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Better jobs, better employment &
better outcomes for Indiana

Technical Assistance Guide

Indiana Institute
for **Working Families**
Research and Public Policy

A Program of **INCAA**
INDIANA COMMUNITY
ACTION ASSOCIATION

Lumina
FOUNDATION

Purpose of the Report

The purpose of this report, funded by Lumina Foundation for Education, was to help develop national criteria to evaluate best practices concerning sub-baccalaureate credential programs, financial aid and state policies. We have evaluated the public credential programs in Indiana according to a rubric designed to rate the programs' economic and career value. The rubric is composed of the following criteria:

Wages: The credential must lead to employment that pays self-sufficient wages. Usually we measure self-sufficiency according to our state's Self-Sufficiency Standard. However, in this study, the "self-sufficient" wage has been set at Indi¬ana's median individual earnings calculated for 2011 by the U.S. Census Bureau's American Community Survey. This annual wage is $27,618. We examined whether credential programs led to this wage either at the entry-level or at the median wage in career paths attached to the credential.

Career Development: The credential must lead directly to a postsecondary degree pathway (Associate's or Bachelor's) OR lead to professional licensing required for employment, OR an industry-recognized exam. This determination was made using primary data from the colleges and universities and from the State Professional Licensing Board.

Job Opportunities: The certificate must be linked to employment in a career field that is either stable or predicted to grow in size. Forecasts from the Indiana Department of Workforce Development (DWD) and from the US Department of Labor were used in conjunction with other research reports on workforce development. Specifically, we looked for links between credential programs and jobs on the DWD's Hoosier Hot 50 Jobs statewide list, as well as, 11 regional 'Hoosier Hot 50' lists.

We wanted to know whether the credential programs in our state lead to good opportunities for low-income adults (along with their families) to become economically self-sufficient, and whether or not those programs were supported through our state's financial aid system. To determine this we used these criteria to create an analytic rubric to evaluate each credential based on the factors described above.

Purpose of the Technical Assistance Guide

We think that taking this deep look at the credentials offered in your state is important, not only to better understand the landscape of credentials in your state, but also to begin discussions to provide further research-based evidence and policy recommendations meant to increase middle skill attainment.

Unfortunately not all of the information that we needed to perform our analysis was available in our state. As a result we had to make some adjustments along the way. What follows is a combination of narration and methodology of how we collected our data and arrived at our findings. The final results of these findings have led to a better understanding of the credentials our state offers, and what benefits those credentials offered to students, employers, and the state as a whole.

There were some twists and turns along the way, and all the solutions to potential pitfalls might not be included in this technical assistance manual. We may have been able to reach a solution that doesn't work in your state, and you may have to seek out another answer. Regardless of the amount of information available from your state, we hope you find what follows to be a useful guide in navigating state level data related to credential programs and the possible outcomes to which they lead. Additionally, what follows is by no means the best way to do this research or the only way to do this research, it is merely a collection of tips, tricks, steps, and sources to get you started.

The Path We Took

The very first step was determining what data was available in our state already and whether or not our state's "longitudinal data system" would be able to provide us with the data we needed to do the evaluation that we wanted. In the case of Indiana, the longitudinal data system, while quite sophisticated, was not able to get to the heart of what we were trying to determine. This should still be your first step as there is no reason to recreate the wheel. The State Higher Education Executive Officer's Association has put together a very helpful report that can get you started if you are not familiar with your state's data system. You will want to verify information as this report was published in 2010. Here is some of the information that is available for each state:

Figure 1: A Snapshot of *The State of State Postsecondary Data Systems*

> **ALABAMA**
> **Alabama Commission on Higher Education**
> - Coordinating board
> - Data collected from 2-year public, 4-year public, and independent (private, non-profit) institutions in the state
> - Financial aid entity
> - 1 of 2 state level postsecondary student unit record (SUR) systems
> - Other postsecondary SURs in state (click on active link(s) to view profile):
>   Alabama State Board of Education/Community College System (not included in study)

Source: The State of State Postsecondary Data Systems, SHEEO, September 2010, http://www.sheeo.org/sspds/

Appendix A and B contain web links and contact information for all of the State Higher Education Offices across the country. Contacting these offices should help you find information that you need to explore the possibilities provided by your state's data system.

The Certificates

Getting a good, reliable list of credential programs from our state's public colleges and universities was the next step. We wanted to make sure that our list was as comprehensive as possible. We did not want to leave any stone unturned, or make any incorrect assumptions about a program, so we decided that it was best to go directly to the source and enlist the institutions themselves in providing us with the most up to date list of programs. In most cases, the right place to start was the Provost for Academic Affairs, who became our primary point of contact at the university and who could help navigate the various university departments in order to get us the best information. In the case of our community college system we also reached out to their Department of Workforce Education, to ensure that we were capturing all non-credit and apprenticeship programs as well. We asked them to provide us with the following data points:

- Name of certificate/certification/apprenticeship program;

- Whether the program was credit bearing;

- Whether the program was eligible for financial aid;

- And whether the program could be "stacked" into a higher degree program.

An important piece of this part of the data collection was the Memorandum of Understanding (MOU) that we entered into with each university and college. We truly wanted them to be invested in the report and its outcomes. We wanted them to feel engaged and part of the process. In the MOU, they agreed to help us compile the data and in turn we would verify the data with them once we had filled in all the variables and grant them an opportunity to provide feedback on the report prior to its release. A sample of the MOU we came up with is found in Appendix C.

The Jobs

Connecting a credential to a possible job became a subjective process in the absence of primary-level data from a statewide data system. We gathered research from the universities about the job titles that alumni of various programs were reporting and used that to start the list. Some schools had jobs listed as part of promotional materials and program descriptions; others had actual data about the placement of alumni. Also, for many of the non-credit programs, information was available from the industry about what jobs nationally-recognized certifications could lead to. This information was the start of connecting jobs to credentials. No data existed for Indiana that could directly connect the credentials to the jobs. We started by recording all of the possible job information that we retrieved from the institutions and then went through a process of *verifying the information with educational attainment data.*

Determining Educational Attainment level

Sources:
• **The Occupational Outlook Handbook:** http://www.bls.gov/ooh/
The OOH is the nations premier source for career information, containing profiles on hundreds of occupations and describing 'What They Do', the 'Work Environment', 'How to Become One', 'Pay', and more. Each profile also includes BLS employment projections for the 2010–20 decade.

• **O*Net Online:** http://www.onetonline.org/
The Occupational Information Network (O*NET) is being developed under the sponsorship of the US Department of Labor/Employment and Training Administration (USDOL/ETA) through a grant to the North Carolina Employment Security Commission. The O*NET database contains information on hundreds of standardized occupations and is continually updated by surveying a broad range of workers from each occupation. Information from this database forms the heart of O*NET OnLine, an interactive application for exploring and searching occupations.

• **Career One-Stop/ America's Career Infonet:** http://www.careerinfonet.org/
Career OneStop/America's Career Infonet, is a tool similar to the others in terms of occupation data. Its value is in its presentation of state-level data. The website is sponsored by the United States Department of Labor.

Any one of these sources would be sufficient to this decision-making process, but because this was arguably the most subjective piece of our research, and the most important to get right, we used all three. In a separate database we listed the UNIQUE jobs that we had attributed to each credential and collected educational attainment data from all three sources and then took the balance of that information into account when choosing whether or not to connect a credential to the specific job. Credential programs were not listed out by name, as they are all called something different, from state to state and from school to school, but what we could find was the educational attainment breakdown of workers in that job classification. O*Net gave us the national data regarding education requirements and the disbursement of education levels among workers in the field. As you can see in Figure 2, it also gave us leads into related jobs that may be connected to our certificates. Finally O*Net linked us to Career One Stop which is where we found the state level figures on educational attainment.

Figure 2: Sample of O*Net Online Search Results, "Dental."

Source: O*Net Online: http://www.onetonline.org/

For more examples of the data found on *O*Net Online and Career One Stop* see Appendix D.

