
	Number	***Percent***	***Number***	***Percent***
Less than High School	61,381	35.7	110,678	64.3
High School Diploma or GED	153,044	58.8	107,137	41.2
Some College, No Degree	142,865	70.6	59,585	29.4
Associate Degree	52,433	77.6	15,112	22.4
Bachelor's Degree	110,510	77.0	33,010	23.0
Graduate or Professional Degree	50,950	78.1	14,301	21.9

Source: Integrated Public Use Microdata Series 5% sample, Minnesota Population Center; www.ipums.org

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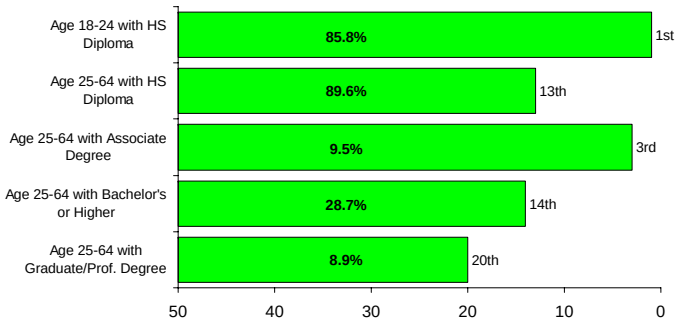
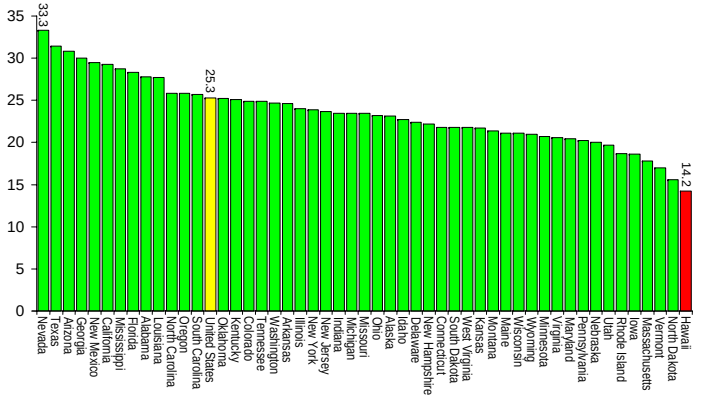
Educational Attainment and Rank Among States—Hawaii, 2000 (Percent)



Source: U.S. Census Bureau, 2000 Census

17

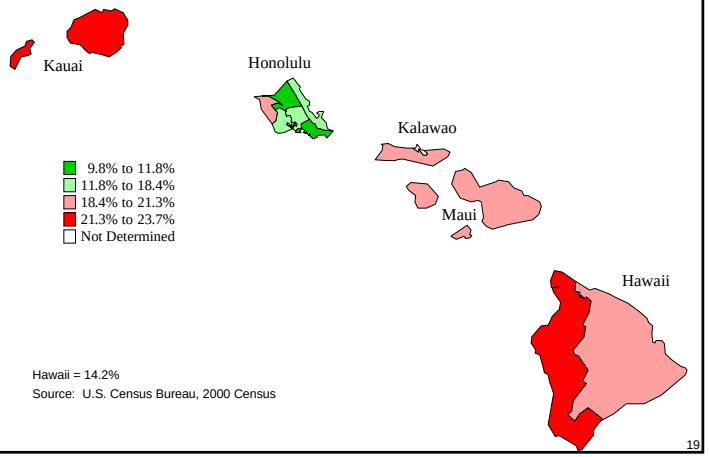
Percent of Population Age 18-24 with No High School Diploma



Source: U.S. Census Bureau, 2000 Census

18

Percent of Population Age 18-24 with Less than a High School Diploma, 2000

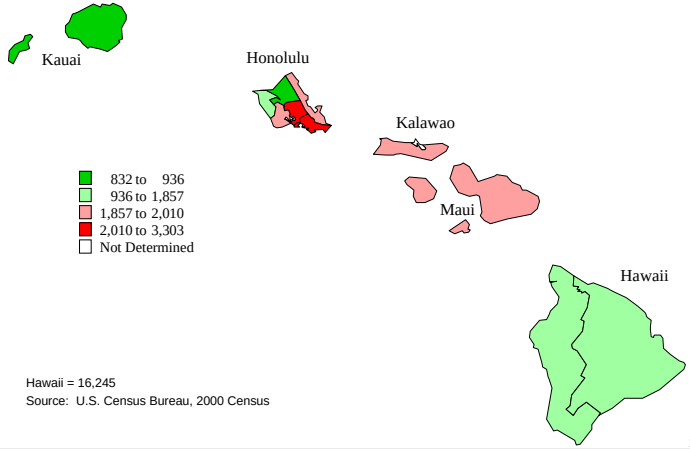


Hawaii = 14.2%

Source: U.S. Census Bureau, 2000 Census

19

Number of Residents Age 18-24 with Less than a High School Diploma, 2000

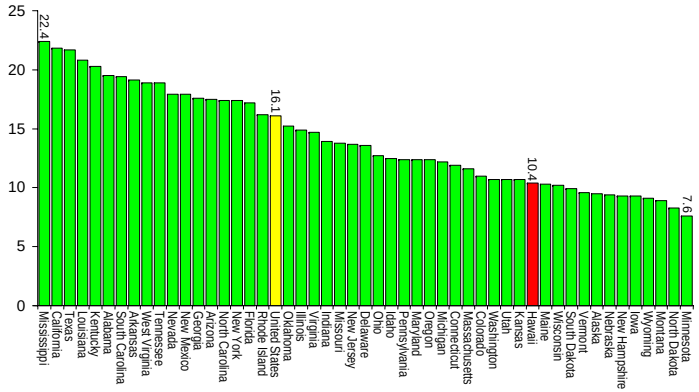


Hawaii = 16,245

Source: U.S. Census Bureau, 2000 Census

20

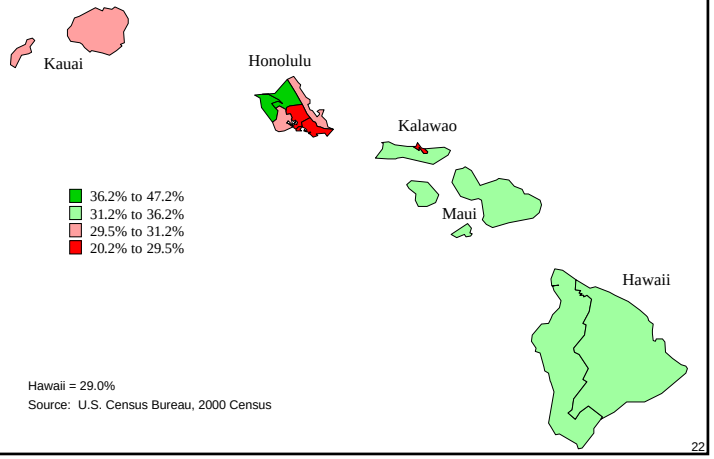
Percent of Population Age 25-64 with Less than a High School Diploma, 2000



Source: U.S. Census Bureau

21

Percent of Population Age 18-64 with Only a High School Diploma, 2000

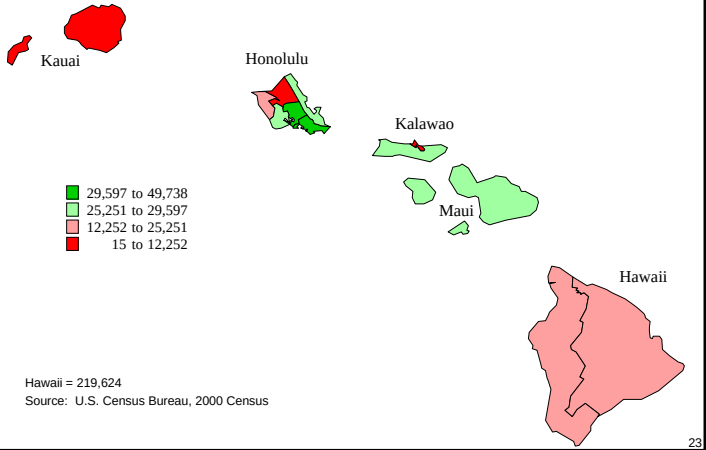


Hawaii = 29.0%

Source: U.S. Census Bureau, 2000 Census

22

Number of Residents Age 18-64 with Only a High School Diploma, 2000

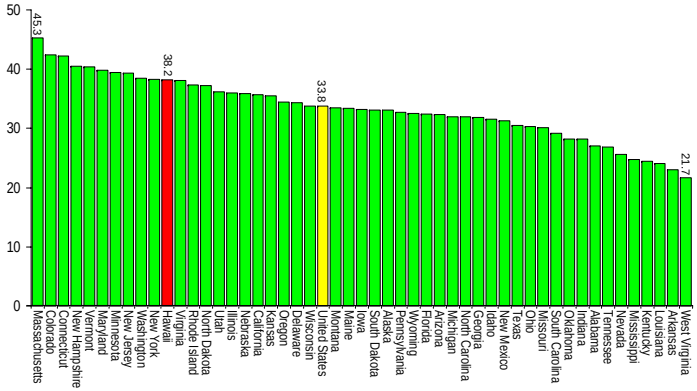


Hawaii = 219,624

Source: U.S. Census Bureau, 2000 Census

23

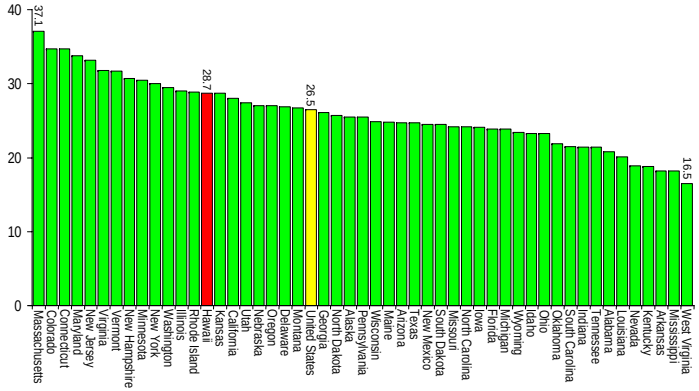
Percent of Population Age 25-64 with an Associate Degree or Higher, 2000



