



Presentation to North Dakota Legislative Council Interim Higher Education Funding Committee

September 26, 2013

Presentation by

Larry Isaak

Midwestern Higher Education Compact

1

Outline of presentation



- I. Projected degree gap in North Dakota
- II. Current condition of postsecondary education in North Dakota
- III. Identifying Measures for Accountability Systems
- IV. The use of a bonus in performance funding models

2



Projected Degree Gap in North Dakota

3

Projected job growth through 2020 in North Dakota



- ▶ 28% of jobs will require high school diploma or less
- ▶ 42% of jobs will require at least some college, associate's degree, or vocational certificate
- ▶ 24% will require a bachelor's degree
- ▶ 6% will require a master's degree or higher = 72% of jobs will require some form of postsecondary education

(Carnevale et al., 2013)

4

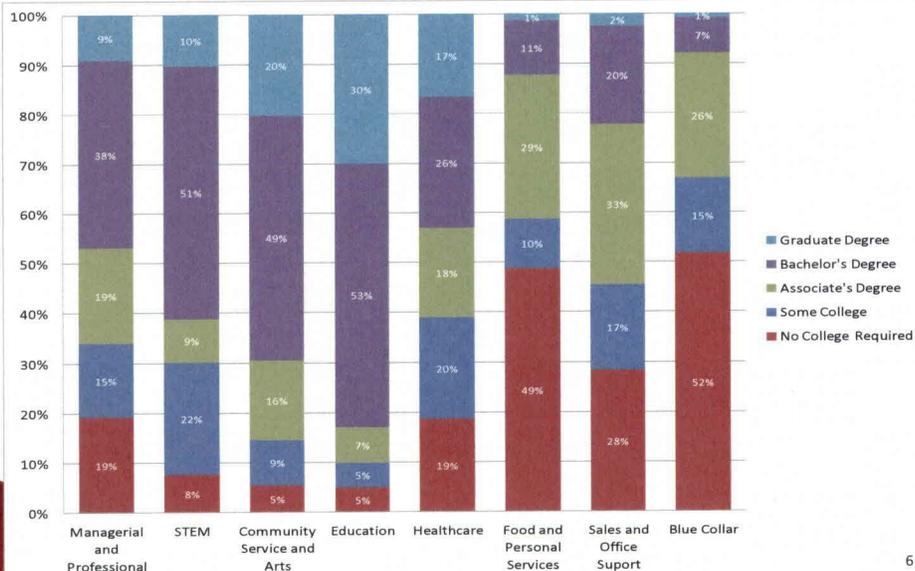
Occupational Categories



- ▶ Managerial and Professional (e.g., management, business operations, finance, and legal)
- ▶ STEM (e.g., computer and mathematical science, architects and technicians, engineers and technicians, life and physical scientists)
- ▶ Community Service and Arts (e.g., social services, arts, design, sports, entertainment, media)
- ▶ Education
- ▶ Healthcare (professionals and support)
- ▶ Food and Personal Services (e.g., protective services, food preparation and serving, personal care)
- ▶ Sales and Office Support
- ▶ Blue Collar (e.g., farming, fishing and forestry, construction and extraction, installation, maintenance and equipment repair, production, transportation and material moving)

5

Educational Requirements for 2018 Job Openings



6

JOB OPENINGS BY OCCUPATION AND EDUCATION LEVEL (IN THOUSANDS)						
OCCUPATION	Less than high school	High school diploma	Some college/ no degree	Associate's degree	Bachelor's degree	Master's degree or better
Managerial and Professional Office	0	3	4	3	11	3
STEM	0	0	1	1	3	1
Social Sciences	0	0	0	0	0	0
Community Services and Arts	0	0	1	1	2	1
Education	0	0	0	0	4	3
Healthcare Professional and Technical	0	0	1	1	3	2
Healthcare Support	0	1	1	2	0	0
Food and Personal Services	2	8	9	3	3	0
Sales and Office Support	2	8	13	5	11	1
Blue Collar	3	17	10	6	4	0
TOTAL	6	40	40	22	41	10₇

Need to increase degree production: Georgetown estimates



- ▶ 55% of adults aged 25–64 currently have a postsecondary certificate or higher
- ▶ Demand could reach 72% by 2020, but projected postsecondary attainment levels are only 69%.
- ▶ An educational attainment gap of 3 percentage points is projected in North Dakota by 2020 if current trends continue.