The educational requirement information was also collected from the Occupational Outlook Handbook, examples of this data also appear in **Appendix D**. Collecting all three of these data points turned out to be crucial, as for some occupations data was missing from one of the sources, giving us the other two to draw conclusions from.

When listing jobs in the database we also listed each jobs *Standard Occupational Classification code (SOC Code)*. This enabled us to be sure we were always identifying job classifications accurately across data sets. Once the jobs were connected to the credential we need to evaluate the value of the job. See Figure 2 above for some examples of SOC codes.

Determining if a Job is "In-Demand"

In Indiana, the Department of Workforce Development puts out a **Hoosier Hot 50 Jobs** list of high-wage, high-demand jobs. This list is prepared both statewide and for each of our 11 economic growth regions. We used these lists to fill in the "in-demand" variable in our database. Your state's **Department of Workforce Development** (or equivalent) may publish similar data for your state, or be able to put a report together for you. That department would be the best starting point for good state level data on job demand.

Figure 3: The Hoosier Hot 50 Jobs List

Source: https://netsolutions.dwd.in.gov/hh50/

The Department of Labor has put together a document in both PDF and Word Format that lists the state and local employment projections. It can be accessed at this link: http://www.doleta.gov/business/projections/docs/internetlinks.pdf

States	LMI (main site)	MAIN PROJECTIONS PAGE	Long-term INDUSTRY		
			Web site	Time period	Locality coverage
Alabama	AL LMI	AL projections	AL long-term industry	2008-18	AL long-term industry (WIA region)
Alaska	AK LMI		AK long-term industry (narrative)	2008-18	
Arizona	AZ LMI	AZ projections	AZ long-term industry	2008-18	MSA, BOS
Arkansas	AR LMI	AR projections report	AR long-term industry (state)	2008-18	AR long-term industry (WIA) 2006-16
California	CA LMI	CA projections	CA long-term industry	2008-18	CA long-term industry (county) (some for 2006-16 only)

If your state doesn't collect or report such data there are other sources you can use. For example, Career InfoNet has a few great lists that can be retrieved by state:

- **'Top 50 Fastest-Growing Occupations'** (shown in the link below for Indiana). http://www.careerinfonet.org/oview1.asp?next=oview1&Level=Overall&optstatus=&jobfam=&id=1&nodeid=3&soccode=&ShowAll=&stfips=18

- **'Top 50 Occupations with the Most Job Openings'** (shown in the link below for Ohio). http://www.careerinfonet.org/oview2.asp?next=oview2&Level=Overall&optstatus=&jobfam=&id=1&nodeid=4&soccode=&ShowAll=&stfips=39

For more information on how to access these sources see Appendix E.

Determining if a Job Requires a Professional License

To gather this information we reached out to our state's professional licensing board and to the state Bureau of Motor Vehicles (BMV); the BMV should be able to tell you which jobs require a commercial driver's license. Both organizations were able to give us a list of the professions that require state licensing or commercial driver's licenses respectively.

Analyzing the Data

We used Microsoft Access to analyze the database. There are many other programs that can do the analysis as well, for example, SPSS, Stata, and even Excel is capable of doing most of the analysis that you are likely to need.

The program you use and the types of queries you build will depend on what you include in your database and what your research questions are, for that reason we are not going to show the queries that were used to analyze our data, for more detailed information on those please contact Jessica Fraser, Program Manager, at jfraser@incap.org. One word of caution, because certificates may have many lines of data due to having multiple jobs attributed to them, you will have to be cautious about duplication when analyzing the data. If the question you are trying to answer is " How many certificate programs are eligible for financial aid?" You will need to take steps to create an unduplicated list for the purposes of answering that question.

Here are some of the questions we tried to answer by analyzing our database:

- Number of credentials leading to Jobs that paid an adequate entry-level wage;
- Number of credentials leading to Jobs that paid an adequate median level wage;
- Total number of job opportunities that could be connected to our state's credential program;
- Number of credentials that lead to jobs that pay good wages AND are "in-demand;"
- Number of credentials that lead to jobs that pay good wages and are NOT eligible for financial aid;
- Number of credentials that lead to jobs that are "in-demand" and are NOT eligible for financial aid.
- A "ranking" of credentials with checkmarks indicating the data in that field met our criteria, i.e. wage above $27,618, on the in-demand jobs list, lead to a post-secondary education career pathway, and so on.

These are just to name a sampling of the data we tried to derive from the database. The "Findings and Recommendations" section of the report I is located in Appendix F.

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[1] The State of State Postsecondary Data Systems, SHEEO, September 2010, http://www.sheeo.org/sspds/

Appendix A: State Education Agencies

- **Alabama**
State Education Department - Alabama State Department of Education
State Higher Education Agency - Alabama Commission on Higher Education

- **Alaska**
State Education Department - Alaska Department of Education
State Higher Education Agency - University of Alaska Board of Regents

- **Arizona**
State Education Department - Arizona Department of Education
State Higher Education Agency - Arizona Commission for Postsecondary Education

- **Arkansas**
State Education Department - Arkansas Department of Education
State Higher Education Agency - Arkansas Department of Higher Education

- **California**
State Education Department - California Department of Education
State Higher Education Agency - California Postsecondary Education Commission

- **Colorado**
State Education Department - Colorado Department of Education
State Higher Education Agency - Colorado Commission on Higher Education

- **Connecticut**
State Education Department - Connecticut State Education Department
State Higher Education Agency - Board of Regents for Higher Education

- **Delaware**
State Education Department - Delaware State Department of Education
State Higher Education Agency - Delaware Higher Education Commission

- **Washington D.C.**
State Education Department - D.C. Public School Systems

- **Florida**
State Education Department - Florida Department of Education
State Higher Education Agency - Florida Board of Governors

- **Georgia**
State Education Department - Georgia Department of Education
State Higher Education Agency - University System of Georgia

- **Hawaii**
State Education Department - Hawaii State Department of Education
State Higher Education Agency - Hawaii Board of Regents

- **Idaho**
State Education Department - Idaho State Department of Education
State Higher Education Agency - Idaho State Board of Education

- **Illinois**
State Education Department - Illinois State Board of Education
State Higher Education Agency - Illinois Board of Higher Education

- **Indiana**
State Education Department - Indiana Department of Education
State Higher Education Agency - Indiana Commission for Higher Education

- **Iowa**
State Education Department - Iowa Department of Education
State Higher Education Agency - Iowa College Student Aid Commission

- **Kansas**
State Education Department - Kansas State Department of Education
State Higher Education Agency - Kansas Board of Regents

- **Kentucky**
State Education Department - Kentucky Department of Education
State Higher Education Agency - Kentucky Council on Postsecondary Education

- **Louisiana**
State Education Department - Louisiana Department of Education
State Higher Education Agency - Louisiana Board of Regents

- **Maine**
State Education Department - Maine Department of Education
State Higher Education Agency - University of Maine System

- **Maryland**
State Education Department - Maryland State Department of Education
State Higher Education Agency - Maryland Higher Education Commission

- **Massachusetts**
State Education Department - Massachusetts State Department of Education
State Higher Education Agency - Massachusetts Board of Higher Education

- **Michigan**
State Education Department - Michigan Department of Education

• **Minnesota**
State Education Department - Minnesota Department of Education
State Higher Education Agency - Minnesota Higher Education Services Office
Minnesota State Colleges and Universities

• **Mississippi**
State Education Department - Mississippi State Department of Education
State Higher Education Agency - Mississippi Institutions of Higher Learning

• **Missouri**
State Education Department - Missouri Elementary and Secondary Education
State Higher Education Agency - Missouri Department of Higher Education

• **Montana**
State Education Department - Montana Office of Public Instruction
State Higher Education Agency - Montana Board of Regents

• **Nebraska**
State Education Department - Nebraska Department of Education
State Higher Education Agency - Nebraska Coordinating Commission for Postsecondary Education

