

Perceptions of Institutional Leaders on State Legislated Outcomes-Based Funding Policy  
at a Wisconsin Technical College

By

Gary W. Kilgas

A dissertation submitted in partial fulfillment of  
the requirements for the degree of

Doctor of Philosophy

(Educational Leadership and Policy Analysis)

At the

UNIVERSITY OF WISCONSIN-MADISON

2023

Date of final oral examination: 04/25/2023

The dissertation is approved by the following members of the Final Oral Committee:

Elton Crim, Chair, Clinical Professor, ELPA

Clifton Conrad, Professor, ELPA

Richard Halverson, Professor, ELPA

Xueli Wang, Professor, ELPA

Alex Stajkovic, Associate Professor, Wisconsin School of Business

## Acknowledgments

First, I would like to acknowledge and thank my spouse, Kathryn, for sacrificing significant personal time with me over multiple years so I could pursue this terminal degree. It has not been an easy road. I would also like to thank my late father for his insight on my early love for music and intellectual curiousness about the world. My dad was a finish carpenter. He, and my two older brothers, were all very mechanically inclined. I distinctly remember his words on the first day I entered high school. He said to me, "Whatever you aspire to do as a career, use your mind. You have two left thumbs!" Interpretation- you have zero mechanical aptitude. It was an indictment, but also a personal challenge to develop and capitalize on my talents and strengths.

I also acknowledge, with fond memories, several high school teachers, business leaders (especially author Steven Covey), and co-workers that inspired me to continue my personal growth, employ servant leadership skills, and help others around me succeed. It has caused me to be an insatiable learner and an enthusiastic, yet compassionate leader that values integrity.

Finally, I would like to acknowledge and thank the professors in the Educational Leadership and Policy Analysis Department and my fellow students at the University of Wisconsin-Madison for the personal and intellectual growth I achieved through coursework and relationships fostered in pursuit of this degree.

## Abstract

2013 marked the year Wisconsin was finally impacted by the decades-long national accountability movement for higher education. The legislature passed Act 20, a first of its kind policy that exclusively targeted the states' 16 two-year technical colleges to earn a portion of their funding based on a set of outcome measures. With intentions of upskilling individuals and incumbent workers along with enrolling and credentialing more students in high-demand fields (Kelchen, 2013), the higher education funding scheme in this state continues. Wisconsin is currently one of 41 states that have implemented or established performance-based funding policies (Ortagus, J. C., Kelchen, R., Rosinger, K., & Voorhees, N. (2020). The technical colleges have been impacted by this alternative funding phenomenon. Existing literature shows some of those effects, such as financial, mirror results observed in other states' implementations such as Tennessee or Washington (Dougherty and Reddy, 2011). Other impacts appear to be unique. Utilizing a qualitative methodology, single case study, and a phenomenological framework, this investigation used guided narrative interviews, with administrators from one Wisconsin technical college, to gain understanding about the impacts of outcomes-based funding (OBF) and what dynamics played into those outcomes. The college studied was part of a one hundred plus year-old system that enrolls 250,000 students annually (WTCS, 2020). The findings from this study revealed three main themes-- communication; the value of collaboration, data, and reporting; and consequences of decisions. Findings also surfaced seven areas of impact from operating under OBF for several years – strategic planning, physical and organizational structures, graduated funding increases, improved decision-making, intended/unintended consequences, surprises, and opportunities/adjustments.

## Table of Contents

Acknowledgments .....	i
Abstract .....	ii
Table of Contents .....	iii
Table of Tables .....	vi
Table of Figures .....	vii
Chapter 1: Introduction .....	1
Brief History .....	1
Major Construct of Interest .....	3
Purposes of the Study and Purpose Statement .....	5
Importance of the Study .....	5
Methodology .....	6
Rationale for a Qualitative Study .....	6
Sampling .....	6
Data Collection Procedures .....	7
Participant Characteristics .....	7
Interview Protocol .....	8
Data Analysis and Interpretation .....	8
Limitations of the Study .....	8
Organization of the Study .....	9
Key Terms and Definitions .....	10
Chapter 2: Literature Review .....	11
Introduction .....	11
PBF 1.0 .....	12
PBF 2.0 .....	14
Driving Performance Through Measurement Criteria and Data Collection .....	20
Phase-In of Measures .....	22
Performance Metrics .....	24
Performance Monitoring and the Emergence of Big Data .....	27
Improving Student Outcomes .....	30
Impacts of PBF 2.0 Policy .....	32