Source: U.S. Census 2000

24

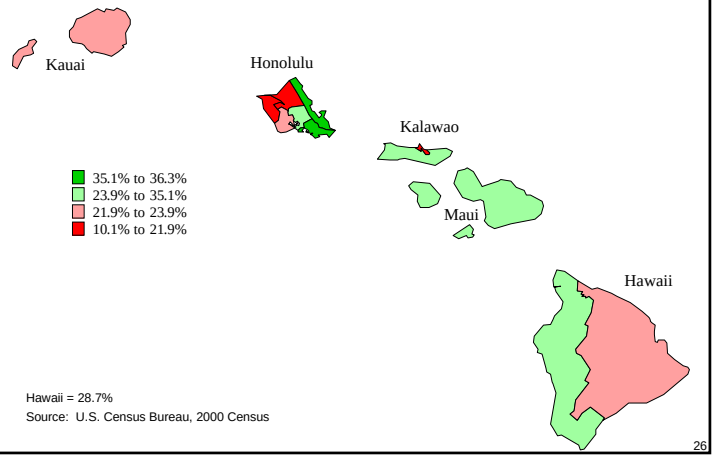
Percent of Adults Age 25-64 with a Bachelor's Degree or Higher, 2000



Source: U.S. Census Bureau, 2000

25

Percent of Population Age 25-64 with at Least a Bachelor's Degree, 2000



Hawaii = 28.7%

Source: U.S. Census Bureau, 2000 Census

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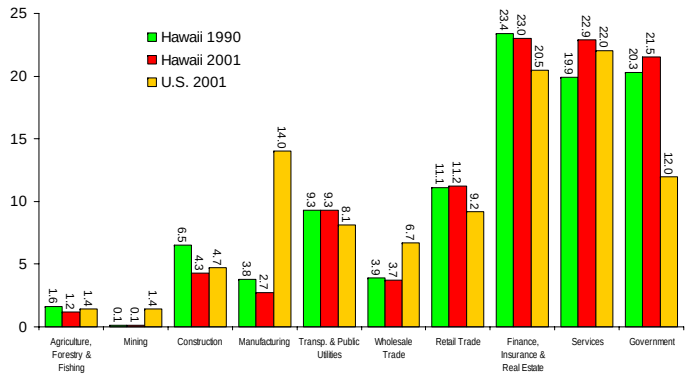
Percent of Total Gross State Product by Industry and Comparison to U.S.



Source: Bureau of Economic Analysis, www.bea.doc.gov

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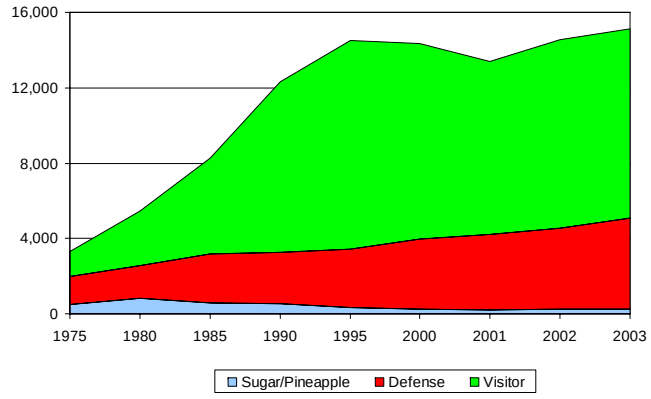
Major Export Earnings 1975-2003



Source: Hawaii Department of Business, Economic Development, and Tourism

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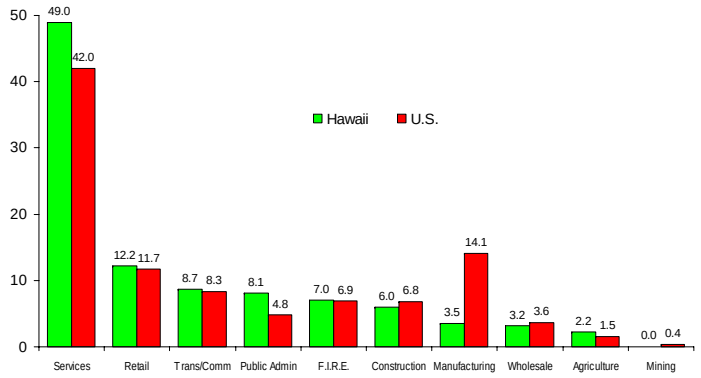
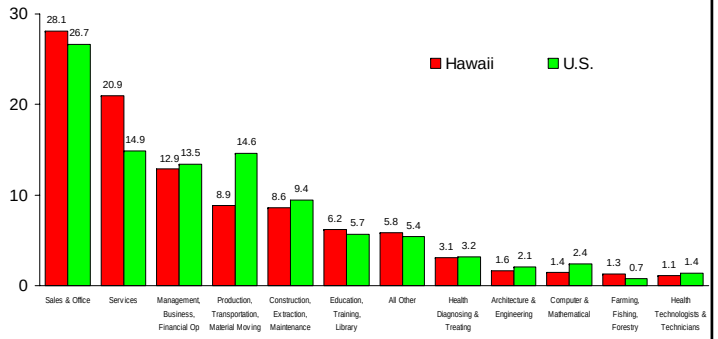
Percent of Employed Persons Age 16 and Older by Industry, 2000



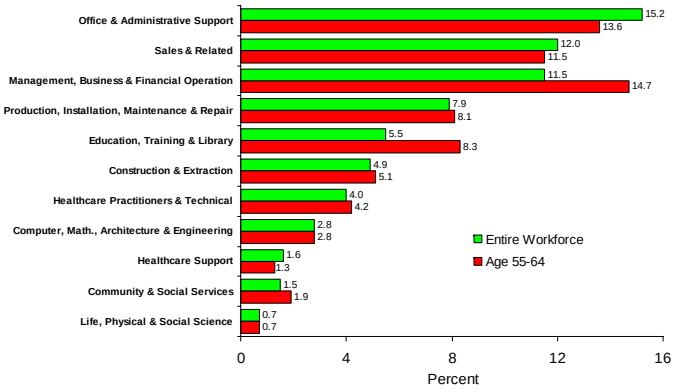
Source: U.S. Census Bureau, 2000 Census

Percent of Employed Persons 16 and Older By Occupation, 2000



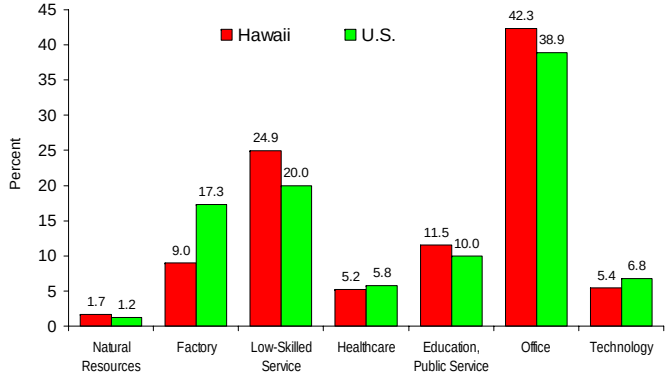
Source: U.S. Census Bureau, 2000 Census

Occupations of Population Age 55-64 (Those Leaving the Workforce by 2010) Relative to Entire Workforce, 2000