• **Nevada**
State Education Department - Nevada Department of Education
State Higher Education Agency - University and College System of Nevada

• **New Hampshire**
State Education Department - New Hampshire Department of Education
State Higher Education Agency - University System of New Hampshire

• **New Jersey**
State Education Department - New Jersey Department of Education
State Higher Education Agency - New Jersey Commission on Higher Education

• **New Mexico**
State Education Department - New Mexico State Department of Education
State Higher Education Agency - New Mexico Commission on Higher Education

• **New York**
State Education Department - New York State Department of Education
State Higher Education Agency - NYSED Office of Higher Education

• **North Carolina**
State Education Department - North Carolina State Department of Education
State Higher Education Agency - College Foundation of North Carolina

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• **North Dakota**
State Education Department - North Dakota Department of Education
State Higher Education Agency - North Dakota University System (NDUS)

• **Ohio**
State Education Department - Ohio Department of Education
State Higher Education Agency - Ohio Board of Regents

• **Oklahoma**
State Education Department - Oklahoma State Department of Education
State Higher Education Agency - Oklahoma State Regents for Higher Education

• **Oregon**
State Education Department - Oregon Department of Education
State Higher Education Agency - Oregon State System of Higher Education

• **Pennsylvania**
State Education Department - Pennsylvania Department of Education
State Higher Education Agency - Pennsylvania State System of Higher Education

• **Rhode Island**
State Education Department - Rhode Island State Department of Education
State Higher Education Agency - Rhode Island Board of Governors for Higher Education

• **South Carolina**
State Education Department - South Carolina Department of Education
State Higher Education Agency - South Carolina Commission on Higher Education

• **South Dakota**
State Education Department - South Dakota Department of Education and Cultural Affairs
State Higher Education Agency - South Dakota Board of Regents

• **Tennessee**
State Education Department - Tennessee State Department of Education
State Higher Education Agency - Tennessee Higher Education Commission

• **Texas**
State Education Department - Texas Education Agency
State Higher Education Agency - Texas Higher Education Coordinating Board

• **Utah**
State Education Department - Utah Office of Education (K-12)
State Higher Education Agency - Utah System of Higher Education

• **Vermont**
State Education Department - Vermont State Department of Education
State Higher Education Agency - Vermont State College System

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• **Virginia**
State Education Department - Virginia Department of Education
State Higher Education Agency - State Council of Higher Education for Virginia
Virginia Community College System (VCCS) - Virginia Community College System

• **Washington**
State Education Department - Office of Superintendent of Public Instruction
State Higher Education Agency - Washington State Higher Education Coordinating Board

• **West Virginia**
State Education Department - West Virginia Department of Education
State Higher Education Agency - West Virginia Higher Education Policy Commission

• **Wisconsin**
State Education Department - Wisconsin Department of Public Instruction
State Higher Education Agency - University of Wisconsin System Administration

• **Wyoming**
State Education Department - Wisconsin State Department of Education
State Higher Education Agency - University of Wyoming

Appendix B: State Higher Education Agency Contacts

Alabama
Alabama Commission on Higher Education
Gregory G. Fitch, Executive Director
100 North Union Street
P.O. Box 302000
Montgomery, Alabama 36130-2000
Telephone: (334) 242-2123
Fax: (334) 242-0268
gregory.fitch@ache.alabama.gov
www.ache.state.al.us

Alaska
Alaska Commission on Postsecondary Education
Diane Barrans, Executive Director
707 A Street, Suite 206
P.O. Box 110505
Juneau, Alaska 99811-0505
Telephone: (907) 465-6740
Fax: (907) 465-3293
diane.barrans@alaska.gov
alaskadvantage.state.ak.us

Alaska
University of Alaska System
Patrick K. Gamble, President
202 Butrovich
PO Box 755000
Fairbanks, Alaska 99775
Telephone: (907) 450-8009
Fax: (907) 450-8012
ua.president@alaska.edu
www.alaska.edu

Arizona
Arizona Board of Regents
Thomas K. Anderes, President
2020 North Central Avenue, Suite 230
Phoenix, Arizona 85004-4593
Telephone: (602) 229-2505
Fax: (602) 229-2555
tom.anderes@azregents.edu
www.azregents.edu

Arkansas
Arkansas Department of Higher Education
Shane Broadway, Interim Director
114 East Capitol Ave
Little Rock, Arkansas 72201
Telephone: (501) 371-2031
Fax: (501) 371-2003
Shane.Broadway@adhe.edu
www.adhe.edu

Colorado
Western Interstate Commission for Higher Education
David A. Longanecker, President
3035 Center Green Drive, Suite 200
Boulder, Colorado 80301-2204
Telephone: (303) 541-0204
Fax: (303) 541-0291
dlonganecker@wiche.edu
www.wiche.edu

Colorado
Colorado Department of Higher Education
Joseph A. Garcia, Lt. Governor of Colorado, and Executive Director of CDHE
1560 Broadway, Suite 1600
Denver, Colorado 80202
Telephone: (303) 866-2723
Fax: (303) 866-4266
josephagarcia@state.co.us
highered.colorado.gov

Connecticut
Connecticut Board of Regents for Higher Education
Philip Austin, Interim President
39 Woodland Street
Hartford, Connecticut 06105-2337
Telephone: (860) 493-0011
Fax: (860) 493-0009
nosalj@so.ct.edu
www.ctregents.org

Connecticut
Connecticut Office of Higher Education
Jane A. Ciarleglio, Executive Director
61 Woodland Street
Hartford, Connecticut 06105-2326
Telephone: (860) 947-1801
Fax: (860) 947-1311
jciarleglio@ctohe.org
www.ctohe.org

Delaware
Delaware Department of Education Higher Education Office
Maureen Laffey, Director
John G. Townsend Building
401 Federal Street
Dover, Delaware 19901
Telephone: (302) 735-4120
Fax: (302) 739-5894
mlaffey@doe.k12.de.us
www.doe.k12.de.us/dheo

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District of Columbia
Post-Secondary and Career Education
Emily Durso, Assistant Superintendent of Post-Secondary and Career Education
DC Office of the State Superintendent of Education
810 First Street NE 2nd Floor
Washington, District of Columbia 20002
Telephone: (202) 741-5529
Fax: (202) 741-0229
Emily.durso@dc.gov
www.osse.dc.gov

Florida
State University System of Florida Board of Governors
Frank T. Brogan, Chancellor
325 West Gaines Street, Suite 1614
Tallahassee, Florida 32399
Telephone: (850) 245-0466
Fax: (850) 245-9685
frank.brogan@flbog.edu
www.flbog.org

Georgia
Board of Regents of the University System of Georgia
Hank M. Huckaby, Chancellor
270 Washington Street, SW
Atlanta, Georgia 30334
Telephone: (404) 656-2202
Fax: (404) 657-6979
chancellor@usg.edu
www.usg.edu

Georgia
Southern Regional Education Board
David S. Spence, President
592 10th Street NW
Atlanta, Georgia 30318-5776
Telephone: (404) 875-9211
Fax: (404) 872-1477
dave.spence@sreb.org
www.sreb.org

Hawaii
University of Hawai`i System
M.R.C. Greenwood, President
2444 Dole Street, Bachman Hall 202
Honolulu, Hawaii 96822
Telephone: (808) 956-9704
Fax: (808) 956-9943
mrcgreenwood@hawaii.edu
www.hawaii.edu

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Idaho
Idaho State Board of Education
Michael Rush, Executive Director
650 West State Street, Room 307
Boise, Idaho 83702-5936
Telephone: (208) 332-1565
Fax: (208) 334-2632
mike.rush@osbe.idaho.gov
www.boardofed.idaho.gov

Illinois
Illinois Board of Higher Education
Harry Berman, Interim Executive Director
431 East Adams, 2nd Floor
Springfield, Illinois 62701-1404
Telephone: (217) 782-2551
Fax: (217) 782-8548
berman@ibhe.org
www.ibhe.org