Unintended Consequences .....	35
Performance-Based Funding and Wisconsin Technical Colleges .....	40
Research Gaps .....	44
Conclusions .....	45
Chapter 3: Research Methodology .....	47
Purpose Statement .....	47
Rationale for a Qualitative Study .....	47
Conceptual Framework-Descriptive Phenomenology Methodology .....	49
Procedures .....	50
Institutional Characteristics .....	50
Sampling Methods in a Phenomenological Study.....	52
Participant Characteristics .....	53
Data Collection .....	54
Data Analysis and Interpretation .....	56
Interview Data Analysis Procedures.....	56
Coding .....	58
Memos .....	60
Trustworthiness .....	60
Ethical Considerations .....	61
Researcher Positionality .....	62
Limitations and Future Study Considerations .....	62
Chapter 4: Analysis and Findings .....	64
Introduction .....	64
Understanding Outcomes-Based Funding Works in Wisconsin .....	65
Overall Analysis .....	66
Analysis Underpinnings .....	66
Theme 1: The importance of communication and educating everyone .....	67
Theme 2: The benefits of collaboration, data, reporting, and strategic planning .....	69
Theme 3: Decisions, Intended and Unintended Consequences .....	72
COVID-19 and its Unintended Consequences .....	79
Summary .....	80

Conclusion .....	83
Chapter 5: Discussion Summary .....	84
Introduction .....	84
Principal Impacts and their Importance .....	84
Summary of Findings and Comparison to Empirical Research .....	90
The COVID-19 Factor .....	95
Findings Conclusions .....	95
Implications of the Study .....	96
For Researchers Studying Performance-Based Funding .....	96
For Educators .....	99
Recommendations for Future Research .....	100
Overall Summary .....	102
References .....	103
Appendices .....	119
Appendix A: Outcomes-Based Funding Allocation Formula .....	119
Appendix B: Literature Review-What We Know .....	120
Appendix C: Literature Review-Table Summarizing Authors Findings .....	123
Appendix D: Human Research Consent Form .....	133
Appendix E: Interview Questions .....	135
Appendix F: Six Stage Data Collection and Analysis Process .....	136
Appendix G: Example Distribution of Outcomes-Based Funding Dollars .....	137

**List of Tables**

Table 1: Higher Education State Adoption of PBF 1.0 .....	13
Table 2: Higher Education State Adoption of PBF 2.0 Current Status .....	20
Table 3: OBF Dollars Earned-Workforce Transition .....	74
Table 4: OBF Dollars Earned-ABE Success .....	75
Table 5: OBF Dollars Earned-Special Populations .....	76
Table 6: Theoretical Propositions versus Actual Outcomes .....	82

**List of Figures**

Figure 1: Higher Education’s Funding Shift from State Support to Federal Aid .....	15
Figure 2: Higher Education Funding Versus Spending .....	17
Figure 3: College Tuition Inflation Comparatives .....	18
Figure 5: Wisconsin Technical College Locations .....	51
Figure 6: Administrative Decisions Leading to Positive OBF Category Performance .....	76
Figure 7: Administrative Decisions Leading to Negative OBF Category Performance .....	76

## Chapter I: Introduction

In 2013, Wisconsin government legislated an Outcomes-Based Funding (OBF) experiment for Higher Education. It was Wisconsin's version "Performance-Based Funding" (PBF), a funding scheme occurring in other states. This change in state funding policy obligated the Wisconsin Technical College System Board to employ a new method for apportioning a graduated percentage of state funding to technical colleges based on pre-defined outcomes to "assure that state priorities were reflected in the work of the colleges" (WTCS, 2021). The amended plan was the first major budget format change in the two-year schools 100+ year history and suggested the state was seeking improved goal alignment. Seven years later, the pay-for-performance funding platform continues for the states 16 two-year schools.

### A Brief History of Performance Based Funding in Higher Education

Tennessee was the first state to adopt a performance-based allocation for higher education. Other states were slow to follow. Dougherty and Ready (2011) observed that over a decade passed before a substantial number of states designed and implemented a form of PBF for colleges and universities. A surging economy post the 2008 recession created a nationwide skilled job shortage while states continued to be challenged with budget allocations.

"This 'new accountability' movement took shape as incentive systems have been designed to link campus funding levels to desired institutional performance outcomes in such areas as student retention and graduation rates, undergraduate access, measures of institutional efficiency, student scores on licensure exams, job placement rates, faculty productivity, campus diversity, and, increasingly, student learning" (McClendon & Hearn, 2013).

Li (2017) noted that by 2016, about 30 states were either utilizing, executing, or creating PBF systems (Snyder and Fox, 2016). New influencers included philanthropic establishments and policy institutes to compliment the attractiveness with legislators (Li, 2017). Yet, some states did not adopt PBF when neighboring states implemented theirs. Described as *Policy Diffusion*, various empirical studies revealed virtually no impacts from previous implementations, or states were taking a "wait and see" philosophy

prior to moving forward<sup>1</sup> (McLendon & Hearn, 2013). Li and Zumeta's research suggested changes in economic conditions, state government political attributes, and educational entity tuition strategies additionally impacted the adoption of PBF (Li, 2014).