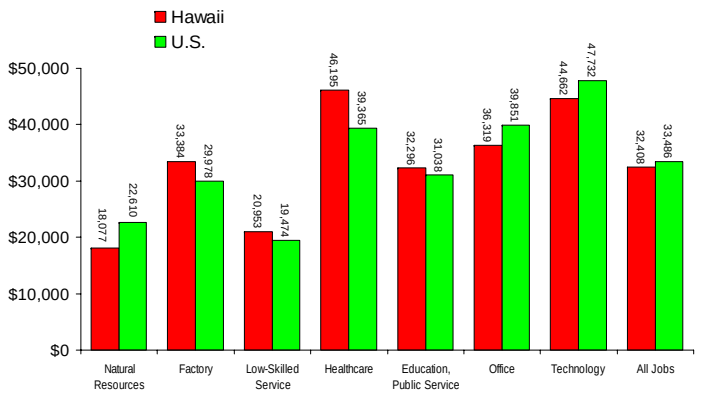
Source: U.S. Census Bureau, 2000 Census; 5%PUMS Files

Employment by Job Type, 2000 (Percent)



Source: Tony Carnevale and Donna Desrochers, ETS (PUMS 2000 5% Sample, source data extracted from www.ipums.org at the University of Minnesota)

Earnings by Job Type, 2000



Source: Tony Carnevale and Donna Desrochers, ETS (PUMS 2000 5% Sample, source data extracted from www.ipums.org at the University of Minnesota)

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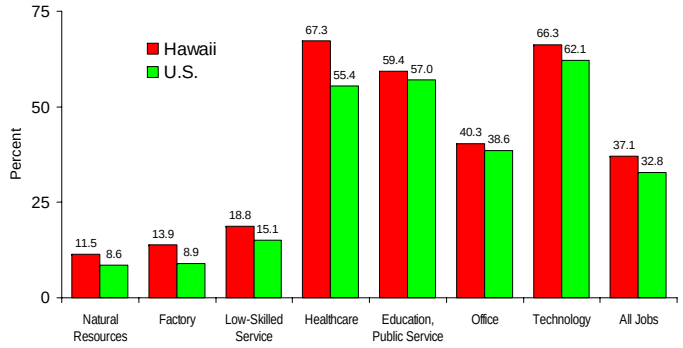
Percent of Employees with a College Degree by Job Type, 2000 (Percent)



Source: Tony Carnevale and Donna Desrochers, ETS (PUMS 2000 5% Sample, source data extracted from www.ipums.org at the University of Minnesota)

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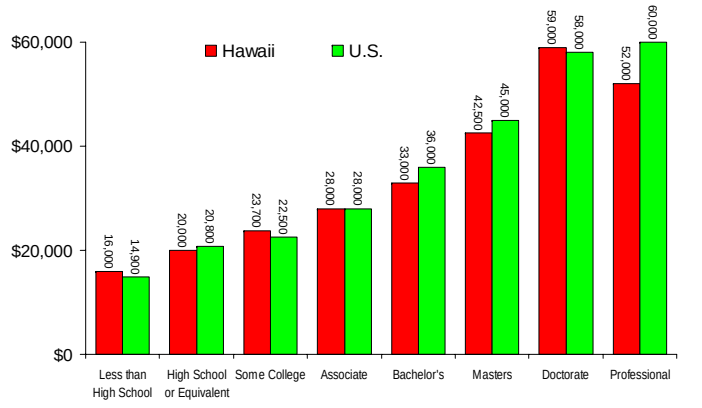
Median Earnings by Degree Level, 1999



Source: U.S. Census Bureau, 2000 Census; 5% PUMS Files

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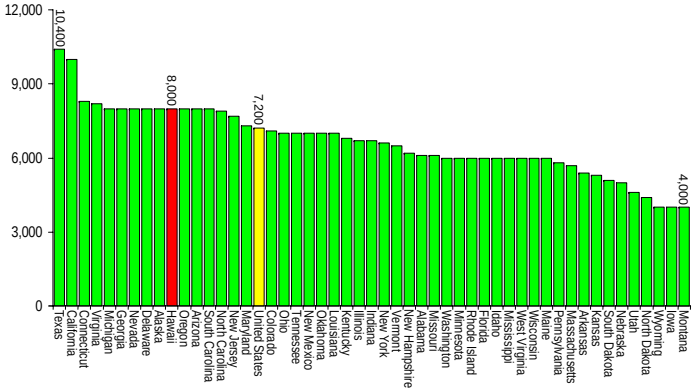
Difference in Median Earnings Between a High School Diploma and an Associate Degree, 2000



Source: U.S. Census Bureau's Public Use Samples, based on 2000 census

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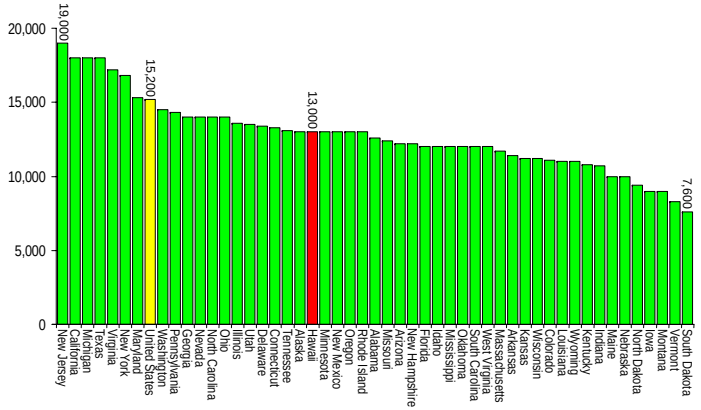
Difference in Median Earnings Between a High School Diploma and a Bachelor's Degree



Source: U.S. Census Bureau's Public Use Samples, based on 2000 census

Development Report Card for the States, 2003—Hawaii

Weaknesses (Bottom 10 Rank)

Rank	Measure
41	University Spin-Outs
42	Change in New Companies
42	Private Lending to Small Businesses
42	Sewage Treatment Needs
42	Job Growth Due to New Business
43	Change in Average Annual Pay
44	Venture Capital Investments
45	SBIC Financing
45	Income Distribution Change
45	Electronic Public Services
46	Private R&D
47	Technology Industry Employment
47	Industrial Diversity
48	Crime Rate
48	Air Quality
48	Bridge Deficiency
49	Homeownership Rate
49	Patents Issued
50	K-12 Educational Expenditures
50	Energy Costs
50	Employment Growth: Long Term
50	Involuntary Part-Time Employment
50	Average Teacher Salary
50	Voting Rate

D	Performance	Employment	C
		Earnings and Job Quality	D
		Equity	D
		Quality of Life	D
		Resource Efficiency	A
F	Business Vitality	Competitiveness of Existing Bus.	D
		Entrepreneurial Energy	F
F	Development Capacity	Human Resources	C
		Financial Resources	F
		Infrastructure Resources	D
		Amenity Resources	C
		Innovation Assets	C

Strengths (Top 10 Rank)

Rank	Measure
1	Per Capita Energy Consumption
2	Toxic Release Inventory
2	Vehicle Miles Traveled
3	Health Professional Shortage Areas
3	Conversion of Cropland to Other Uses
3	Urban Mass Transit
7	Manufacturing Investment
7	Unemployment Rate
7	High School Completion
8	Deaths from Heart Disease
9	Households with Computers
9	Greenhouse Gas Emissions

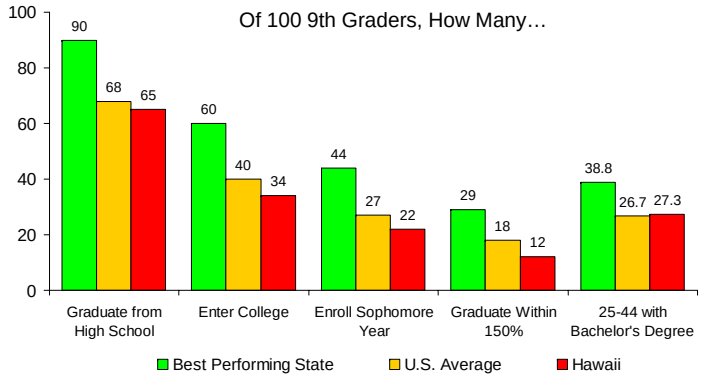
Source: Corporation for Enterprise Development

The Education Pipeline

Key Transition Points in the Education Pipeline

- Complete High School
- Enter College
- Finish College
- Enter the Workplace

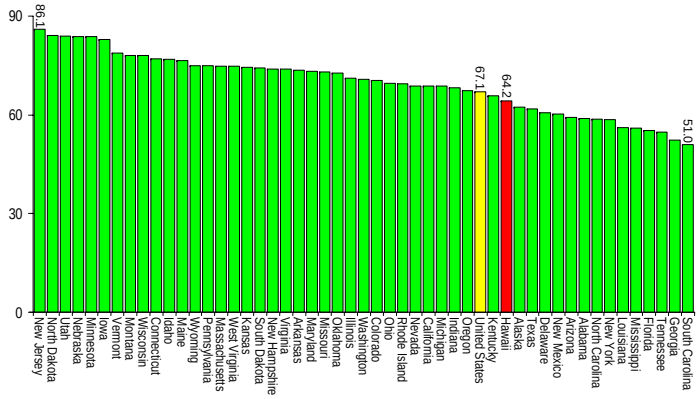
Student Pipeline



Source: NCES Common Core Data; NCES, IPEDS Graduation Rate Survey; WICHE High School Graduates; ACT Institutional Survey; U.S. Census Bureau, 2000 Census