(Carnevale et al., 2013)

Need to increase degree production: Lumina Foundation estimates



- ▶ 45% of adults aged 25–64 currently have an associate’s degree or higher
- ▶ Demand could reach 60%, but projected estimate is only 54 percent.
- ▶ A degree gap of 6 percentage points is projected in North Dakota by 2025 if current trends continue.

9

Current Condition of Postsecondary Education in North Dakota



10

Leaks in the Pipeline



	For every 100 Ninth Graders	# Graduate from High School	# Enter College	# Still Enrolled Sophomore Year	# Graduate within 150% Time
ND	100	82	55	41	25

National Center for Higher Education Management Systems. (2011). *Student pipeline: Transition and completion rates from 9th grade to college.*

11

Direct college enrollment is fairly strong



- ▶ 10th in nation in high school graduates directly enrolling in college (68%)
- ▶ Highest enrollment rate among peer states except South Dakota (72%)

12

Job #1: Academic preparation



- ▶ Academic preparation is one of the strongest determinants of success during college.
- ▶ ND has lowest rate of preschool enrollment among peer states (33%). ND is one of 11 states without state pre-K program.
- ▶ National Assessment of Education Progress (NAEP) results for North Dakota:
 - Over 50% of students fail to attain proficiency in math, reading, or science
- ▶ ACT results: 77% of students do not meet the college readiness benchmark in at least one subject area (English, Math, Reading, Science).

13

Job #2: Affordability



- ▶ College attendance for low-income students requires between 34 and 43% of family income after subtracting financial aid (12–15% for middle-income students)
- ▶ 83% of graduates of public 4-year institutions in North Dakota have some student loan debt, compared to national average of 57%
- ▶ Student debt levels are higher than national average and higher than average debt levels in most peer states.

14

Job #3: Institutional effectiveness and efficiency in degree completion



- ▶ Public 2-year colleges
 - Very High effectiveness
 - Moderate efficiency

- ▶ Public 4-year institutions
 - Low effectiveness
 - High efficiency

15

Job #4: Postsecondary learning

- ▶ Are students graduating with the knowledge and skills necessary for gainful employment and effective citizenship?

- ▶ Are graduates getting jobs or starting businesses?

- ▶ Employers seek graduates with “communication skills, analytical reasoning, quantitative literacy, broad knowledge of science and society, field-specific knowledge and skills, intercultural skills, creativity, teamwork skills, ethical reasoning” etc. (Schneider, 2010)

- ▶ ND does not report student learning outcomes data.

16

Summary



Postsecondary Enrollment	+
Graduation: 2-yr public	+
Graduation: 4-yr public**	-
Academic Preparation**	-
Affordability**	-
Effectiveness and Efficiency: 2-yr public	+ / +
Effectiveness and Efficiency: 4-yr public**	- / +
Postsecondary learning outcomes**	??

17



Identifying Measures for Accountability Systems

18

Four ideal elements of accountability systems



1. Long-term goals or public agenda
2. Performance indicators
3. Criteria for determining success
4. Broad support and utilization

(Burke, 2005)

19

1. Public agenda



- ▶ What are the most pressing public demands impacting ND and its ability to have an educated and skilled workforce to meet these demands?
- ▶ What are the needs that North Dakota's colleges and universities should address?
- ▶ Consider long-term needs and gaps

20

1. Public agenda



- ▶ Aim for shared accountability (PK–16, employers, state)
 - Eliminates the blame game
 - All stakeholders must articulate their role in advancing the public agenda
 - Advocacy groups
 - Employers
 - Institutional leaders, faculty
 - PK–12 leaders

21

2. Performance Indicators



MHEC Typology of Performance Indicators for Shared Accountability:

- Ultimate or target outcomes derived from public agenda (e.g., postsecondary degree completion or degrees that meet future job needs of the economy)
- Process outcomes or leverage points that are instrumental to achieving public agenda goals (e.g., increase academic preparation)
- Policy instruments intended to influence leverage points and target outcomes (e.g., PK–16 alignment policies)