Since Tennessee's initial effort in 1979, PBF strategies have had a checkered and capricious existence. As implementations accumulated, some states cautiously watched for long-term results before developing their scheme or opting out, while others jumped in, some with hastily formatted designs. For example, South Carolina's first plan (1996) opted for 100% performance funding based on graduation rates (Dougherty, Natow, Hare & Vega, 2010); (McLendon & Hearn, 2013). This approach failed quickly, as the state applied it with the new budget and college administrators and faculty were ill prepared and felt threatened (McLendon & Hearn, 2013). As a result, "Many states have adopted, modified, shrank, defunded, supplanted, terminated, and readopted it at different times" (Burke & Associates, 2002). Nevertheless, higher education PBF policies have endured.

Hillman (2016) argued today's contemporary period of subsidizing public higher education involved two oscillations. The first, essentially 1990-2009, entailed colleges competing for a supplement beyond base financial support. A second surge (2010 to present) fixated on outcomes such as college completion (Hillman, 2016), and placing heightened emphasis on enabling persistence for low-income, first generation, and students of color, as a technology driven economy demanded additional knowledge and skill levels; attributes graduates provided and institutions could deliver on (Lane, 2012)<sup>2</sup>. Jones (2013) noted although performance funding tactics did not automatically equate to more college degrees, it was a methodology to persuade institutions to initiate modifications, so more students persevered and finished. Similarly, Miao (2012) remarked "Ongoing budget cuts, combined with

---

<sup>1</sup> **Policy diffusion** is a process where policy choices are interdependent. Utility of a policy depends on both its effectiveness and the payoffs it yields. Various diffusion mechanisms operate by altering these two parameters. (Source: Sage Journals. Braun, D. and Gilardi, F. See References).

<sup>2</sup> Low income, first generation, and students of color are often described as Traditionally Underserved Students.

stagnating graduation rates and a rising national demand for highly educated workers, make it increasingly important for states to invest in completion too.” Hillman (2016) summed up PBF’s multi-decade quandary, stating “The resurgence of this policy is remarkable considering the history of performance-based funding, in which two-thirds of all states that experimented with the policy discontinued it at some point”. Continued state budget challenges, ever-increasing college costs, and a robust economy are all reasons PBF has continued to influence the college funding landscape.

### **Major Construct of Interest**

This section describes Performance (or Outcomes)-Based Funding, the constructs surrounding theory development about impacts this funding phenomenon on one technical college in Wisconsin realized, and reasons for viability as a research topic.

Performance-based funding (PBF) allocates a portion of a state’s higher education budget according to specific performance measures such as course completion, credit attainment, and degree completion, instead of allocating funding based entirely on enrollment (Burke, 2002; Dougherty & Hong, 2006, Harnish, 2011). The pay-for-performance concept originated in government entities when they espoused the principle/agent theory. Lane (2005) hypothesizes “Principal–agent interaction arises in the public sector as one party, the principal, hires someone or a team of people, the agents, to get something done in exchange for remuneration.” Higher Education adaptations of the alternative funding phenomenon now encompass more than four decades<sup>3</sup>.

Early pay-for-performance allocations were over and above regular state funding for higher education (Dougherty & Reddy, 2011). Institutions continued to receive a base allocation from the state, but also received additional amounts. This “bonus” funding was an inducement to achieve metrics tied to outcomes.

---

<sup>3</sup> Principal/Agent Theory. Theory of interaction between an agent and the principal for whom they act, the point being to structure incentives so that the agent will act to benefit the principal. (Gauld 2016).

Starting in 2007, The Lumina Foundation funded quality improvement efforts in eleven states, each featuring substantial commitment to what was termed “Performance Funding 2.0,” a systematic effort to tie state funding explicitly and significantly to quality improvements on various dimensions of campus performance (Hearn & McLendon, 2013)<sup>4</sup>. Dougherty and Reddy (2011) argued that instead of providing a gratuity beyond the appropriation, this new format compelled institutions to earn a percentage of their base by achieving goals.

By early 2020, 38 states had some form of PBF (Rosinger et. al., 2020). This includes Wisconsin and their Technical Colleges, whose primary focus is ‘hands-on’ technical training that will lead to employment. This entity has not been the subject of Performance-based funding research until this investigation.

This study examines Outcomes-Based Funding at a Wisconsin Technical College, the leadership behaviors in response to it, and the impacts of decisions made along the way.