Indiana
Indiana Commission for Higher Education
Teresa Lubbers, Commissioner
101 West Ohio Street, Suite 550
Indianapolis, Indiana 46204-1984
Telephone: (317) 464-4400
Fax: (317) 464-4410
teresal@che.in.gov
www.in.gov/che

Iowa
Board of Regents, State of Iowa
Robert Donley, Executive Director
11260 Aurora Avenue
Urbandale, Iowa 50322-7905
Telephone: (515) 281-6426
Fax: (515) 281-6420
bdonley@iastate.edu
www.regents.iowa.gov

Kansas
Kansas Board of Regents
Andy Tompkins, President and CEO
1000 SW Jackson Street, Suite 520
Topeka, Kansas 66612-1368
Telephone: (785) 296-3421
Fax: (785) 296-0983
atompkins@ksbor.org
www.kansasregents.org

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Kentucky
Kentucky Council on Postsecondary Education
Robert L. King, President
1024 Capital Center Drive, Suite 320
Frankfort, Kentucky 40601
Telephone: (502) 573-1652
Fax: (502) 573-1535
Robert.King@ky.gov
www.cpe.ky.gov

Louisiana
Louisiana Board of Regents
James Purcell, Commissioner of Higher Education
P.O. Box 3677
1201 North Third Street
Baton Rouge, Louisiana 70821-3677
Telephone: (225) 342-4253
Fax: (225) 342-9318
jim.purcell@la.gov
www.regents.state.la.us

Maine
University of Maine System
James H. Page, Chancellor
16 Central Street
Bangor, Maine 04401
Telephone: (207) 973-3205
Fax: (207) 973-3296
jpage@maine.edu
www.maine.edu

Maryland
Maryland Higher Education Commission
Danette Howard, Secretary of Higher Education
6 N. Liberty St.
Baltimore, Maryland 21201
Telephone: (410) 767-3301
Fax:
dhoward@mhec.state.md.us
www.mhec.state.md.us

Massachusetts
New England Board of Higher Education
Michael K. Thomas, President and Chief Executive Officer
45 Temple Place
Boston, Massachusetts 02111
Telephone: (617) 357-9620
Fax: (617) 338-1692
mthomas@nebhe.org
www.nebhe.org

Massachusetts
Massachusetts Department of Higher Education
Richard M. Freeland, Commissioner
One Ashburton Place, Room 1401
Boston, Massachusetts 02108-1696
Telephone: (617) 994-6901
Fax: (617) 727-6397
rfreeland@bhe.mass.edu
www.mass.edu

Minnesota
Minnesota State Colleges & Universities
Steven J. Rosenstone, Chancellor
Wells Fargo Place
30 7th St. E., Suite 350
St. Paul, Minnesota 55101-7804
Telephone: (651) 201-1696
Fax: (651) 297-3312
steven.rosenstone@so.mnscu.edu
www.mnscu.edu

Minnesota
Minnesota Office of Higher Education
Larry Pogemiller, Director
1450 Energy Park Drive, Suite 350
St. Paul, Minnesota 55108-5227
Telephone: (651) 259-3900
Fax: (651) 642-0597
larry.pogemiller@state.mn.us
www.ohe.state.mn.us

Minnesota
Midwestern Higher Education Compact
Larry Isaak, President
1300 S Second Street, Suite 130
Minneapolis, Minnesota 55454-1079
Telephone: (612) 626-8292
Fax: (612) 626-8290
larryi@mhec.org
www.mhec.org/MHECHomePage

Mississippi
Mississippi Institutions of Higher Learning
Hank M. Bounds, Commissioner of Higher Education
3825 Ridgewood Road
Jackson, Mississippi 39211-6453
Telephone: (601) 432-6198
Fax: (601) 432-6972
hbounds@ihl.state.ms.us
www.ihl.state.ms.us

Missouri
Missouri Department of Higher Education
David R. Russell, Commissioner of Higher Education
205 Jefferson Street
Jefferson City, Missouri 65102-1469
Telephone: (573) 751-1876
Fax: (573) 751-6635
David.Russell@dhe.mo.gov
www.dhe.mo.gov

Montana
Montana University System
Clayton Christian, Commissioner of Higher Education
2500 Broadway Street
P.O. Box 203201
Helena, Montana 59620-3201
Telephone: (406) 444-0374
Fax: (406) 444-1469
cchristian@montana.edu
mus.edu

Nebraska
Nebraska's Coordinating Commission for Postsecondary Education
Marshall A. Hill, Executive Director
140 North 8th Street, Suite 300
P.O. Box 95005
Lincoln, Nebraska 68509-5005
Telephone: (402) 471-2847
Fax: (402) 471-2886
Marshall.Hill@nebraska.gov
www.ccpe.state.ne.us/PublicDoc/CCPE/Default.asp

Nevada
Nevada System of Higher Education
Daniel J. Klaich, Chancellor
2601 Enterprise Road
Reno, Nevada 89512-1666
Telephone: (775) 784-3222
Fax: (775) 784-1127
dklaich@nevada.edu
system.nevada.edu

New Hampshire
New Hampshire Division of Higher Education - Higher Education Commission
Richard A. Gustafson, Division Director
101 Pleasant Street
Concord, New Hampshire 03301
Telephone: (603) 271-0256
Fax: (603) 271-1953
richard.gustafson@doe.nh.gov
www.education.nh.gov/highered

New Hampshire
University System of New Hampshire
Edward R. MacKay, Chancellor
25 Concord Road, Dunlap Center
Durham, New Hampshire 03824-3545
Telephone: (603) 862-0918
Fax: (603) 862-0908
ed.mackay@usnh.edu
www.usnh.edu

New Jersey
New Jersey Higher Education
Rochelle Hendricks, Secretary of Higher Education
20 West State Street, 4th Floor
Trenton, New Jersey 08608-1206
Telephone: (609) 292-8052
Fax: (609) 292-7225
rochelle.hendricks@njhe.state.nj.us
www.state.nj.us/highereducation/

New Mexico
New Mexico Higher Education Department
José Z. Garcia, Cabinet Secretary
2048 Galisteo Street
Santa Fe, New Mexico 87505-2100
Telephone: (505) 476-8404
Fax: (505) 476-8454
jose.garcia@state.nm.us
www.hed.state.nm.us

New York
New York State Education Department, Office of Higher Education
John D'Agati, Deputy Commissioner
Room 977, Education Building Annex
89 Washington Avenue
Albany, New York 12234
Telephone: (518) 486-3633
Fax: (518) 486-2254
jdagati@mail.nysed.gov
www.highered.nysed.gov/

North Carolina
University of North Carolina
Thomas W. Ross, President
910 Raleigh Road, PO Box 2688
Chapel Hill, North Carolina 27514-2688
Telephone: (919) 962-4622
Fax: (919) 843-9695
tomross@northcarolina.edu
www.northcarolina.edu

North Dakota
North Dakota University System
H.A. Shirvani, Chancellor
10th Floor, State Capitol
600 East Boulevard Ave, Dept. 215
Bismarck, North Dakota 58505-0230
Telephone: (701) 328-2963
Fax:
ham.shirvani@ndus.edu
www.ndus.edu/default.asp

Ohio
Ohio Board of Regents
James Petro, Chancellor
30 East Broad Street, Floor 36
Columbus, Ohio 43215-3414
Telephone: (614) 466-0965
Fax: (614) 466-5866
jpetro@regents.state.oh.us
www.ohiohighered.org

Oklahoma
Oklahoma State Regents for Higher Education
Glen D. Johnson, Chancellor
655 Research Parkway, Suite 200
Oklahoma City, Oklahoma 73104
Telephone: (405) 225-9100
Fax: (405) 225-9230
gjohnson@osrhe.edu
www.okhighered.org/

Oregon
Oregon University System
George Pernsteiner, Chancellor
1431 Johnson Lane
Eugene, Oregon 97403-0175
Telephone: (541) 346-5703
Fax: (541) 346-5764
george_pernsteiner@ous.edu
www.ous.edu