22

2. Performance Indicators



Important distinction:

- Institutional performance vs. multi-institutional performance
 - Institutional performance indicators: performance can be attributed to a particular institution's policies, practices, programs, or activities (e.g., value-added)
 - Multi-institutional performance: diffused performance across multiple educational institutions or sectors
 - E.g., graduation rates reflect the effectiveness of colleges and PK-12 system

23

2. Performance Indicators



- ▶ Measures should reflect quantity AND quality
 - NGA recommendation: “require public colleges and universities to provide evidence that improvements in completion and attainment are not occurring at the expense of learning” (Reindl & Reyna, 2011)
 - Specified learning outcomes should reflect preparation for vocation *and* citizenship

24

2. Performance Indicators



- ▶ Preserve mission differentiation: different indicators for different types of institutions

- ▶ Align indicators at different levels (either held in common or instrumental to each other)
 - State: proportion of adults with postsecondary credential
 - System: average four-year college graduation rate
 - Institution: institutional effectiveness in promoting graduation
 - (Academic department goals should be aligned with institutional goals through internal performance reporting)

- Less is more: Include a small set of performance indicators that provide actionable information

25

3. Criteria for success



- ▶ How will we know whether institutions are responding to public expectations? (usually missing)
 - Peer comparisons
 - Improvement over time
 - Projected target (e.g., rank among top 5 percent in nation)

26

4. Support and utilization



- ▶ Accountability systems may encounter stiff opposition without the involvement of institutional leaders
 - respecting institutional autonomy increases campus support, but should not come at the cost of doing nothing.
- ▶ Option 1: mandate use of performance reporting framework, but state coordinating agency and institutional leaders identify indicators
- ▶ Option 2: do not use legislative mandate; communicate expectation

(Burke, 2005)

27

4. Support and utilization



- ▶ Ensure all stakeholders are familiar with the accountability system: students/parents, faculty, department chairs, deans, etc.
- ▶ Capture stakeholder attention by holding a biennial forum or policy summit on the condition of education, wherein the accountability framework is discussed/ revised

28

4. Support and utilization



- ▶ Conduct regular assessments of whether the results are being used to inform policy and practice
- ▶ Ensure that institutions have adequate resources for institutional research needed to diagnose problems
- ▶ Provide a simple publication format to enhance usability

29



Example of Performance Indicator System: Illinois

30

Illinois Public Agenda



1. Increase Educational Attainment.
2. Ensure college affordability for students, families, and taxpayers.
3. Increase the number of high-quality post-secondary credentials.
4. Better integrate Illinois' education, research, and innovation assets to meet economic needs of the state.

(reproduced from Phillips, 2012)

31

Increase educational attainment



- ▶ **Education Level of Adult Population** Age 25–34 with an associate's degree or higher.
- ▶ **Education Level of Adult Population** Age 25–64 with a college degree or certificate.
- ▶ **High School Graduation.** Ethnic/racial group rates.
- ▶ **College Graduation.** Ethnic/racial group rates.
- ▶ **Adults Earning GEDs.**
- ▶ **Adults Enrolling in College.**

- ▶ **Adults Earning Degrees.**

- ▶ **No High School Diploma.** By geographic regions.
- ▶ **Adults with Associate's Degree or Higher.** By geographic regions.
- ▶ **Adults with Bachelor's Degree or Higher.** By geographic regions.

(Reproduced from IBHE, 2013)

32

Ensure college affordability



- ▶ **Family Income.** Percent required to attend public 4-year.
- ▶ **Family Income.** Percent required to attend private 4-year.
- ▶ **Family Income.** Percent required to attend public 2-year.
- ▶ **Family Income.** Percent required to pay tuition and fees at public 2-year.
- ▶ **Student Loans.** Average debt.
- ▶ **State and Local Support.** Percent of total revenues for students.
- ▶ **Institution Efficiency.** Spending per degree and certificate completed.