Higher education in Wisconsin did not experience the pay-for-performance phenomenon until 2013 when the Wisconsin legislature approved Act 20, aimed directly at the states technical college system. The partial funding formula began with 10% year one, graduated to 20% in year two, and rose to 30% year three. In 2017, Act 59 permanently capped the amount of outcomes-based state aid distributed to technical colleges at 30 percent (WTCS, 2021). 2021 marked a seven-year point individual colleges have experienced this phenomenon<sup>5</sup>.

Outcomes-based funding affected Wisconsin’s technical colleges. Since its onset, criteria selections have occurred, subsidy nuances have been crafted, annual results have ensued, and colleges have adapted, all in efforts to maximize revenues. The state and individual colleges thrived, treaded

---

<sup>4</sup> Performance Funding 2.0 is actually performance-based funding 2.0

<sup>5</sup> 2013 **Wisconsin Act 20**, the state's 2013-15 biennial budget, required the Wisconsin Technical College System Board to implement a new formula for allocating a portion of general state aid to technical colleges based on outcomes identified in state statute (WTCS, 2022)

water, or failed to some extent. Has it disappointed, met, or exceeded educational stakeholder's financial and organizational expectations and what have been the affects?

### **Purpose Statement and Purposes of the study**

*The purpose of this study was to explore and understand leaders' perceptions of what happened when implementing Outcomes-Based Funding and the factors that contributed to those outcomes.*

This study sought to understand the experiences of leaders at a Wisconsin Technical College as they navigated their organization through a multi-year period of state funding based partially on performance. I was interested in the impacts of OBF related decisions on planning, operations, faculty, administrative staff, students, and outside stakeholders along with intended and unintended consequences as strategic plans and potential organizational changes were implemented.

### **Importance of the Study**

My research was designed to fill a knowledge gap in performance-based funding schemes as applied to technical colleges and the consequences of a particular subsidy format.

Understanding individual colleges' leadership challenges and performance under Outcomes-Based Funding will serve as new research knowledge, as Wisconsin and other states continue attempts to increase higher education accountability in exchange for a portion of their subsidies.

This study informs other researchers, higher education leaders, government officials, and other interested stakeholders if (1) results met expectations at one educational institution; (2) internal change processes and policies, designed to meet criteria, were effective; (3) and how challenges were mitigated across one organization; (4) unintended consequences occurred; and (5) lessons were learned, and any new best practices emerged.

Higher education stakeholders and two-year community and technical college leaders should have an ardent interest in Wisconsin Technical Colleges outcomes-based funding policy successes,

failures, impacts, and challenges as this study may be used as evidence for future decisions on implementing or continuing performance funding schemes.

### **Methodology**

This study employed a qualitative, phenomenological methodology. The phenomenological methodology was selected as the researcher desired to answer “how” the Outcomes-Based Funding phenomenon affected an institution and “why” specific results happened. A singular technical college in the state of Wisconsin was selected to participate in data gathering and analysis.

### **Rationale for Qualitative Methodology**

Multiple sources on qualitative research were engaged including publications by Yin (2018), Hyde (2000), Peel (2020), Densin & Lincoln (2011), and Savenye (2005). Qualitative investigation has been described as “a process of naturalistic inquiry that seeks an in-depth understanding of social phenomena within their natural setting” (libguides.uta, 2022). It concentrates on the “why” of observations or shared direct experiences of human beings. This enquiry sought to understand outcomes-based funding impacts on an organization utilizing “descriptive phenomenology”. Descriptive phenomenology concentrates on unearthing patterns that replicate (Braun & Clarke, 2006). Sundler et al., (2019) recommend the investigative process, “from data gathering to data analysis and reporting the findings, be guided by the methodological principles of *emphasizing openness, questioning pre-understanding* and adopting a *reflective attitude*.”

### **Sampling**

This study required gathering data from people in higher level leadership positions. I employed purposeful sampling to identify a college where research could be undertaken. Purposeful sampling is a technique widely used in qualitative research for the identification and selection of information-rich cases for the most effective use of limited resources (Patton, 2002). Potential colleges were selected

utilizing two criteria: 1) experienced both positive and negative outcomes on reported criteria over the seven-year period and 2) ease of entry to the organization- where connections to colleagues existed from prior employment in the WTCS. Contacts were made until an organization was amenable to having this research performed at their college. Upon receiving approval from both the college and UW's IRB office to perform research, work began on selecting interviewees.

The chosen college's directory and college leadership websites were used to develop a list of people to interview. Ten people were identified as tier one candidates. Five additional people were identified as alternate (tier two) entrants. Only one of an original ten prospective contenders opted out of participation. My first choice of alternates then accepted the invitation to contribute to bring the total participants to ten (10). I provided introductory letters and consent forms to be signed and returned. When signed forms were received, interview dates and times were established.

### **Data Collection Procedures**

Interviews and collection of artifacts were the primary sources of data. One-hour time limitations were established for each interview. Conversations were digitally audio recorded for later transcription. In addition, the researcher scribed notes as dialog commenced and pertinent internal OBF documents were provided by some participants.