41

High School Graduation Rates—Public High School Graduates as a Percent of 9th Graders Four Years Earlier, 2000



Source: Tom Mortenson, Postsecondary Opportunity

42

MEASURING UP 2004
THE STATE REPORT CARD ON HIGHER EDUCATION

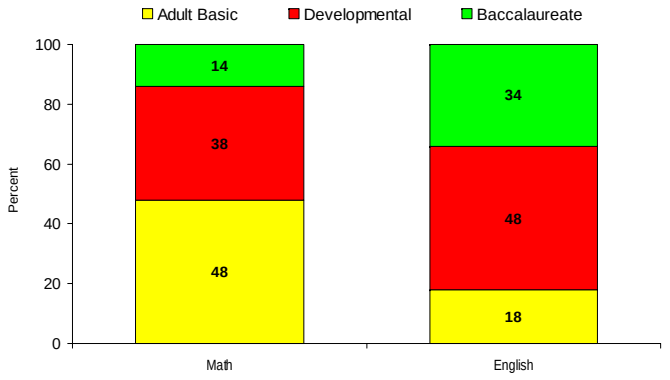
PREPARATION *2004 Hawaii*

PREPARATION	HAWAII A Decade Ago	HAWAII 2004	Top States 2004
High School Completion (20%)			
18- to 24-year-olds with a high school credential	94%	92%*	94%
K–12 Course Taking (35%)			
9th to 12th graders taking at least one upper-level math course	22%	n/a	59%
9th to 12th graders taking at least one upper-level science course	18%	n/a	41%
8th grade students taking algebra	n/a	n/a	35%
12th graders taking at least one upper-level math course	n/a	n/a	66%
K–12 Student Achievement (35%)			
8th graders scoring at or above "proficient" on the national assessment exam:			
in math	14%	17%	36%
in reading	19%	22%	39%
in science	15%	15%	42%
in writing	15%	18%	41%
Low-income 8th graders scoring at or above "proficient" on the national assessment exam in math	7%	8%	23%
Number of scores in the top 20% nationally on SAT/ACT college entrance exam per 1,000 high school graduates	110	152	227
Number of scores that are 3 or higher on an Advanced Placement subject test per 1,000 high school juniors and seniors	92	147	219
Teacher Quality (10%)			
7th to 12th graders taught by teachers with a major in their subject	58%	73%	81%

*Eighty-eight percent of 18- to 24-year-olds have a regular high school diploma; 4% have a GED.
Note: Indicators in italics are new for 2004.

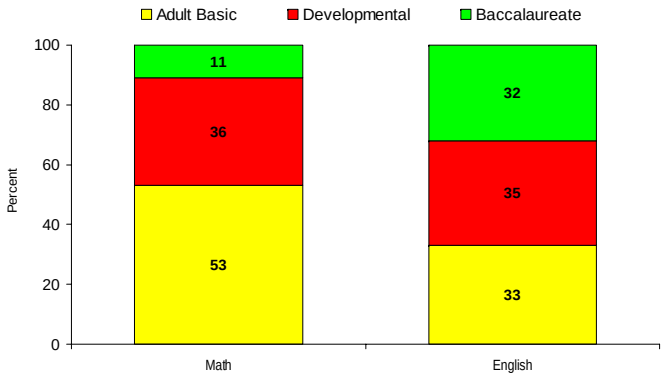
43

University of Hawaii Community Colleges—Entering Student Placement, Fall 2000



44

University of Hawaii Community Colleges—Entering Student Placement, Fall 2003



45

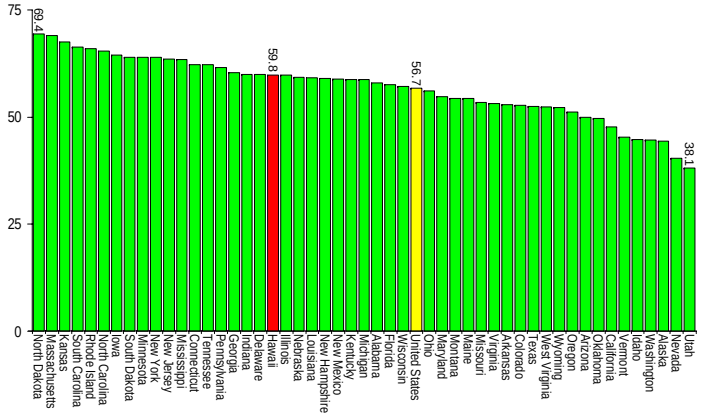
Occupations with the Most Openings Requiring Only Work Experience or On-the-Job Training—Hawaii, 2002-12

Rank	Occupation	2002 Employment	Average Annual Job Openings*
1.	Waiters and Waitresses	15,270	1,030
2.	Retail Salespersons	21,360	970
3.	Cashiers, except Gaming	12,010	690
4.	Combined Food Preparation and Serving Workers, Including Fast Food	8,740	550
5.	Security Guards	9,370	480
6.	Janitors and Cleaners, except Maids and Housekeeping Cleaners	12,270	410
7.	Office Clerks, General	13,500	400
8.	Maids and Housekeeping Cleaners	9,830	390
9.	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	4,080	310
10.	Cooks, Restaurant	6,380	290
11.	Food Preparation Workers	5,280	270
12.	Landscaping and Groundskeeping Workers	6,330	250
13.	Maintenance and Repair Workers, General	6,740	250
14.	Stock Clerks and Order Fillers	6,500	240
15.	Customer Service Representatives	6,680	230
16.	Medical Assistants	3,590	230
17.	Dining Room and Cafeteria Attendants and Bartender Helpers	4,220	220
18.	Sales Reps., Wholesale and Manufacturing, except Tech./Science Products	4,700	210
19.	Bookkeeping, Accounting, and Auditing Clerks	8,120	190
20.	Construction Laborers	3,960	190
21.	First-Line Supervisors/Managers of Retail Sales Workers	5,860	190
22.	Laborers and Freight, Stock, and Material Movers, Hand	5,460	190
23.	Teacher Assistants	4,660	180
24.	Dishwashers	4,370	170
25.	Receptionists and Information Clerks	3,660	170

*Note: Openings due to growth and net replacements.
Source: America's Career InfoNet 2005; Hawaii Workforce Informer, Labor Market Information

46

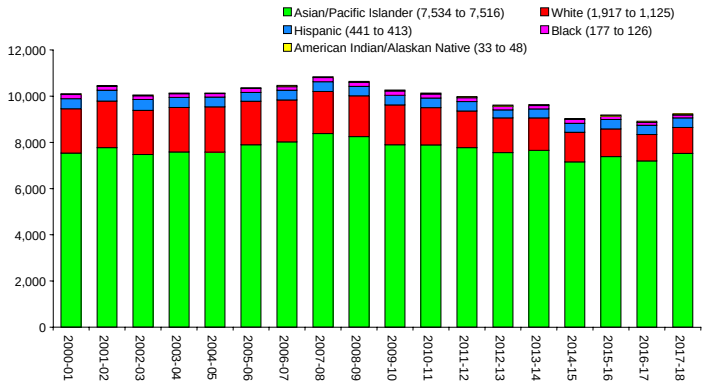
College Going Rates—First-Time Freshmen Directly Out of High School as a Percent of Recent High School Graduates, 2000



Source: Tom Mortenson, Postsecondary Opportunity

47

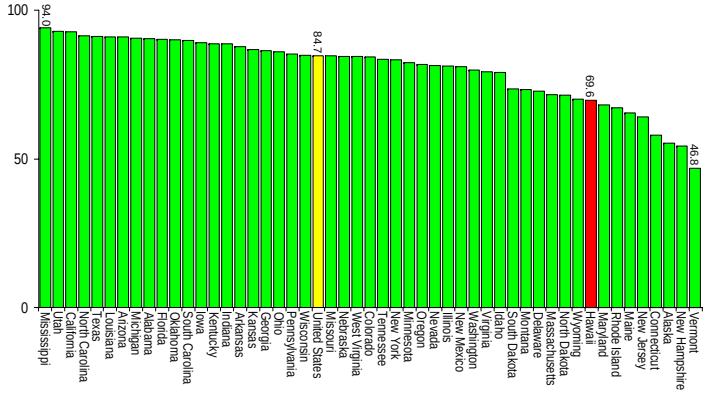
Projections of High School Graduates to 2018 By Race/Ethnicity—Hawaii