(Reproduced from IBHE, 2013) 33

Address workforce needs



- ▶ **AA/AS Degrees and Certificates.** Associate-degree granting institutions
- ▶ **BA/BS Degrees.** Baccalaureate-degree granting institutions
- ▶ **Illinois Articulation Initiative.** Participation
- ▶ **Critical Fields.** Certificates and degrees

(Reproduced from IBHE, 2013) 34

Enhance economic growth



- ▶ **Research and Development.** Academic expenditures.
- ▶ Employment after graduation

(Reproduced from IBHE,
2013)

35



Example of Performance Indicator System: Minnesota

36

Example: Public Agenda Minnesota



1. Improve success of all students, particularly students from groups traditionally underrepresented in higher education
2. Create a responsive system that produces graduates at all levels who meet the demands of the economy.
3. Increase student learning and improve skill levels of students so they can compete effectively in the global marketplace
4. Contribute to the development of a state economy that is competitive in the global market through research, workforce training and other appropriate means.
5. Provide access, affordability and choice for all students.

(Reproduced from Minnesota Office of Higher Education, 2009) 37

Minnesota Performance Indicators



- ▶ **Ultimate outcomes**
 - Educational attainment (e.g., adults 25+ with postsecondary degree)
 - Graduation and transfer rates
 - Number of degrees/certificates awarded by career cluster
 - Employment rates of recent graduates
 - Cumulative debt of college graduates
 - Manageable loan repayments
 - Default rates
 - Graduate school preparation (e.g., GRE, LSAT, MCAT)
 - Licensure (e.g., teaching licensure pass rates)
 - U of M national ranking among research universities

38

Minnesota Performance Indicators



- ▶ **Process outcomes: Preparing for and entering college**
 - AP and dual enrollment
 - MN assessment scores
 - ACT scores
 - High school grad rate
 - College enrollment rates
 - Net price

- ▶ **Process outcomes: During college**
 - Undergraduate enrollment profile (e.g., full-time, race and ethnicity)
 - Retention rates
 - Transfer
 - Study abroad

39



Example of Performance Indicator System: Pennsylvania

40

Pennsylvania Indicator Types



- ▶ Groups of indicators
 - Mandatory
 - Elective (institution selects indicators among various options)

- ▶ Three indicator categories
 - Student success
 - Access
 - Stewardship

(Cavanaugh & Garland, 2012) 41

Pennsylvania Mandatory Indicators



- ▶ Access
 - Closing gap for Pell recipients
 - Closing gap for underrepresented minority students
 - Percent of full-time faculty who are non-majority persons
 - Percent of full-time faculty who are female
- ▶ Student success
 - Number of degrees conferred
 - Closing achievement gap for Pell recipients
 - Closing achievement gap for underrepresented minority students
- ▶ Stewardship
 - Private philanthropic support

(reproduced from Cavanaugh & Garland, 2012) 42

Pennsylvania Elective Indicators (must select 3-5)



- ▶ Third and fourth-year student persistence
- ▶ Educational value added (as reflected in senior CLA, CAAP, or ETS® Proficiency Profile scores)
- ▶ STEM degree recipients (including health degrees)
- ▶ Faculty career advancement
- ▶ Staff diversity
- ▶ Student diversity
- ▶ Student experience with diversity and inclusion (as reflected in the average of the combined scores on applicable NSSE items)
- ▶ Facilities investment (as measured by the annual Sightlines' Return on Physical Assets study)
- ▶ Administrative expenditures as percent of the cost of education
- ▶ Credit-hour productivity (as measured by student credit hours as a ratio of the total FTE faculty)
- ▶ FTE student/FTE employee (faculty and staff) productivity

(reproduced from Cavanaugh & Garland, 2012)

43

Pennsylvania Group III elective Indicators



- ▶ Group III elective indicators: identified in institutional strategic plans (e.g., improve ranking among research universities)

44

Possible Focal Areas for North Dakota



- ▶ Public agenda goal: raise postsecondary educational attainment to 60 percent by 2025
 - Percentage of population with postsecondary credential

45

Job #: 1 Focus on Academic Preparation



- ▶ Academic preparation (prior to college)
 - Children ages 3 to 4 enrolled in preschool
 - Academic proficiency of 8th grade students
 - Rate of high school graduation
 - Proportion of college-bound students who demonstrate college-ready achievement

46

Job #1: Focus on Academic Preparation



- ▶ Policy considerations for improving academic preparation:
 - Educational expenditures: Are they adequate?
 - Pre-K, K-12, postsecondary systems
 - Adoption of 10 Pre-K quality standards
 - Adopt policies for PK-16 alignment, teacher effectiveness, teacher evaluation, etc.