### **Participant Characteristics**

Interviewees included five female and five males in leadership roles at the college. The entire executive leadership team was interviewed, as were campus deans, deans, and directors. Leadership experience at the college ranged from less than one year to several decades. Several participants previously worked for other technical colleges or University of Wisconsin System Colleges. Everyone had a minimum of five-years of experience working in higher education.

### **Interview Protocol**

All interviews were one-to-one and, with two exceptions, held in either the interviewee's office or a conference room at the main campus administrative building. One interview was conducted remotely with the participant at home. For that dialog, I utilized the college's zoom capability to connect from a private and dedicated room of the same administrative building. The final interview took place in the campus dean's office at a satellite location.

### **Data Analysis and Interpretation**

The thematic analysis process served as a foundation for data analysis on this project. Thematic analysis involves chunking data into units for further interpretation (Duran, et. al. 2006). I employed both categorical aggregation and direct interpretation to assist with unit descriptors as initial evaluation of each recorded transcript proceeded. This initial coding, involving the transcripts and notes taken during interviews is a form of continual or iterative assessment (Maxwell, 2005). By using this process as interviews were completed, I continually compared responses.

Secondary analysis utilized inductive coding, memos, and focused coding. This process extracted themes from transcripts, researcher notes, and memos constructed between conversations, to answer the general question 'what is this about'? Once themes emerged, more focused or deductive/concept driven coding ensued.

### **Limitations of the Study**

Several limitations surfaced based on a singular phenomenological study approach and selection of a research source and subjects. Research completed was limited to 1) one of 16 technical colleges in Wisconsin; 2) interviews of people in administrative leadership positions; and 3) self-reported information, leading to potential data gaps and, therefore, prone to error.

## **Organization of the Study**

This study was designed to expand knowledge on public college adaptation to performance-based funding schemes. Specifically, this research focused on performance-funding impacts and factors driving those impacts, from a leadership perspective, over a seven-year period at one two-year technical college in Wisconsin.

The study process was designed to address my research question. Research conducted was qualitative and included college leader interviews. Therefore, permission to conduct human subject research was gained and a process established to identify and gain access to a college to perform the study. Interviews of ten people in leadership roles took place over a two-week span. Artifacts were also collected. Afterwards, data was analyzed utilizing Yin's methodology, and findings emerged. Those findings, their implications, and recommendations for future research are included in this document.

The following chapters are constructed to echo the study's organization. In chapter two, I provide readers ample background on Performance-Based Funding by reviewing eight literature strands, including initial applications of the phenomenon (1.0), and more recent version (2.0). This chapter closes with research gaps.

Chapter three covers the study's design and methods. A rationale for the research, conceptual framework, procedures, characteristics of the institution and interviewees, and data collection and analysis processes are presented. Rounding out this chapter are the researcher's positionality and limitations of the study.

Chapter four is comprised of analysis and findings of the study. Highlighting the findings are interview quotes, themes and trends.

Chapter five provides a discussion of the findings and factors impacting those findings. Then, the importance of my findings and a summary comparing findings to empirical research are discussed.

Finally, the dissertation closes with implications for future researchers and educators, recommendations for future research, and an overall summary.

### **Key Terms and definitions**

*Performance-Based Funding (PBF)*

*Principal/Agent Theory*

*Performance Indicators*

*PBF 1.0 and PBF 2.0*

*Phase-In of Measures* [Permitting colleges a transition time prior to full PBF implementation]

*Big Data* [Ability for colleges to generate robust electronic information]

*Policy Diffusion* [Adoption of PBF policy is interdependent on payoff and effectiveness]

*Policy Diffusion Theory* [Neighboring states policy adoption is influenced by surrounding states]

*Gaming the System* [Manipulating information (data) to achieve a desired outcome]

*Thematic Analysis* [A pattern of crucial information related to research questions]

*Inductive Coding* [Codes derived from data gathered]

*Deductive Coding* [Concept driven coding]

## Chapter II: Literature Review

### Introduction

Performance-Based Funding in the United States encompassed two distinct time periods. The first 25 plus years saw roughly 25% of states enact a pay-for-performance formula. Few plans survived during an era where incentives were minor and typically in bonus format. The more recent version, dubbed PBF 2.0, emerged around 2007 when tax revenues declined, and state agencies competed for available subsidies. State governments sought improved quality and accountability from higher education institutions by incentivizing part of their allocation. States utilizing performance funding schemes increased to roughly 60% and have focused primarily on four-year and some two-year community colleges.

This chapter explores the history of higher education funding and catalysts that led to numerous states abandoning or modifying longstanding enrollment-based support and moving to outcomes-based subsidy models.