Pennsylvania
Pennsylvania State System of Higher Education
John C. Cavanaugh, Chancellor
Dixon University Center
2986 North Second Street
Harrisburg, Pennsylvania 17110-1201
Telephone: (717) 720-4010
Fax: (717) 720-4011
jcavanaugh@passhe.edu
www.passhe.edu

Pennsylvania

Pennsylvania Department of Education - Office of Postsecondary and Higher Education

L. Jill Hans, Deputy Secretary
333 Market Street, 12th Floor
Harrisburg, Pennsylvania 17126-0333
Telephone: (717) 787-5041
Fax: (717) 772-3622
jhans@pa.gov
www.education.state.pa.us

Rhode Island

Rhode Island Board of Governors for Higher Education

Ray M. Di Pasquale, Commissioner of RIBGHE and President of Community College of Rhode Island
The Shepard Building
80 Washington Street, Suite 450
Providence, Rhode Island 02903
Telephone: (401) 456-6002
Fax: (401) 456-6028
rmdipasquale@ccri.edu
www.ribghe.org

South Carolina

South Carolina Commission on Higher Education

Julie J. Carullo, Acting Executive Director
1122 Lady Street, Suite 300
Columbia, South Carolina 29201
Telephone: (803) 737-2292
Fax: (803) 737-2297
jcarullo@che.sc.gov
www.che.sc.gov

South Dakota

South Dakota Board of Regents

Jack R. Warner, Executive Director and Chief Executive Officer
306 East Capitol Avenue, Suite 200
Pierre, South Dakota 57501-2545
Telephone: (605) 773-3455
Fax: (605) 773-5320
JackW@sdbor.edu
www.sdbor.edu

Tennessee

Tennessee Higher Education Commission

Richard G. Rhoda, Executive Director
404 James Robertson Parkway
Parkway Towers, Suite 1900
Nashville, Tennessee 37243-0830
Telephone: (615) 741-7561
Fax: (615) 741-6230
richard.rhoda@tn.gov
www.state.tn.us/thec/

Texas
Texas Higher Education Coordinating Board
Raymund A. Paredes, Commissioner of Higher Education
1200 East Anderson Lane, PO Box 12788
Austin, Texas 78752
Telephone: (512) 427-6101
Fax: (512) 427-6127
raymund.paredes@thecb.state.tx.us
www.thecb.state.tx.us/

Utah
Utah System of Higher Education
David L. Buhler, Commissioner
60 S 400 W
Salt Lake City, Utah 84101-1284
Telephone: (801) 321-7162
Fax: (801) 321-7156
dbuhler@utahsbr.edu
www.utahsbr.edu

Vermont
The University of Vermont
Thomas Sullivan, President
85 South Prospect Street
344-353 Waterman Building
Burlington, Vermont 05405
Telephone: (802) 656-7878
Fax: (802) 656-9220
Thomas.Sullivan@uvm.edu
www.uvm.edu

Vermont
Vermont State Colleges
Timothy J. Donovan, Chancellor
Office of the Chancellor
P.O. Box 7
Montpelier, Vermont 05601
Telephone: (802) 224-3000
Fax: (802) 224-3035
tim.donovan@vsc.edu
www.vsc.edu

Virginia
State Council of Higher Education for Virginia
Peter Blake, Director
101 North 14th Street
James Monroe Building, 10th Floor
Richmond, Virginia 23219
Telephone: (804) 225-2611
Fax: (804) 225-2908
peterblake@schev.edu
schev.edu

Washington
Washington Student Achievement Council
Donald Bennett, Executive Director
917 Lakeridge Way
Olympia, Washington 98504
Telephone: (360) 753-7810
Fax: (360) 753-7808
donb@wsac.wa.gov
wsac.wa.gov

West Virginia
West Virginia Higher Education Policy Commission
Paul L. Hill, Chancellor
1018 Kanawha Blvd E, Suite 700
Charleston, West Virginia 25301
Telephone: (304) 558-0699
Fax: (304) 558-5719
chancellor@hepc.wvnet.edu
www.hepc.wvnet.edu/

Wisconsin
University of Wisconsin System
Kevin P. Reilly, President
1720 Van Hise Hall - 1220 Linden Drive
Madison, Wisconsin 53706
Telephone: (608) 262-2321
Fax: (608) 262-3985
kreilly@uwsa.edu
www.wisconsin.edu/

Wyoming
Wyoming Community College Commission
James O. Rose, Executive Director
2020 Carey Avenue, 8th Floor
Cheyenne, Wyoming 82002
Telephone: (307) 777-7763
Fax: (307) 777-6567
jrose@commission.wcc.edu
www.communitycolleges.wy.edu

Wyoming
University of Wyoming
Thomas Buchanan, President
Old Main Room 206
1000 E University Ave, Dept 3434
Laramie, Wyoming 82071
Telephone: (307) 766-4121
Fax: (307) 766-4126
tombuch@uwyo.edu
www.uwyo.edu/

Source: http://www.sheeo.org/agencies.asp

State Higher Education Officers Association

The State Higher Education Executive Officers (SHEEO) is a nonprofit, nationwide association of the chief executive officers serving statewide coordinating boards and governing boards of postsecondary education. SHEEO was created in 1954 by the executive officers of nine of the ten statewide higher education boards then in existence. SHEEO's current members are the chief executive officers serving 28 statewide governing boards and 29 statewide coordinating boards of higher education.

Appendix C: MOU with University/College Partners

YOUR GROUP

And

UNIVERSITY OF XX

University Of XX (herein called the "University") and YOUR GROUP (herein called the "GROUP") enter the following Memorandum of Understanding (herein called the "MOU") and for the terms of which WITNESS THE FOLLOWING:

WHEREAS YOUR GROUP has received funding from FOUNDATION XX to evaluate credential programs in YOUR STATE.

WHEREAS YOUR GROUP will publish a report looking at credentials, which credentials are eligible for financial aid, and examine whether credential programs serve as a gateway to higher education, higher wages, and or better economic opportunity; and

WHEREAS the University intends to fully cooperate and assist YOUR GROUP in this project.

NOW THEREFORE, the parties to this Memorandum of Understanding mutually agree as follows:

1. **UNIVERSITY TO DELIVER PROGRAM LIST:** The University agrees to provide to YOUR GROUP a listing of all certificate programs offered by the University. Of the listed certificate programs the University shall identify which programs qualify for state financial aid and which do not, which programs include or lead to an industry-recognized credentialing examination, and which can be applied to higher degree pathways.

2. **REVIEW REPORT:** Once YOUR GROUP has compiled the listing of the certificate programs of the University and other colleges and universities in Indiana, the University agrees to review a pre-published version of the report produced by YOUR GROUP to ensure accuracy.

3. **STUDENT CONFIDENTIALITY & RECORDS**: All rules regarding the records of students taking courses for University credit under this agreement shall comply with the University's Academic Policies and Procedures Manual and Student Affairs Policies and Procedures Manual. In order to comply with the Family Educational Rights and Privacy Act (FERPA), all students enrolled in the program shall be required to complete a FERPA waiver form allowing parents/guardians to have access to their students' records.

4. **INDEMNIFICATION OF PARTIES**: To the extent authorized by law, in consideration of the performance by both parties of this agreement, each party does hereby agree to indemnify and hold harmless all agents, servants, and employees of the other party from and against any and all claims, debts, from either (1) claimed or actual defects in premises owned or controlled by the other party and used in the performance of this agreement; or (2) any acts or omissions of the other party, its agents, servants, or employees, in the performance of this MOU controlled by the YOUR GROUP and used in the performance of this agreement; (2) any acts or omissions of YOUR GROUP, its agents, servants, or employees in the performance of this MOU.