47

Job #2: Improve Affordability



- ▶ Percentage of family income needed to pay for college: low/middle/high income families; 2-yr, 4-yr colleges
- ▶ Percentage of low-income, college-ready students who enroll in 2-yr and 4-yr colleges
- ▶ Proportion of students graduating (and prematurely departing) with “unmanageable” student loan debt
- ▶ Percentage of low-income, college-ready students who graduate

48

Job #2: Improve Affordability



- ▶ Policy considerations for improving affordability
 - Make students pay monthly rather than up front
 - Distribute aid monthly
 - Maximize effect of aid by providing grants to students with greatest financial need
 - Create a two-tier system of need-based grant aid that incentivizes high level of academic preparation
 - Link need-based grant aid directly or indirectly with degree progress (e.g., 30 credits)

49

Job #3: Improve Effectiveness & Efficiency in Degree Completion



- ▶ Educational attainment (e.g., adults 25+ with postsecondary degrees)
- ▶ Graduation rates by race/ethnicity
- ▶ Time to completion
- ▶ Successful completion of remedial coursework
- ▶ Number of degrees/certificates awarded by career cluster (especially STEM)
- ▶ Degrees per expenditure (need to examine comparable institutions)
- ▶ Employment rates of recent graduates (consider congruence with major)

50

Job #4: Postsecondary Learning

- ▶ Are students graduating with the knowledge and skills necessary for gainful employment and effective citizenship?

Remember: Many employers seek graduates with “communication skills, analytical reasoning, quantitative literacy, broad knowledge of science and society, field-specific knowledge and skills, intercultural skills, creativity, teamwork skills, ethical reasoning” etc. (Schneider, 2010)

51

Job #4: Postsecondary Learning

- ▶ Value-added measure for student learning
 - College achievement test scores (e.g., CLA)
- ▶ Value-added measure for degree completion
- ▶ Professional preparation
 - Praxis teacher pass rates
 - Nursing licensure pass rates
 - CPA pass rates
- ▶ Diffusion of best practices
 - National Survey of Student Engagement scores
 - Community College Survey of Student Engagement scores

52

An additional public agenda goal



- ▶ Increase public engagement of postsecondary institutions
 - Community Engagement Carnegie Classification: “collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.”
 - University of North Dakota: awarded Community Engagement Classification in 2010

(Carnegie Foundation, 2013) 53

Public engagement indicators



- Research and Development: Academic expenditures.
- What is the tangible result of research related to the economic and social condition of the state?
- Proportion of faculty involved in “engaged” scholarship that responds to community needs
- Employment after graduation

54



The Use of a Bonus in Performance Funding Models

55



Tenfold Path to Designing Performance Funding Models

1. Identify key stakeholders
2. Establish broad consensus on a public agenda
3. Assess viability of performance funding
4. Identify appropriate measures
5. Define adequate institutional progress
6. Allocate sufficient funds
7. Link with state appropriations
8. Foster favorable conditions for compliance
9. Prevent gaming the system
10. Evaluate and adjust

56

Cautionary note



- ▶ Determine whether your state's ultimate goals for postsecondary reform can be addressed through performance funding
- ▶ Ensure you are adopting performance funding because it will be effective, not because it will be easier than other reforms (e.g., improving pk-12 education, increasing college affordability, fostering high-quality postsecondary learning)
- ▶ Performance based funding has not yet been empirically validated as an effective means of improving student outcomes (Fryar, 2011; Sanford & Hunter, 2011; Shin, 2010; Shin & Milton, 2004; Volkwein & Tandberg, 2008)

57

What are the state's motivations for accountability measures and performance funding?