Eight strands of literature on performance-based funding were synthesized. 1 (History) a brief examination of foundational elements, PBF 1.0, and more recent version 2.0 efforts. 2) Measurement and Data Collection; how stakeholders earn appropriations and systems to define, capture, filter and communicate related information. 3) System Phase-in Approaches; allocating time for institutions to understand new expectations and prepare to maximize investment before measurement timeframes commence. 4) Metrics; a quantifiable measure that is used to track and assess the status of a specific outcome. 5) Monitoring; a review of aggregated data, trend analysis, feedback systems, and evaluating/implementing potential adjustments. 6) Improving Student Outcomes; the desired results proponents of PBF pursue as related to student success and personal and economic ROI. 7) Impacts - results of selected performance funding initiatives. 8) Unintended consequences; unexpected temporary

or permanent changes that occur within systems or higher education institutions resulting from PBF implementation efforts.

### **Performance Funding 1.0**

As stated earlier, in 1979, Tennessee became the first state to adopt higher education funding based on performance. After observing Tennessee's experience for half a decade, legislators and higher education officials in several other states began to structure similar alternative funding schemes. McClendon and Hearn (2013) noted Connecticut implemented their performance funding program in 1985, followed by Missouri (1991), Kentucky (1992), Florida (1994), Ohio (1995), and Washington (1997). The policies, metrics, and performance-based formulas advanced by these early adapters became referred to as Performance Funding (PF) 1.0.

Performance funding 1.0 had the characteristics of a bonus. Allocations were over and above regular state funding for higher education (Dougherty & Reddy, 2011). The "bonus" funding was an inducement to achieve metrics tied to outcomes. Institutions continued to receive a base allocation from the state, but now also received an additional amount. Tennessee's first model allowed public institutions to earn an additional 2% of funding (Williams, 2014). By 2001, twenty-one additional states had adopted performance-funding systems (Hearn & McLendon, 2013). Interest in performance funding was increasing; however, strategy evaluation and impact measurement of most models were absent.

Various forms of PBF surfaced, waned, and re-emerged into the early 2000's. Kysie Miao, in her review of best PBF practices, *Performance-Based Funding of Higher Education: A Detailed Look at Best Practices in 6 States*, affirmed the BPF challenge:

Between 1979 and 2007, 26 states experimented with measures that attempted to incorporate institutional performance as a determinant of higher education funding. During this period, fourteen states that had enacted performance-based funding programs eventually discontinued them, although two of the discontinuing states re-established new programs. The states' dissatisfaction stemmed from the fact that these early funding models were plagued by a number of fatal design flaws. In particular, many programs were inflexible to institutional differences, resulting in rigid and

seemingly arbitrary requirements that focused too heavily on degree completion and failed to reward intermediate progress. Furthermore, many models failed to allocate enough funding to create genuine incentives for colleges to improve (Miao, 2012).

Hillman, Kelchen, & Goldrick-Rab, (2011) asserted that the unsettled, almost three-decade initial PBF period was wracked with modest input and inducements, a failure to purge self-interests, and little energy expended toward shared goals that would have improved probabilities for long-term success. Most of these efforts were abandoned or discarded, falling victim to poor design, hurried implementation, or budget cuts. Table 1 summarizes state PBF activity through 2011.

**Table 1.**  
*Higher Education State Adoption of PBF 1.0 (1990 to 2011)*

<b>Continuously Operating PF Policies as of 2011 (initial year)</b>	<b>PF Policies Initiated, Disbanded, Readopted at Later Date, and Operating as of 2011</b>	<b>PF Policies Initiated and Disbanded as of 2011 (# of operational years)</b>
Hawaii (2011)	Kansas	Arkansas (3)
Indiana (2007)	Ohio	Colorado (8)
Louisiana (2009)	Oklahoma	Florida (15)
Massachusetts (2011)	Oregon	Idaho (6)
New Mexico (2007)	South Dakota	Illinois (5)
North Carolina (2001)		Kentucky (3)
Pennsylvania (2000)		Minnesota (4)
Tennessee (2009)		Missouri (10)
Texas (2009)		New Jersey (4)
Virginia (2007)		New York (8)
Washington (2007)		South Carolina (9)

(Source: Hillman, Kelchen, Goldrick-Rab, 2011).

Despite systemic flaws, these early models established critical underpinnings for more recent policies and models that incorporated best practices and lessons learned (McKeown-Moak & Mullin, 2015). Those proved to be important tenets as new challenges awaited higher education.

## Performance Funding 2.0

This section examines the emergence of alternative forms of outcomes-based funding and the catalysts behind the next generation of proposed state subsidy options.