Source: WICHE Projections of High School Graduates

48

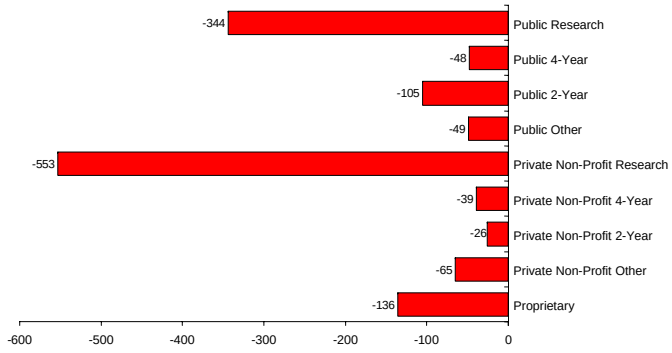
Percent of First-Time Freshmen Who Attend College Within Their Reported State of Residence, Fall 2002



Source: NCES, IPEDS Fall 2002 Residency and Migration File

49

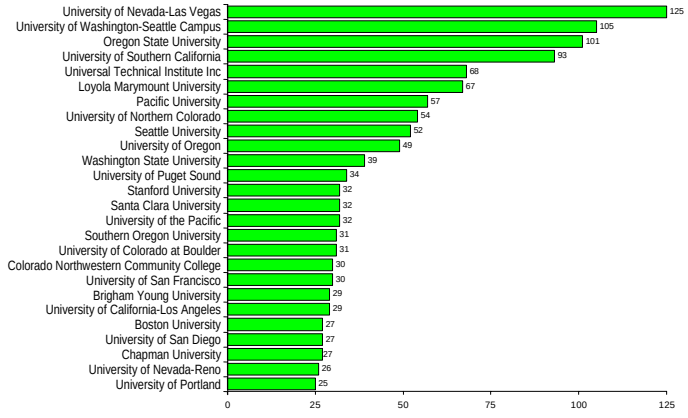
Net Imports of First-Time Freshmen



Source: NCES, IPEDS Fall 2002 Enrollments, Residency and Migration File

50

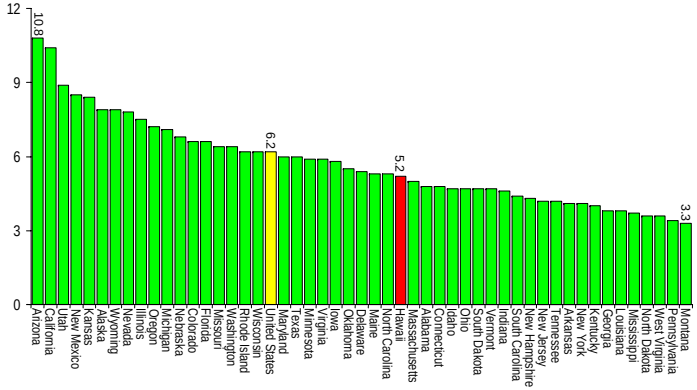
Out-of-State Institutions in Which Hawaii Students Enroll



Source: NCES, IPEDS Fall 2000 Enrollments, Residency and Migration File

51

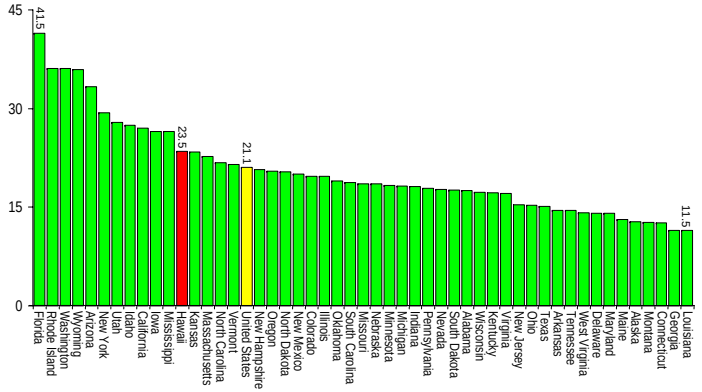
Part-Time Undergraduate Enrollment as a Percent of Population Age 25-44, 2000



Source: NCES-IPEDS, U.S. Census Bureau

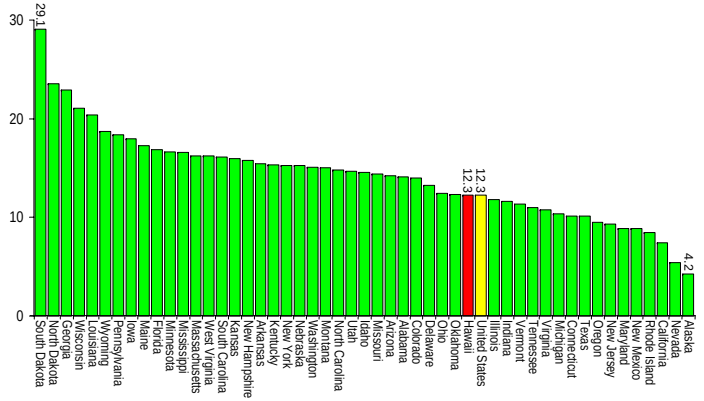
52

Associate Degrees Awarded per 100 High School Graduates Three Years Earlier, 2002



Source: NCES-IPEDS Completions Survey, WICHE

All Credentials Awarded (Two-Year and Less) at Two-Year Colleges as a Percent of Enrollment, 2002



Source: NCES-IPEDS Completions Survey, Enrollment Survey

Occupations with the Most Openings Requiring Postsecondary Training or an Associate Degree—Hawaii, 2002-12

Rank	Occupation	2002 Employment	Average Annual Job Openings*
1.	Registered Nurses	7,700	350
2.	Licensed Practical and Licensed Vocational Nurses	2,450	100
3.	Automotive Service Technicians and Mechanics	2,390	90
4.	Fitness Trainers and Aerobics Instructors	1,030	60
5.	Preschool Teachers, except Special Education	1,660	60
6.	Computer Support Specialists	1,230	50
7.	Hairdressers, Hairstylists, and Cosmetologists	1,180	40
8.	Aircraft Mechanics and Service Technicians	1,050	30
9.	Bus and Truck Mechanics and Diesel Engine Specialists	850	30
10.	Dental Hygienists	760	30
11.	Legal Secretaries	880	30
12.	Medical Records and Health Information Technicians	560	30
13.	Travel Agents	1,220	30
14.	Electrical and Electronic Engineering Technicians	590	20
15.	Electrical and Electronics Repairers, Commercial and Industrial Equipment	420	20
16.	Emergency Medical Technicians and Paramedics	480	20
17.	Massage Therapists	430	20
18.	Medical and Clinical Laboratory Technicians	560	20
19.	Radiologic Technologists and Technicians	660	20
20.	Real Estate Sales Agents	420	20
21.	Respiratory Therapists	240	20
22.	Architectural and Civil Drafters	480	10
23.	Avionics Technicians	240	10
24.	Biological Technicians	250	10
25.	Broadcast Technicians	140	10

*Note: Openings due to growth and net replacements.
Source: America's Career InfoNet 2005; Hawaii Workforce Informer, Labor Market Information

Certificates Awarded by Field and Sector—Hawaii, 2002-03

Description	Public	Private	Total
Licensed Practical/Vocational Nurse Training	102	0	102
Institutional Food Workers & Administrators, General	37	0	37
Automobile/Automotive Mechanics Technology/Technician	33	0	33
Administrative Assistant & Secretarial Science, General	31	0	31
Computer & Information Sciences & Support Services, Other	0	24	24
Medical/Clinical Assistant	16	1	17
Cosmetology/Cosmetologist, General	13	0	13
Accounting Technology/Technician and Bookkeeping	11	0	11
Computer & Information Sciences, General	0	10	10
All Other	93	41	134
TOTAL	336	76	412

Source: NCES, IPEDS 2002-03 Completions

Associate Degrees Awarded by Field and Sector—Hawaii, 2002-03

Description	Public	Private	Total
Liberal Arts & Sciences/Liberal Studies	1,104	0	1,104
Computer & Information Sciences & Support Services, Other	0	203	203
Electrical/Electronic Engineering Technologies/Technicians, Other	7	193	200
Industrial Production Technologies/Technicians, Other	192	0	192
Computer Engineering Technology/Technician	79	97	176
Medical/Clinical Assistant	13	137	150
Institutional Food Workers & Administrators, General	142	0	142
Nursing/Registered Nurse (RN, ASN, BSN, MSN)	120	0	120
General Studies	0	119	119
Criminal Justice/Safety Studies	0	108	108
Management Information Systems & Services, Other	0	99	99
Business Administration & Management, General	8	73	81
Accounting Technology/Technician & Bookkeeping	69	0	69
Automobile/Automotive Mechanics Technology/Technician	57	0	57
Accounting	0	57	57
Criminal Justice/Law Enforcement Administration	54	0	54
Administrative Assistant & Secretarial Science, General	52	0	52
Business, Management, Mktg. & Related Support Services, Other	0	48	48
Public Administration & Social Service Professions, Other	38	0	38
Hospitality Administration/Management, General	0	38	38
Computer Science	0	37	37
Computer & Information Sciences, General	0	33	33
Fire Science/Fire-fighting	32	0	32
Legal Assistant/Paralegal	31	0	31
International Business/Trade/Commerce	0	30	30
All Other	377	98	475
TOTAL	2,375	1,370	3,745