- ▶ Improve economy?
 - ▶ Have an educated citizenry?
 - ▶ Control "higher education"?
 - ▶ Manage institutions?
 - ▶ Reallocate funds among institutions?
 - ▶ Reduce funding for higher education?
 - ▶ Increase funding for higher education?
- *Better to agree to the answer to this question before you embark on performance funding and determining accountability measures.*

58

Measures for performance funding



- ▶ **Preserve differentiation of institutional missions**
 - Different measures for different types of institutions (Jones, 2012)
 - E.g., Community colleges: completion of 12/30 credits; completion of developmental education coursework; transfer-ready or work-ready status. (Ewell, 2011)
 - Use different resource pools for different types of institutions (Jones, 2012)
 - E.g., Ohio: main campuses, regional campuses, community colleges

59

Measures for performance funding



- ▶ **Maintain institutional focus on the success of underserved students**
 - Homogeneity of student outcome measures can inadvertently incentivize selective admissions policies
 - Ohio model: assigns greater weight to at-risk student completions
 - Tennessee model: 40 percent bonus for low-income student completions
- ▶ **Account for differences in student characteristics**
 - Graduation and retention: need to consider differences in student intent, transfer, and student background characteristics (e.g., academic preparedness, socioeconomic status, ethnicity)

60

Measures for performance funding



- ▶ Identify key priorities within performance indicator framework:
 - Job #1: Focus on Academic Preparation
 - Job #2: Improve Affordability
 - Job #3: Improve Effectiveness and Efficiency in Degree Completion
 - Job #4: Postsecondary learning

61

Common Outcome Indicators Used in Performance Funding



- ▶ Number of (or increase in number of) students who complete a degree (FL, IN, LA, OH, OK, PA, TN, WA, WV)
- ▶ Priority for underserved students, such as low-income and minority students (FL, IN, LA, OH)
- ▶ Priority for high-demand fields, such as STEM (OH);
- ▶ Degrees per 100 full-time enrolled students (TN);
- ▶ Number of (or increase in number of) students graduating on-time (IN);
- ▶ Transfer of students to four-year institutions (FL, IN, LA, OH);
- ▶ Graduation rates at 100 percent and 150 percent of time (FL, PA, OK, TN-four-year institutions only)
- ▶ Graduation rates for underserved students, such as low-income or minority (PA); and job placement (LA-technical colleges only, TN-community colleges only)

(Reproduced from HCM Strategists, 2011)

62

Allocate sufficient funds



- ▶ Pennsylvania universities: 2.4% of operating budget (\$36–38 million)
- ▶ Washington community colleges: \$1.15 million
- ▶ Massachusetts universities and community colleges: \$2.5 million

63

Final Suggestion



- ▶ The litmus test for every policy consideration, operational action or motivation should be how it will improve student access and success. If it doesn't result in improvement then ask the question "Is it worth it?"

64

Discussion



- ▶ Which state priorities will inform the development of accountability and performance measures?
- ▶ What are your top five accountability measures? What are your next five accountability measures?
- ▶ What do you consider outcomes for these measures?
- ▶ What do you consider success within these measures?
- ▶ How will you ensure utilization of the accountability system?
- ▶ Which top priorities will be linked with performance funding?

65

References



- ▶ Altstadt. (2012). Tying funding to community college outcomes: Models, tools, and recommendations for states. Retrieved from <http://knowledgecenter.completionbydesign.org/sites/default/files/367%20JFF%20Altstadt%202012.pdf>
- ▶ Burke, J. C. (2005). Reinventing accountability: From bureaucratic rules to performance results. *Achieving accountability in higher education*, 216–245.
- ▶ Carnegie Foundation for the Advancement of Teaching. (2013). Community engagement elective classification. Retrieved from http://classifications.carnegiefoundation.org/descriptions/community_engagement.php
- ▶ Carnevale, A. P., Smith, N., & Strohl, J. (2013). Job growth and education requirements through 2020. Retrieved from <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/Recovery2020.SR.Web.pdf>
- ▶ Cavanaugh, J. C., & Garland, P. (2012). Performance funding in Pennsylvania. Retrieved from <http://www.changemag.org/Archives/Back%20Issues/2012/May-June%202012/Funding-full.html>
- ▶ Dougherty, K., & Reddy, V. (2011). The Impacts of State Performance Funding Systems on Higher Education Institutions: Research Literature Review and Policy Recommendations (CCRC Working Paper No. 37). Retrieved from <http://ccrc.tc.columbia.edu/Publication.asp?uid=1004>