Coinciding with declining tax revenues and consequent state support for colleges and universities in the latter half of the first decade of the 21<sup>st</sup> century, the next generation of PBF surfaced (Kelderman, 2019). Starting in 2007, The Lumina Foundation funded quality improvement efforts in eleven states, each featuring substantial commitment to what was termed “Performance Funding 2.0,” a systematic effort to tie state funding explicitly and significantly to quality improvements on various dimensions of campus performance (Hearn & McLendon, 2013)<sup>6</sup>. Support for this initiative came from sources such as the Bill and Melinda Gates Foundation, National Governors Association, and Complete College America (Hillman, Tandberg & Fryar, 2015).

Dougherty and Reddy (2011) argued that instead of providing a gratuity beyond the appropriation, this new format compelled institutions to earn a percentage of their base by achieving goals. Incentivized outcomes included degrees conferred, students retained, and rates students transferred upward (McKeown-Moak, 2013).

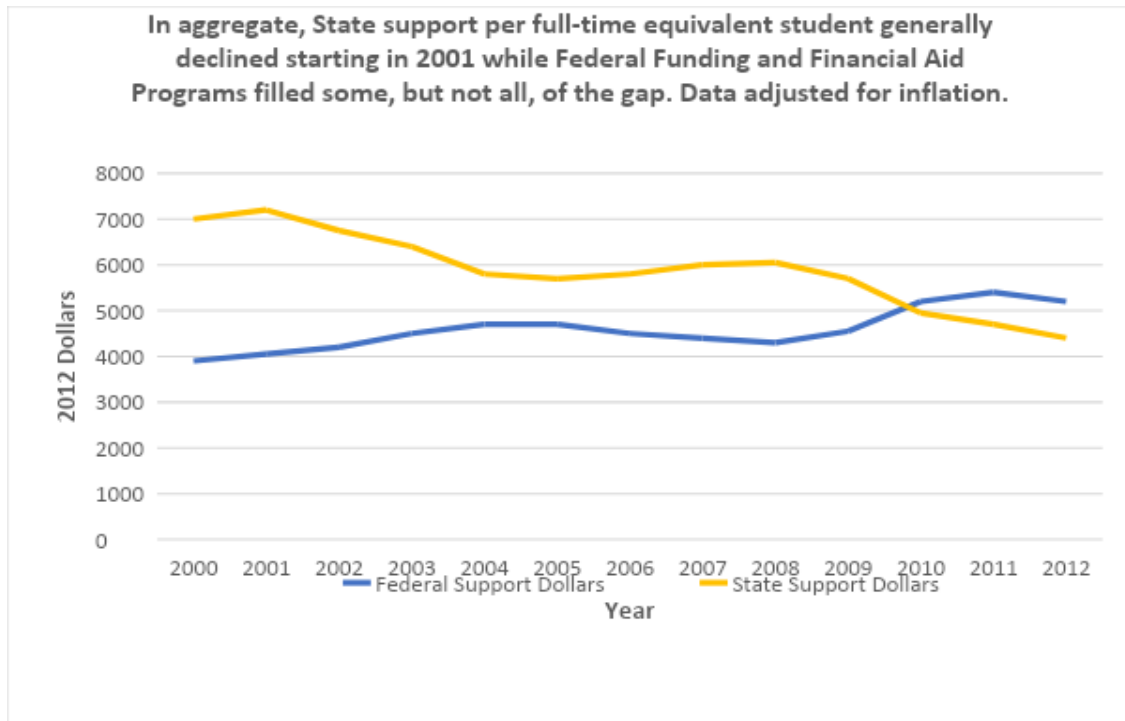
By 2012, the United States economy was slowly recovering from a deep recession that began in 2007. The economic downslide and growing unemployment rate [9.9% by 2009] (BLS, 2022), led to substantial increases in college enrollments (Kelderman, 2019). Concurrently, state revenues lagged as extensive unemployment continued through 2013 (BLS, 2022). Led by public welfare programs, agency competition for available allocations was strong and support for higher education continued to shrink (Urban Institute, 2015). Figure 1 below notes how competition for dollars caused a negative shift in state support and subsequent supplanted federal dollars, including substantially increased federal lending

---

<sup>6</sup> Performance Funding 2.0 is performance-based funding 2.0

programs to students and parents to pay for tuition and related expenses. Hillman, (2016) postulated, “As states divest, they’ve pushed costs to individual students and families in the form of higher tuition.”

**Figure 1.**  
*Higher Education’s Funding Shift from State Support to Federal Aid*



**Sources:** Pew’s analysis of data provided by the Delta Cost Project (May 2015) and based on original data provided by the U.S. Department of Education National Center for Educational Statistics Integrated Postsecondary Education Data System.