5. **APPROVALS**:

   UNIVERSITY OF XX

   _____   _____

   NAME, TITLE   Date   NAME, TITLE   Date

   YOUR GROUP

   _____   _____

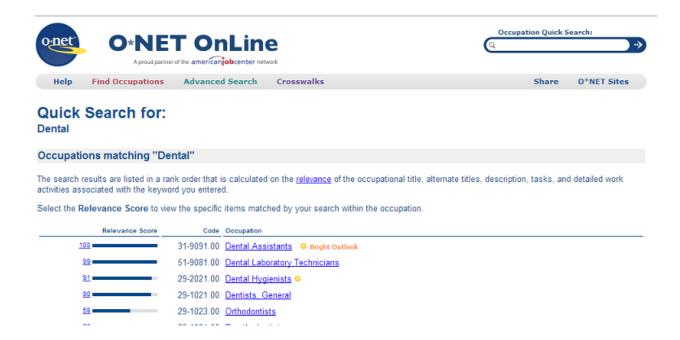   NAME, TITLE   Date   NAME, TITLE   Date

Appendix D: Determining Educational Attainment
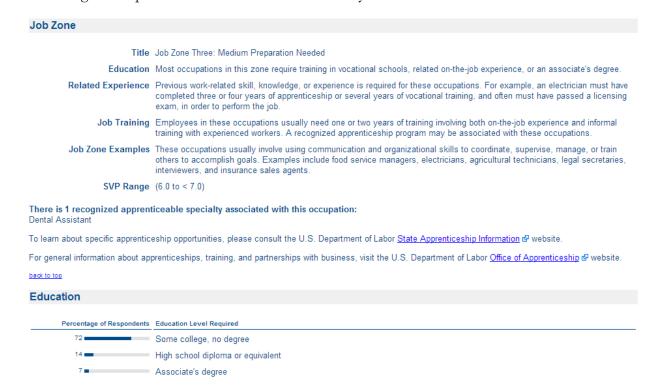
O*net OnLine: www.onetonline.org

In the search bar on the right type in part or all of an occupations title, then choose the occupation that you would like to learn more about.

After you choose an occupation, a summary report will come up and you want to skip down to the Job Zone data.

In the Job Zone section you will see the jobs designated job zone of the occupation and what level of education that relates to generally. Just below this section, the Education section will show the distribution of educational attainment among the respondents of their nationwide survey.

State Level Educational Attainment Data from Career OneStop and America's Career Infonet:

On the Occupation profile select "Education & Training" and update:

Modify Occupation Profile Content :

☑ Wage Information   ☐ Tools & Technology
☑ Employment Trends   ☑ Education & Training
☐ Knowledge, Skills & Abilities   ☐ Related Occupation Profiles
☐ Tasks & Activities   ☐ Web Resources

Select or deselect profile options individually or use the **Select All** button below to change the report. To view the new results, select the **Update** button.

Select All   Update

Education and Training

Occupation: **Dental Assistants**
Typical **education** needed for entry: **Postsecondary non-degree award**
Typical **work experience** needed for a job in this occupation: **None**
Typical **on-the-job training** once you have a job in this occupation: **None**
Related Instructional Programs: Dental Assisting/Assistant

Distribution of Educational Attainment

Occupation	Percent of employees aged 25 to 44 in the occupation whose highest level of educational attainment is						
	Less than high school diploma	High school diploma or equivalent	Some college, no degree	Associate's degree	Bachelor's degree	Master's degree	Doctoral or professional degree
Dental Assistants	3.5%	31.8%	39.5%	15.9%	6.4%	0.6%	2.3%
Other Healthcare Support Occupations	4.3%	27.8%	37.9%	16.3%	10.4%	1.6%	1.7%
Healthcare Support	5.9%	24.8%	29.5%	26.2%	10.5%	1.8%	1.3%
Total, All Occupations	10.4%	27.4%	20.9%	8.9%	19.5%	8.2%	4.7%

The results show the "typical" level of education and give a distribution of educational attainment for the workers in the occupation in our state. If at least 30 percent of workers in the field had *less than* an Associate's Degree, then it could be feasible to get the job with only a credential.

Credentials of Opportunity

The final data source for looking at educational attainment was the Occupational Outlook Handbook, published in 2012 by the Bureau of Labor Statistics. http://www.bls.gov/ooh/

Enter your search parameters and then click "How to Become One." The results will show the Bureau of Labor Statistics analysis on the education requirements of the profession and will also, on occasion, discuss emerging education trends. This is particularly helpful if you are *on the fence* about whether or not a credential should be included.

How to Become a Dental Assistant

There are several possible paths to becoming a dental assistant. Some states require assistants to graduate from an accredited program and possibly pass a state exam. In other states, there are no formal educational requirements. Dental assistants who do not have formal education in dental assisting may learn their duties through on-the-job training. The dentist or other dental assistants in the office teach the new assistant dental terminology, the names of the instruments, how to do daily tasks, how to interact with patients, and other activities necessary to help keep the dental office running smoothly. Most states regulate what dental assistants may do, but that varies by state.

Education

High school students interested in a career as a dental assistant should take courses in biology, chemistry, and anatomy. Some states require assistants to graduate from an accredited program and pass a state exam. Most programs take about 1 year to complete and lead to a certificate or diploma and are offered by community colleges. Two-year programs, also offered in community colleges, are less common and lead to an associate's degree. The Commission on Dental Accreditation (CODA), part of the American Dental Association ⊡, approved more than 285 dental-assisting training programs in 2011.
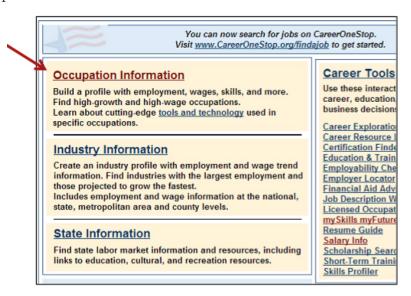
Source: Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2012-13 Edition*, Dental Assistants, on the Internet at http://www.bls.gov/ooh/healthcare/dental-assistants.htm (visited *November 30, 2012*).

Credentials of Opportunity
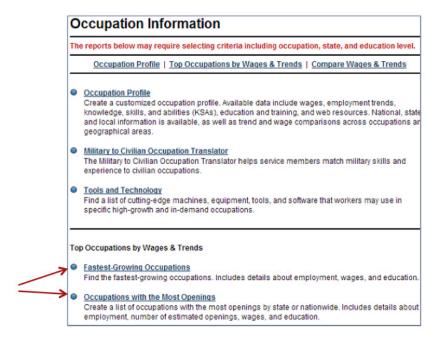
Appendix E: Determining if a Job is "In-Demand"

Career InfoNet:

To get to the Top 50 Fastest Growing Occupations and the

1. Go to http://www.careerinfonet.org/

2. Click on "Occupation Information"

3. Scroll down and click on either the "Fastest Growing Occupations" or the "Occupations with the Most Openings."

4. Your selection will come up for the country as a whole, simple chose the option to "Change State" and select your state from the list, see below, the example for Indiana.

Your Selections:

Find Related Content...

Education Level: **All Education Levels** Change Education Level

State: **Indiana** Change State Change to National

These are the occupations that are projected to grow the fastest during the 2008-2018 time period. This does not hese are the occupations with the most openings. Select an occupation to learn more about it in the Occupation

Top 50 Fastest-Growing Occupations

Displaying Records 1 - 25 of 50   Next 25 >   Show A

#	Occupation	Employment 2008	2018
1	Home Health Aides	12,900	19,730
2	Athletic Trainers	420	620
3	Financial Examiners	560	810
4	Personal Care Aides	12,780	18,440
5	Skincare Specialists	650	930
6	Occupational Therapy Aides	200	290
7	Physician Assistants	820	1,170
8	Physical Therapist Aides	780	1,080
9	Veterinary Technologists and Technicians	980	1,340
10	Massage Therapists	2,490	3,410
11	Dental Hygienists	4,000	5,450
12	Dental Assistants	5,840	7,950
13	Barbers	1,070	1,430
14	Medical Assistants	9,930	13,260
15	Geoscientists, Except Hydrologists and Geographers	330	440
16	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	6,000	7,980

Appendix F: Findings and Recommendations

Our research found that Indiana currently has some laudable overlap between credentials and the skills that employers demand. However, in a significant portion of cases, credential programs that meet multiple criteria for career and economic development are ***currently not supported by state financial aid***, even though they provide benefits such as immediate self-sufficiency through entry level wages, industry-recognized certification, or other pathways to sustainable careers.