Source: NCES, IPEDS 2002-03 Completions

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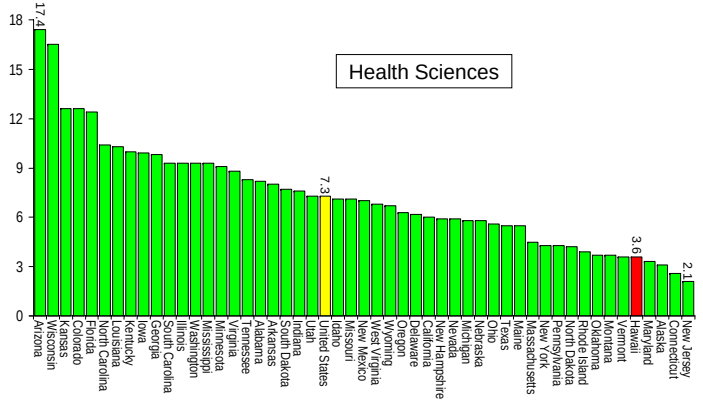
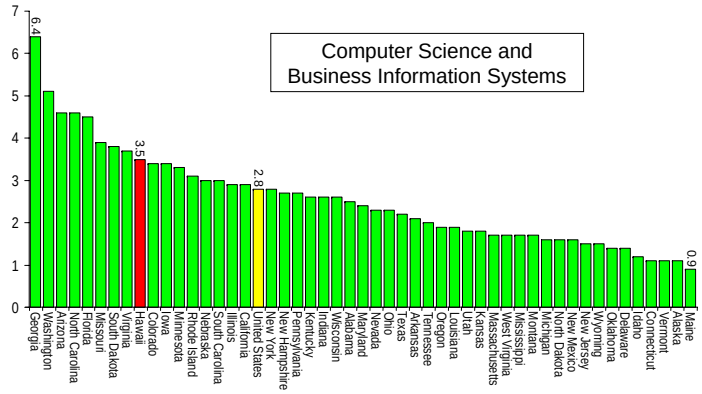
Number of Associate Degrees and Certificates Awarded (2003) Per 100 High School Graduates Three Years Earlier, 2000



Source: NCES-IPEDS Completions 2002-03; WICHE High School Graduates, 2000

58

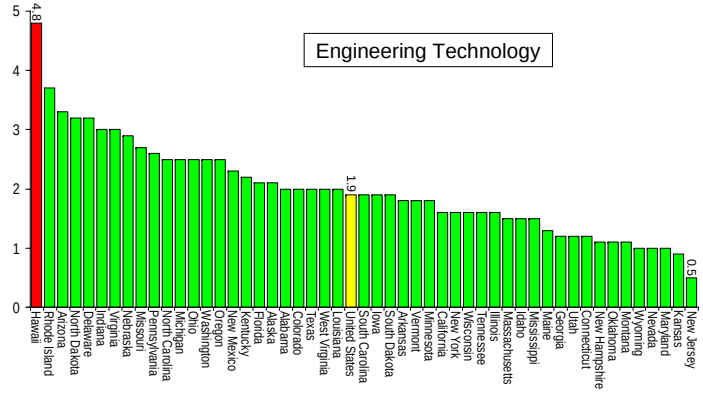
Number of Associate Degrees and Certificates Awarded (2003) Per 100 High School Graduates Three Years Earlier, 2000



Source: NCES-IPEDS Completions 2002-03; WICHE High School Graduates, 2000

59

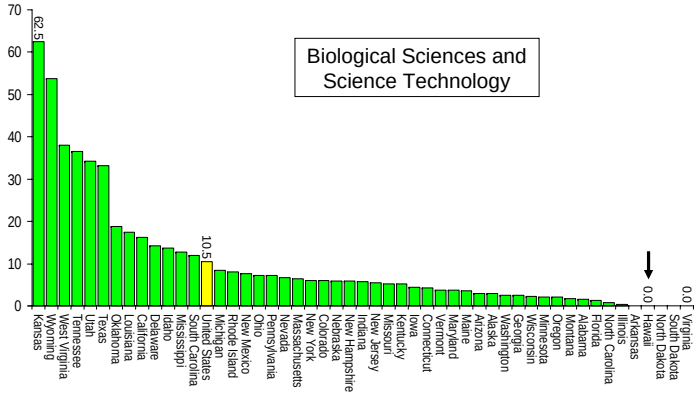
Number of Associate Degrees and Certificates Awarded (2003) Per 100 High School Graduates Three Years Earlier, 2000



Source: NCES-IPEDS Completions 2002-03; WICHE High School Graduates, 2000

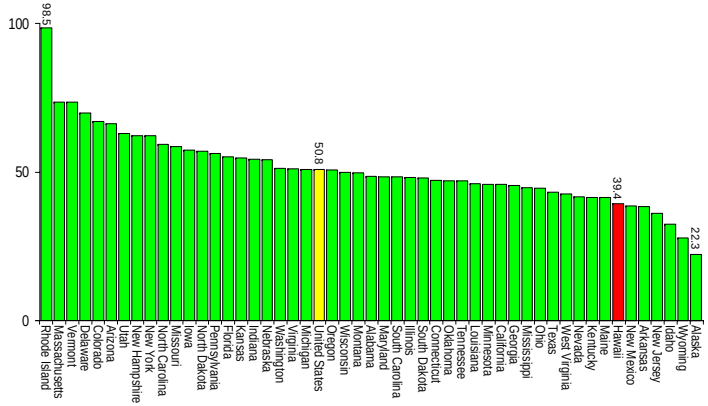
60

Number of Associate Degrees and Certificates Awarded (2003) Per 100 High School Graduates Three Years Earlier, 2000



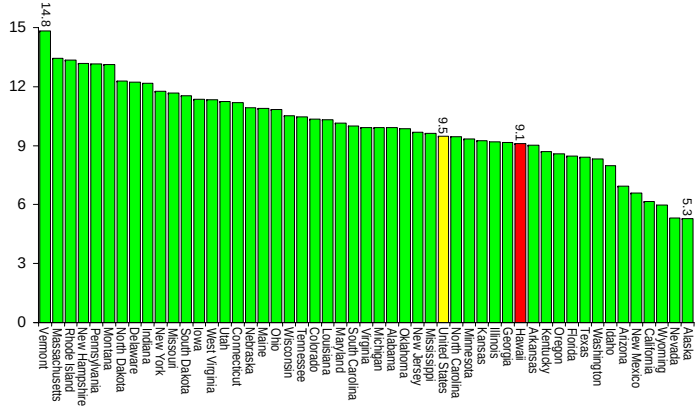
Source: NCES-IPEDS Completions 2002-03; WICHE High School Graduates, 2000

Bachelor's Degrees Awarded per 100 High School Graduates Six Years Earlier, 2002



Source: NCES-IPEDS Completions Survey, WICHE

Bachelor's Degrees Awarded as a Percent of All Undergraduates, 2002



Source: NCES-IPEDS Completions Survey, Enrollment Survey

Occupations with the Most Openings Requiring a Bachelor's Degree or Higher—Hawaii, 2002-12

Rank	Occupation	2002 Employment	Average Annual Job Openings*
1.	Postsecondary Teachers	5,850	330
2.	General and Operations Managers	6,900	240
3.	Accountants and Auditors	4,100	140
4.	Airline Pilots, Copilots, and Flight Engineers	1,530	70
5.	Financial Managers	2,280	70
6.	Lawyers	2,010	70
7.	Sales Managers	1,500	70
8.	Computer Systems Analysts	1,750	60
9.	Physicians and Surgeons	1,880	60
10.	Recreation Workers	1,540	60
11.	Child, Family, and School Social Workers	1,560	50
12.	Management Analysts	1,150	50
13.	Pharmacists	1,070	50
14.	Administrative Services Managers	960	40
15.	Chief Executives	1,120	40
16.	Civil Engineers	1,630	40
17.	Construction Managers	880	40
18.	Network Systems and Data Communications Analysts	670	40
19.	Public Relations Specialists	1,010	40
20.	Architects, Except Landscape and Naval	980	30
21.	Computer and Information Systems Managers	660	30
22.	Employment, Recruitment, and Placement Specialists	960	30
23.	Instructional Coordinators	630	30
24.	Librarians	700	30
25.	Loan Officers	930	30

*Note: Openings due to growth and net replacements.