66

References



- ▶ Dougherty, K. J., Natow, R. S., & Vega, B. E. (2012). Popular but unstable: Explaining why state performance funding systems in the United States often do not persist. *Teachers College Record*, 114(3).
- ▶ Ewell, P. (2011). Accountability and institutional effectiveness in the community college. *New Directions for Community Colleges*, 153, 23-35.
- ▶ Fryar, A. H. (2011). The disparate impacts of accountability- Searching for causal mechanisms. Retrieved from http://www.maxwell.syr.edu/uploadedFiles/conferences/pmrc/Files/HicklinFryar_TheDisparateImpactsOfAccountabilitySearchingforCausalMechanisms.pdf
- ▶ HCM Strategists. (2011). Common performance measures used in higher education funding models. Retrieved from http://www.collegeproductivity.org/sites/default/files/common_measures_one-pager_-_final-1.pdf
- ▶ IBHE. (2013). How are we doing. Retrieved from <http://www.illinois.org/performanceMeasures/default.htm>
- ▶ Indiana Commission for Higher Education. (2012). Reaching higher, achieving more. Retrieved from http://www.in.gov/che/files/2012_RHAM_4_26_12.pdf

67

References



- ▶ Jones, D. (2012). Performance funding: From idea to action. CCA. Retrieved from <http://dl.dropbox.com/u/28697036/Performance%20Funding%20Think%20This.pdf>
- ▶ Kiley, K. (2011). A numbers game? *Inside Higher Ed*. Retrieved from http://www.insidehighered.com/news/2011/07/20/edison_state_college_awards_degrees_to_students_who_did_not_take_required_courses
- ▶ Minnesota Office of Higher Education. (2009). Minnesota measures. Retrieved from <http://www.ohe.state.mn.us/pdf/MinnesotaMeasures2009.pdf>
- ▶ NCHEMS. (2013). Student pipeline: 2008. Retrieved from <http://www.higheredinfo.org/dbrowser/index.php?measure=72>
- ▶ Ohio Board of Regents. (2010). Performance-based funding for higher education. Retrieved from http://www.collegeproductivity.org/sites/default/files/FundingFormula%20_092710.pdf
- ▶ Phillips, A. (2012). Illinois higher education performance funding model. Retrieved from <http://www.ibhe.org/PerformanceFunding/schedule.htm>

68



References

- ▶ Reindl, T., & Reyna, R. (2011). Complete to complete: From information to action: Revamping higher education accountability systems. National Governors Association. Retrieved from <http://www.nga.org/cms/home/nga-center-for-best-practices/center-publications/page-edu-publications/col2-content/main-content-list/from-information-to-action-revam.html>
- ▶ Sanford, T., & Hunter, J. M. (2011). Impact of performance funding on retention and graduation rates. *Educational Policy Analysis Archives*, 19(33).
- ▶ Schneider, C. (2010). The three-year degree is no silver bullet. AAC&U. Retrieved from <http://www.aacu.org/about/statements/2010/threeyears.cfm>
- ▶ Shin, J. C., & Milton, M. (2004). The effects of performance budgeting and funding programs on graduation rate in public four-year colleges and universities. *Educational Policy Analysis Archives*, 12(22), 1-26.
- ▶ Shin, J., C. (2010). Impacts of performance-based accountability on institutional performance in the U.S. *Higher Education*, 60(1), 47-68.

69



References

- ▶ Volkwein, J. F., & Tandberg, D. A. (2008). Measuring up: Examining the connections among state structural characteristics, regulatory practices, and performance. *Research in Higher Education*, 49(2), 180-197.
- ▶ Voluntary System of Accountability. (2012). *Preliminary outline for expansion of student learning outcomes reporting*. Retrieved from http://www.voluntarysystem.org/docs/reports/VSABoardDecisions_060712_final.pdf
- ▶ Wright, D. L., Dallet, P. H., & Copa, J. C. (2002). Ready, fire, aim: Performance funding polices for public postsecondary education in Florida. In J.C. Burke (Ed.), *Funding public colleges and universities for performance: Popularity, problems, and prospects* (pp. 137-168). Albany, NY: Rockefeller Institute Press.

70