A striking comparison in our data findings is the potential for credentials to provide students with adequate, self-sustainable wages. The most powerful credentials can help students get jobs that pay a self-sustaining wage at the entry level. Many more credentials give students an entry into careers that pay adequate median wages, meaning that they have a ladder to a self-sustaining wage.

The tables on the following page demonstrate credentials that are representative of the entry-level and median wage comparison:

Credentials of Opportunity

Credentials that lead to adequate median wages:

School	Name of Certificate	Fin Aid Eligible	Hoosier Hot 50	Entry Level Wage	Median Wage	PSE Pathway	State License	I-R exam
Indiana State University	Piano Pedagogy Certificate	No			✔			
Indiana University	Sports Tourism Development CRT	Yes			✔			
IUPUI	Paralegal Studies	Yes	✔		✔	✔		
Ivy Tech	Alternative Fuels Certificate	Yes	✔		✔	✔		
Purdue University	Organizational Leadership	No	✔		✔	✔		
Purdue University North Central	Carpentry	Unknown	✔		✔			
Vincennes University	Tractor-Trailer Driver Training Externship	Yes	✔		✔			

Credentials that lead to an adequate entry-level wage (and therefore an adequate median wage):

School	Name of Certificate	Fin Aid Eligible	Hoosier Hot 50	Entry Level Wage	Median Wage	PSE Pathway	State License	I-R exam
Indiana State University	Medical Sales Certificate	No	✔	✔	✔	✔		
Indiana State University	American Humanics Certificate	No	✔	✔	✔	✔		
Indiana University	International Business PBS	Yes		✔	✔			
Ivy Tech	Apprenticeship Technology (Electricians)	Yes	✔	✔	✔	✔		✔
Ivy Tech	Sustainable Energy	Yes	✔	✔	✔	✔		
Purdue University North Central	Web Applications Developer	Unknown	✔	✔	✔			
Vincennes University	Nursing, Practical	Yes	✔	✔	✔			

Credentials of Opportunity

557 Indiana Credentials lead to 781 Job Titles.

Adequate ENTRY-LEVEL Wages

132 = **174**
Credentials   Job Titles

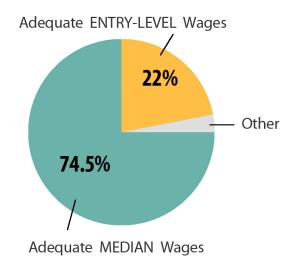132 credentials lead to 174 jobs with entry-level wages at or above the state median ($27,618).

Adequate MEDIAN Wages

412 = **582**
Credentials   Job Titles

582 jobs obtained through a credential that pay an adequate median wage.

Adequate ENTRY-LEVEL Wages

22%

Other

74.5%

Adequate MEDIAN Wages

311 = **406**
Credentials   Job Titles

311 credentials lead to 406 jobs
that pay a low entry-level wage
but lead to an adequate median wage.

Credentials are leading to jobs on the Indiana Hot 50 Job list.

HOT 50 JOBS

Adequate ENTRY-LEVEL Wages

46 = **53**

Credentials   Hot Jobs

There are 53 career paths on the hot 50 (35 unique jobs on the hot 50) and that pay an adequate entry level wage. These 53 jobs can be obtained through 46 unique credentials.

Adequate MEDIAN Wages

181 = **220**

Credentials   Hot Jobs

There are 220 jobs on the hot 50 (74 unique entries) and that pay an adequate median wage. These 220 jobs can be obtained through 181 unique credentials.

CAREER PATHS

Job Counts: 450 credentials could be connected to ONE career path, of the remaining 109 credentials the averages number of career paths was 3, the median was 2. 24% of credentials lead to more than one career path. There were 26 credentials that lead to more than 3 career paths each.

450 = **One**

Credentials   Career Path

450 credentials could be connected to ONE career path

109 = **Three**

Credentials   Career Paths

…of the remaining 109 credentials the averages number of career paths was 3

24% > **One**

Credentials   Career Path

24% of credentials lead to more than one career path

26 > **Three+**

Credentials   Career Paths

There were 26 credentials that lead to more than 3 career paths each

Credentials of Opportunity

Credentials of Opportunity Denied Financial Aid!

DENIED

Financial Aid

Indiana Hot 50 Jobs

62 = **0**

Career Paths   Financial Aid

There are 62 career paths that are on the Hot 50 but the credential to obtain them is *not currently eligible for Financial Aid.*

Adequate Entry-level Wages

37 = **0**

Career paths   Financial Aid

There are 37 career paths that pay an adequate entry level wage, but the credential to obtain them is *not currently eligible for Financial Aid*. Theses 37 jobs can be obtained through 22 unique credentials.

Leads to Post-Secondary Education/Self-Sustainability

98 = **0**

Credentials   Financial Aid

98 credentials have a built-in pathway to further Post-Secondary education and lead to self-sustainability, but are *currently not eligible for Financial Aid.*

Leads to Career Development Test/Self-Sustainability

169 = **0**

Credentials   Financial Aid

169 credentials lead to an Industry-Recognized Test for career development and lead to self-sustainability, but are *currently not eligible for Financial Aid.*

Credentials of Opportunity

Recommendations

1. Remove barriers to financial aid and provide support for credentials that lead to self-sufficiency

Perhaps the single most effective step that Indiana can take is to immediately remove barriers to students seeking to improve career prospects through credential and certification programs. Not only will this access lead students to economic self-sufficiency, it will help businesses fill the middle-skill jobs that make up the skills gap.

We strongly encourage the state's Commission for Higher Education to take our data findings to heart when considering which programs are worthy of dismissing the funding ban. A credential that earns even one 'check' means that that program has a demonstrated path to economic self-sufficiency and would thus be a strong candidate for state investment. However, the state and commission would be worthy of praise for prioritizing aid for credential programs that fulfill both student needs (such as adequate entry-level wages) and employer needs (such as jobs listed on the Hoosier Hot 50).

Indiana would also be wise to consider how state investment can help community colleges provide programs that deliver the largest economic impact to students and employers. We agree with the Landscape study, which finds that "since community colleges may seek to offer noncredit workforce education to generate profit, states should support noncredit programs that are necessary but might not be offered to generate profit." [9]

In addition, in order to become a leader in workforce development through credentials, Indiana will likely need to join the majority of states that use general funds to help support these programs. We recommend that Indiana adopt the model of general funds 'bundled' with college discretion that has been successful in other states.

2. Provide comprehensive student services, from enrollment information, conducive scheduling and assistance with completion

Providing comprehensive student services, beginning with clear enrollment information through student support services and career counseling, would help alleviate the problem of non-completion. Two key strategies are to implement streamlined scheduling and institute student cohorts. Both will help older and non-traditional students adjust to educational culture, to accommodate their outside work and life responsibilities, and to encourage peer support.