Source: America's Career InfoNet 2005; Hawaii Workforce Informer, Labor Market Information

Fastest Growing Occupations Requiring a Bachelor's Degree or Higher—Hawaii, 2002-12

Rank	Occupation	Employment 2002	Employment 2012	Percent Change*
1.	Network Systems and Data Communications Analysts	670	990	48
2.	Computer Software Engineers, Systems Software	350	510	45
3.	Database Administrators	280	410	44
4.	Mental Health and Substance Abuse Social Workers	290	410	42
5.	Computer Software Engineers, Applications	370	520	40
6.	Network and Computer Systems Administrators	680	950	39
7.	Postsecondary Teachers	5,850	7,930	36
8.	Personal Financial Advisors	200	270	35
9.	Mental Health Counselors	250	340	34
10.	Computer and Information Systems Managers	660	880	32
11.	Environmental Engineers	200	250	30
12.	Medical and Public Health Social Workers	200	260	30
13.	Rehabilitation Counselors	310	400	30
14.	Technical Writers	90	120	30
15.	Compensation, Benefits, and Job Analysis Specialists	230	300	29
16.	Physical Therapists	390	510	29
17.	Sales Managers	1,500	1,930	29
18.	Public Relations Specialists	1,010	1,300	28
19.	Construction Managers	880	1,110	26
20.	Management Analysts	1,150	1,450	26
21.	Occupational Therapists	210	260	26
22.	Substance Abuse and Behavioral Disorder Counselors	300	380	26
23.	Social and Community Service Managers	650	820	25
24.	Instructional Coordinators	630	780	24
25.	Medical and Health Services Managers	780	960	24

*Note: The national average percent change is 14.8 for the 2002-12 employment projection series.

Source: America's Career InfoNet 2005; Indiana Department of Workforce Development, Labor Market Information

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Bachelor's Degrees Awarded by Field and Sector—Hawaii, 2002-03

Description	Public	Private	Total
Psychology, General	253	130	383
Business Administration & Management, General	93	161	254
Computer & Information Sciences	92	144	236
Nursing/Registered Nurse (RN, ASN, BSN, MSN)	89	137	226
Marketing/Marketing Management, General	128	75	203
Accounting	114	73	187
Management Information Systems, General	86	100	186
English Language & Literature, General	125	35	160
Criminal Justice/Safety Studies	26	133	159
Finance, General	98	50	148
Tourism, Travel, Hospitality Management	73	75	148
International Business/Trade/Commerce	22	104	126
Biology/Biological Sciences, General	93	32	125
Political Science & Government, General	97	25	122
Multi-/Interdisciplinary Studies, Other	104	14	118
Communication Studies/Speech Communication & Rhetoric	69	41	110
Sociology	103	7	110
Elementary Education & Teaching	49	45	94
History, General	63	22	85
Engineering (35 Electrical, 29 Civil, 15 Mechanical, 2 Agricultural/Biological)	81	0	81
Special Education & Teaching, General	64	10	74
Speech & Rhetorical Studies	70	0	70
Journalism	54	14	68
Family Resource Management Studies, General	62	0	62
Human Resources Management/Personnel Admin., General	25	37	62
Social Work	13	42	55
Art/Art Studies, General	51	2	53
All Other	813	529	1,342
TOTAL	3,010	2,037	5,047

Source: NCES, IPEDS 2002-03 Completions

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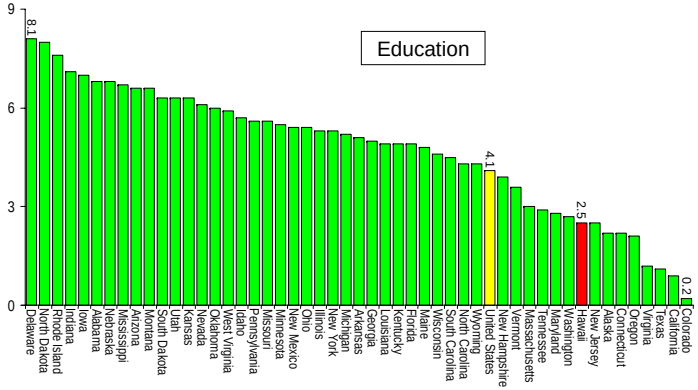
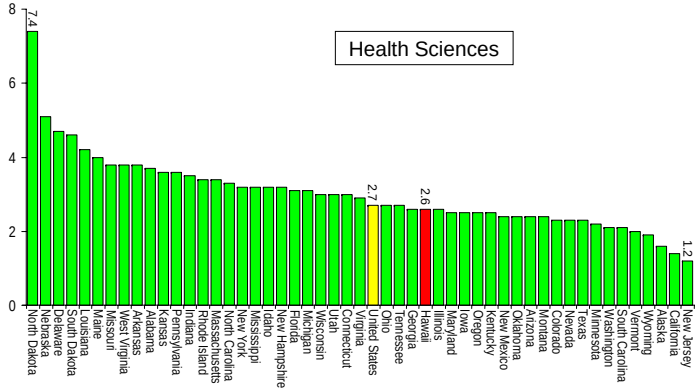
Number of Baccalaureate Degrees Awarded (2003) Per 100 High School Graduates Six Years Earlier, 2000



Source: NCES-IPEDS Completions 2002-03; WICHE High School Graduates, 1997

67

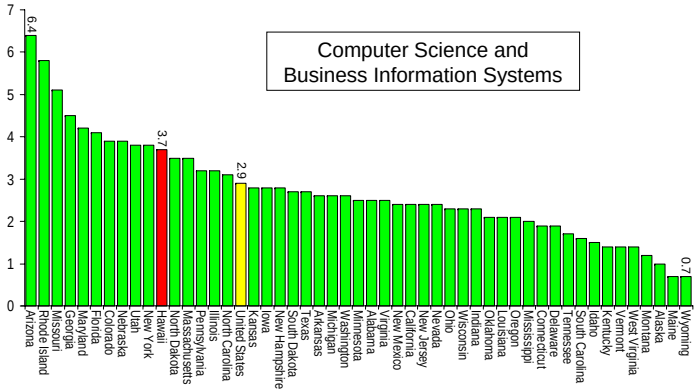
Number of Baccalaureate Degrees Awarded (2003) Per 100 High School Graduates Six Years Earlier, 2000



Source: NCES-IPEDS Completions 2002-03; WICHE High School Graduates, 1997

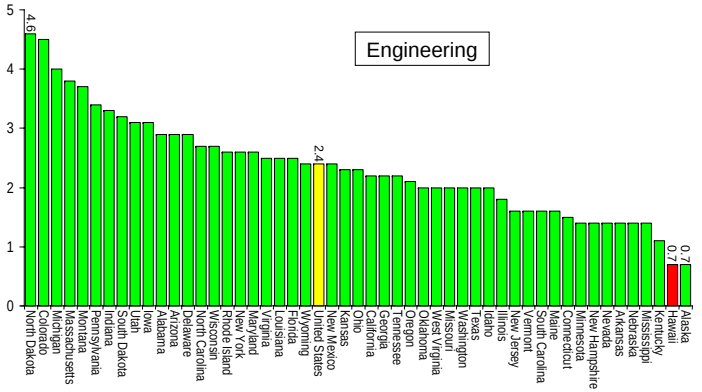
68

Number of Baccalaureate Degrees Awarded (2003) Per 100 High School Graduates Six Years Earlier, 2000



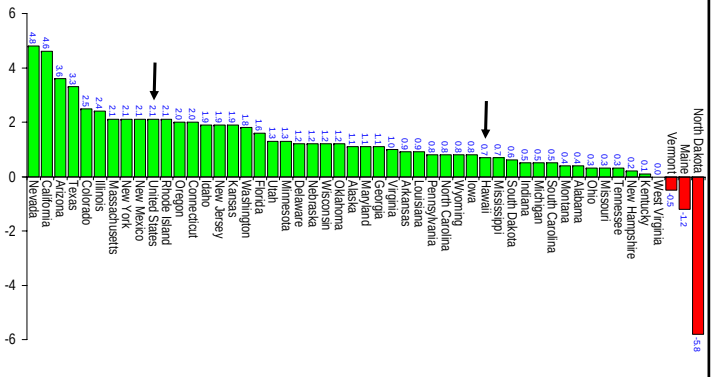
Source: NCES-IPEDS Completions 2002-03; WICHE High School Graduates, 2000

Number of Baccalaureate Degrees Awarded (2003) Per 100 High School Graduates Six Years Earlier, 2000



Source: NCES-IPEDS Completions 2002-03; WICHE High School Graduates, 2000

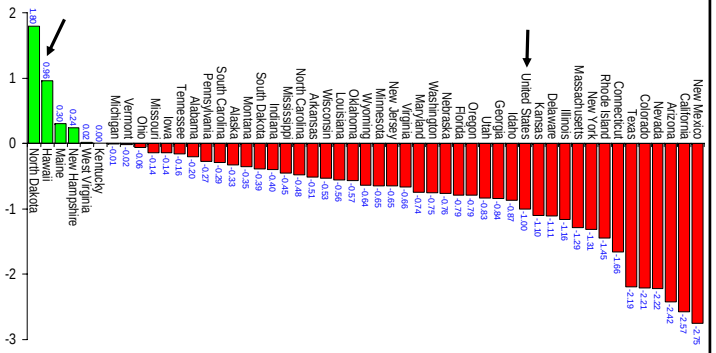
Projected Change in Percent of Population Age 25-64 with Less than a High School Diploma, 2000-20*



*Projected Change is based on 2000 educational attainment by race/ethnicity and the projected changes in the population age 25-64 by race/ethnicity.