We also agree with the recommendations of the National Center for Higher Education Management Systems, who called for "improvements in retention, completion, and transfer rates for Ivy Tech students would serve to more effectively meet demand for college credentials of two-years and less, and educate many more students at a lower cost per degree. In addition, increasing the number of two-year and less credentials in STEM and health fields provide great value to the recipients of the awards and to the state with respect to filling jobs in high-demand fields and increased tax revenues." [6]

We reiterate several recommendations from our 2009 study on financial aid: in order to better serve adult students (which include many credential seekers), the state must "increase the availability of curriculum designs, supportive services, and program offerings" – including remedial course offerings; flexible, compressed formats; and offerings during evening and weekend sessions. "Additionally, offering supportive services, such as academic guidance counseling, academic supports (i.e., tutoring, time management, and study skills trainings) and career counseling, as part of a structured curriculum for adult students should help to increase persistence."[3]

3. Provide Pathways for Adult Learners to Re-Enter and Succeed in Higher Education

Make it easier for older adult learners to enroll, earn credit for previous learning and complete certificate programs that can lead to higher education completion goals. Strategies include "awarding credit for prior learning and improving the delivery of remedial/developmental education. Some of the more successful efforts to improve the delivery of remedial education to adults include the provision of remedial and college level work simultaneously so adults experience immediate progress toward a credential"[6]

4. Provide schools with incentives to make certificates more stackable & portable

Indiana colleges should be provided with incentives to make their certificate programs easier to carry over into degree-bearing programs. Make sure that all such programs count towards state attainment goals, including retroactively if students go on to complete further degrees and certifications.

Ivy Teach has provided a "crosswalk" from non-credit to credit programs since 1999, and provides a non-credit transcript upon request. Encouraging more institutions to provide crosswalks as a regular part of credential program offerings would help students know what further educational opportunities are available to them, potentially encouraging thousands of students to 'stack' their credentials into future degrees.

5. Provide consistent tracking information about credential programs and outcomes

Consistent tracking of credential programs and outcomes throughout the state will allow a better understanding about which programs are most successful. Currently, Ivy Tech tracks enrollments and completions, but cannot track certification outcomes.

Beyond helping students, colleges and state agencies better understand the effectiveness of credential programs, a robust tracking policy would help the state enact a Cross-Agency Credential Measurement (CACM) system. CACM would "collect aggregate credential attainment data from all state education and training programs, and… analyze if these investments are collectively producing the range of skilled workers needed to meet employer demand or to otherwise fill skills gaps documented by labor market or job openings data. CACM also allows a governor to establish a baseline of credential attainment, to set new goals for increased statewide postsecondary attainment, and to regularly measure and publicly report on the state's progress toward those goals over time."[11]

In addition, we call for U.S. Census to differentiate credential attainment from their "some college, no degree" category.

Appendix A: Survey of State Policies Regarding Credentials and Financial Aid

In order to gauge the range of policies concerning credentials and financial aid, we sent the following five questions to representatives in all 50 states. We received responses from 25 states, with widely ranging answers. Here are several representative responses for each question:

Distinctions are made between short and longer-term certificates by way of the course requirements and other criteria.

1. How does your state define post-secondary certifications? Is a distinction made between short and longer-term certificates? How are your definitions and distinctions made?

"For program inventory purposes, post-secondary certificates are identified as: Certificate (curriculum of less than one year), Certificate (curriculum of one year but less than two years), Undergraduate Certificate (curriculum is at the undergraduate level), and Graduate Certificate (curriculum is at the Graduate level)"

"I'm not aware of a definition that defines post-secondary certifications."

"I've reviewed this and it seems the focus of this query is policies governing the award of state-based financial aid. Since {our state] awards no need-based financial aid (and a relatively small amount of merit-based aid) it appears to me that your survey does not apply."

"[In response to the first question], please provide your operational definition of "postsecondary certificate programs". Are these for-credit programs only, or do they include those offered as not-for-credit? Also, what is your definition of "Certificate" (versus "certification") – does it align with CCA's? Does your definition of "postsecondary" include non-degree granting programs offered by non-degree granting private vocational/career institutions?"

2. Are post-secondary certificates eligible for state-based financial aid in your state?

"Yes, as long as the student is enrolled full-time (minimum 12 hours) in a certificate program at an eligible institution."

"Yes. The type of financial aid that can be used to pay for a certificate program depends on whether the program qualifies for federal Title IV aid or not."

3. Is there a policy structure or rubric for granting financial aid for certificate programs in your state? Please explain the structure, rubric or alternate aid policy used.

"The [state] Grant and [state] programs make no distinction between certificate programs or degrees at our community and technical colleges. So there is no special policy structure geared towards certificate programs."

"No."

4. What are the criteria for student eligibility for certificate programs in your state (e.g. minimum credit hours, etc.)? Do these criteria differ from other post-secondary education financial aid eligibility?

"Students must meet eligibility criteria:
a.   Complete the FAFSA
b.   Demonstrate financial need
c.   Be a [state]resident
d.   US citizen or permanent resident
e.   Not incarcerated
f.   Not in default on a student loan
g.   Registered for Selective Service
h.   Enrolled in an approved certificate program

"Students pursuing a certificate program at an eligible postsecondary institution may be considered for state financial aid."

"[Our state]has very little state-funded financial support for higher education."

5. Are there any distinctive practices or policies regarding certificates in your state that might be useful in assembling national 'best practices' recommendations?

"[Our state] is heavily into local control. Our six community colleges each have their own governing board and there is no central coordinating body just for them (like a Board of Regents for a university)."

"I like the fact that we review eligible programs each year that best meet the needs of our state and that will contribute to our state economy to try and get the biggest bang out of our buck since the funding for this program is limited to about $5 million, which is split between both components of [state aid programs]."

As these responses suggest, there is very little standardization when it comes to state policies regarding credential programs and financial aid. A select few states gave well-defined, organized responses. But in the main, even the first question regarding local definitions frequently resulted in unknowns, ad-hoc descriptions and even confusion.

Responses from the states generally support the findings regarding from 'Certificates Count':

"Most certificate programs are eligible for most federal and state student financial aid programs. For overall Title IV eligibility, they must be accredited by an authority approved by the Department of Education and prepare students for gainful employment in a recognized occupation. For Pell Grant eligibility, programs must be at least 16 semester hours or their equivalency but programs of at least 8 semester hours are eligible for Title IV loans. Typically, state eligibility guidelines mirror the federal requirements, but this is not always the case and sometimes certificate programs are not eligible for state awards." [1]

Appendix B

All credential programs were matched to as many occupations as are applicable for the "connection to an occupation" variable using the following data:

a. Occupation ideas for each certificate came from course catalogs, certificate profiles, the Institution's promotional materials, and keyword searches.

b. These potential occupations were assigned its appropriate SOC code and verified with the combined data provided by:

i. The Occupational Outlook Handbook, which lists educational requirements in its "How to Become One" section. The educational requirements listed in this section of the handbook were copied into a data-gathering spreadsheet, which was used to determine the appropriate score to attribute to each occupation. Some requirements are very clear, e.g. "A bachelor's degree is required for this position." Other scenarios were less clear, e.g. "for most workers a high school diploma is sufficient but employers are increasingly requiring some form of post-secondary education."

ii. National data regarding the distribution at various levels of educational attainment was collected for each occupation from O*Net OnLine. "The O*NET program is the nation's primary source of occupational information. Central to the project is the O*NET database, containing information on hundreds of standardized and occupation-specific descriptors. The database, which is available to the public at no cost, is continually updated by surveying a broad range of workers from each occupation. Information from this database forms the heart of O*NET OnLine, an interactive application for exploring and searching occupations. The database also provides the basis for our Career Exploration Tools, a set of valuable assessment instruments for workers and students looking to find or change careers." This information provides a percentage of workers currently in the particular occupation at various levels of educational attainment. The percentage of workers falling in the Some College, No Degree (SCND) category was entered into our data-gathering spreadsheet.

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http://ccrc.tc.columbia.edu/Publication.asp?UID=572

10 Complete College America, 'Time is the Enemy', September 2011, Retrieved November 29, 2012
http://www.completecollege.org/docs/Time_Is_the_Enemy.pdf

11 'Cross-Agency Credential Measurement Policy Proposal', Retrieved November 29, 2012
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Credentials of Opportunity

For More Information, Please Contact Us:
Indiana Institute for Working Families
1845 W. 18th St., Indianapolis, IN
Phone: 317-638-4232
Contact: Andrew Bradley at abradley@incap.org
Web: www.incap.org.iiwf.html