Source: U.S. Census 2000, U.S. Census Bureau's 1995 Population Projections

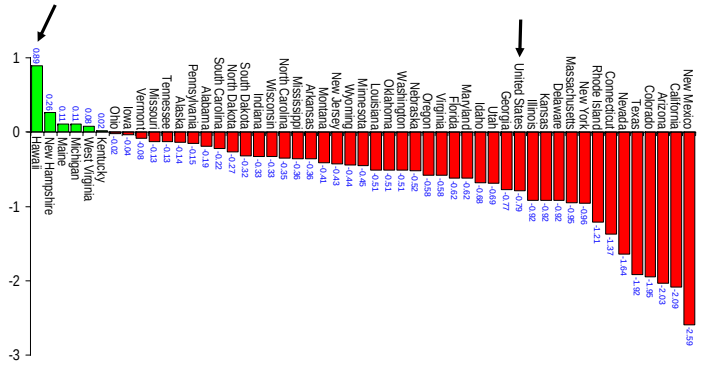
Projected Change in Percent of Population Age 25-64 with an Associate Degree or Higher, 2000-20*



*Projected Change is based on 2000 educational attainment by race/ethnicity and the projected changes in the population age 25-64 by race/ethnicity.

Source: U.S. Census 2000, U.S. Census Bureau's 1995 Population Projections

Projected Change in Percent of Population Age 25-64 with a Bachelor's Degree or Higher, 2000-20*



*Projected Change is based on 2000 educational attainment by race/ethnicity and the projected changes in the population age 25-64 by race/ethnicity.

Source: U.S. Census 2000, U.S. Census Bureau's 1995 population projections

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Migration

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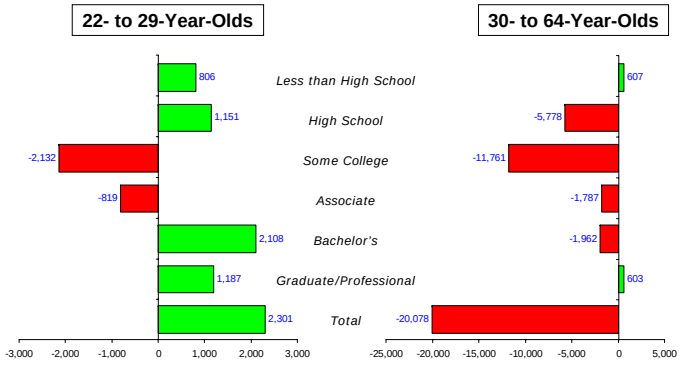
Net Migration by Degree Level and Age Group—Hawaii



Source: U.S. Census Bureau, 2000 Census; 5% Public Use Microdata Sample (PUMS) Files

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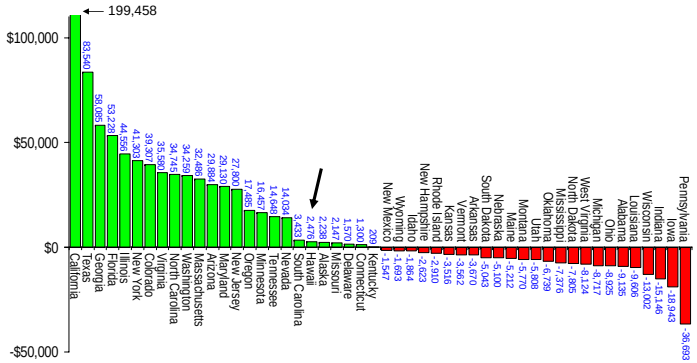
Net Migration of Residents Age 22-29 with a College Degree (Associate or Higher), 1995-2000



Source: U.S. Census Bureau, Public Use Microdate Samples, 2000

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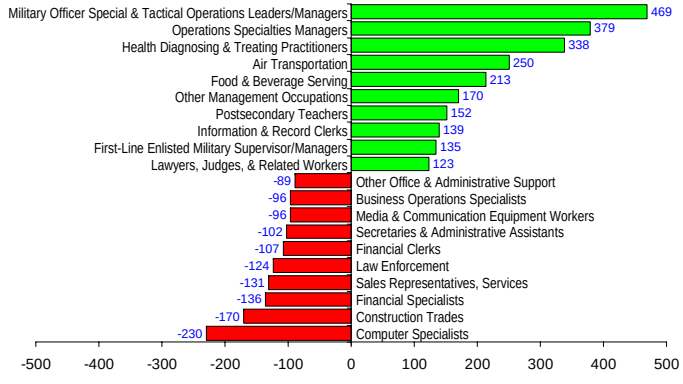
Occupations with High Net Imports and Exports, 1995-2000

All 22- to 29-Year-Olds

Source: U.S. Census Bureau, 2000 Census; 5% PUMS Files

Occupations with High Net Imports and Exports, 1995-2000

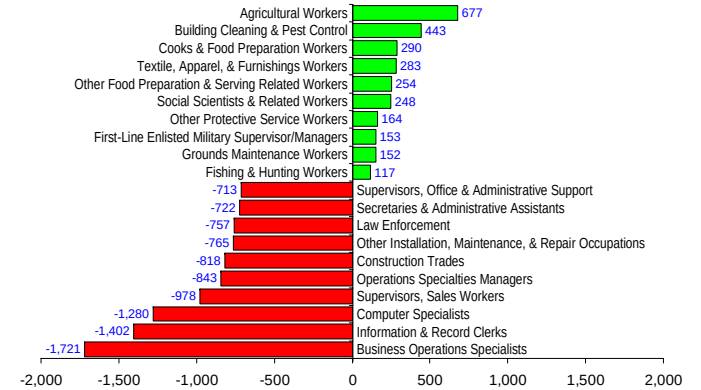
22- to 29-Year-Olds with College Degrees



Source: U.S. Census Bureau, 2000 Census; 5% PUMS Files

Occupations with High Net Imports and Exports, 1995-2000

All 30- to 64-Year-Olds



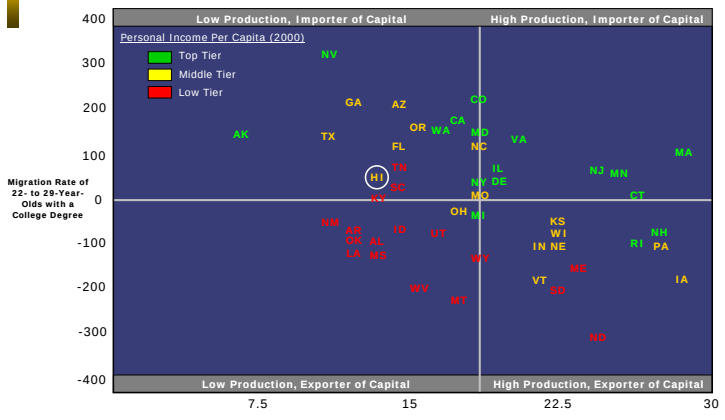
Source: U.S. Census Bureau, 2000 Census; 5% PUMS Files

Occupations with High Net Imports and Exports, 1995-2000

30- to 64-Year-Olds with College Degrees

Source: U.S. Census Bureau, 2000 Census; 5% PUMS Files

States' Ability to Produce Graduates vs. Ability to Keep and Attract Graduates



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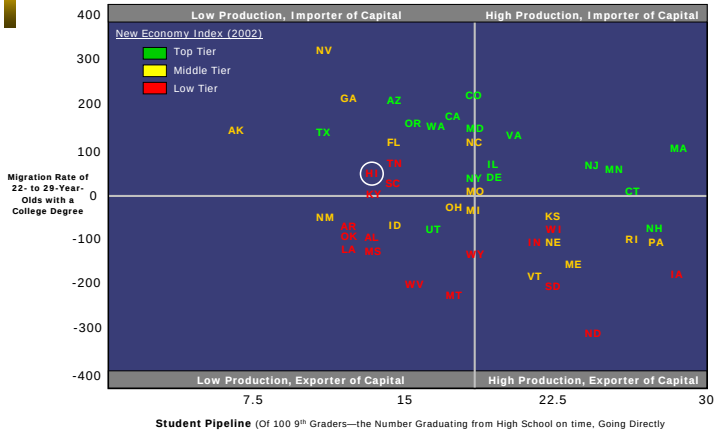
States' Ability to Produce Graduates vs. Ability to Keep and Attract Graduates



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The Bottom Line

- Enhance the State's Stock of Human Capital
  - Improved Competencies of High School Graduates
  - Increased Skills of Adults with Less than a High School Education
  - Improve Graduation Rates of College Students

(continued)

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The Bottom Line (cont.)

- Provide Skilled Workers in Critical Need Areas
  - Nursing/Allied Health
  - Teachers
  - Science Technologies
- Help to Expand and Diversify the State's Economy
  - Technology Transfer
  - Rapid Response to Employer's Training Needs

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Address These Issues

as Appropriate in

All Parts of the State

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