Five factors influenced the ascent of PBF-2.0: 1) subsidizing degree production for the evolving economy; 2) a desire to connect missions, actions, motivations, and efficiencies within higher education (Dougherty et al., 2014); 3) a perceived need to improve the accountability of colleges and universities for throughput in an era of amplified tuition and fee increases, coupled with government financial aid and student loan policies and continued poor persistence and graduation rates (Klein, 2015). For example, Louisiana’s GRAD Act (2010) set the following performance goals:

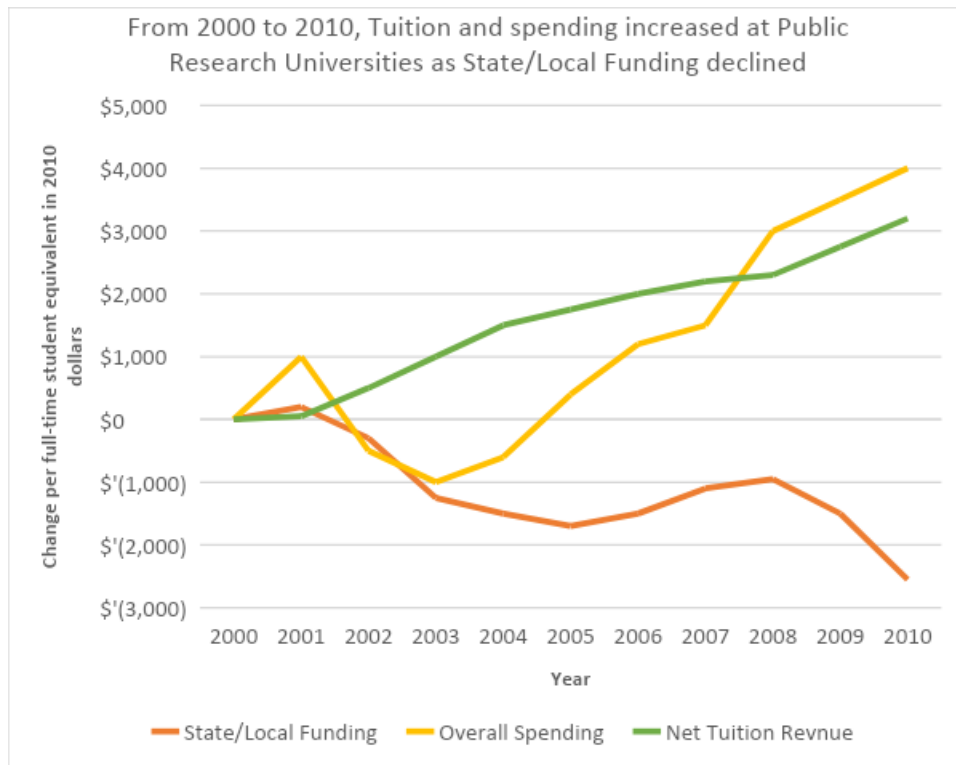
- Student Success
- Articulation and Transfer
- Workforce and Economic Development
- Institutional Efficiency and Accountability

Schools were required to have baseline, short and long-term measurements, benchmarks, 6-year targets and annual reporting (Harnisch, 2011); 4) the need to graduate more students to address a growing worker shortage in high-demand occupations [between 2014 and 2024, jobs requiring at least a postsecondary credential were projected to rise more rapidly than jobs requiring no college education (Li, 2018)]; and 5) competing demands by state agencies for limited state dollars in an apprehensive political environment (Hearn & McLendon, 2013).

Performance Funding 2.0 programs in Ohio, Tennessee, and Washington received endorsements from the U.S. Department of Education and the National Governors Association, providing further credibility for efforts to improve funding mechanisms and accountability (Albright, 2009; Harnisch, 2011; Lederman, 2008; Snyder, 2011; Sparks & Waits, 2011; U.S. Department of Education, 2011). Of note was Tennessee's revised program. 31 years after their initial effort, the new plan sought more graduates by allocating 68% of total state funding for 4-year schools and 49% for community colleges (Johnson & Yanagiura, 2016). The *Complete College Tennessee Act* created one system for community colleges, simplified transfers to universities, and increased dual-enrollment choices for high schoolers (Kelderman, 2019).

Escalating tuition at flagship universities caused both media and the general public to question whether costs finally outweighed the value of a college education (Schoen, 2015). Research by (Kelderman, 2019) also noted continued skepticism regarding increased college costs and degree value. However, expanding economic conditions and advocates, such as President Obama, and his goal of the U.S. leading the world in college graduates by 2020 (Kelderman, 2019), generated continued demand for post-secondary education. The ensuing financial burden on students and parents is depicted in Figure 2 as **Net Tuition Revenue**. It became the main source of generating funds to keep up with rising spending while state and local funding plummeted, starting in 2008.

**Figure 2.**  
*Higher Education Funding Versus Spending*

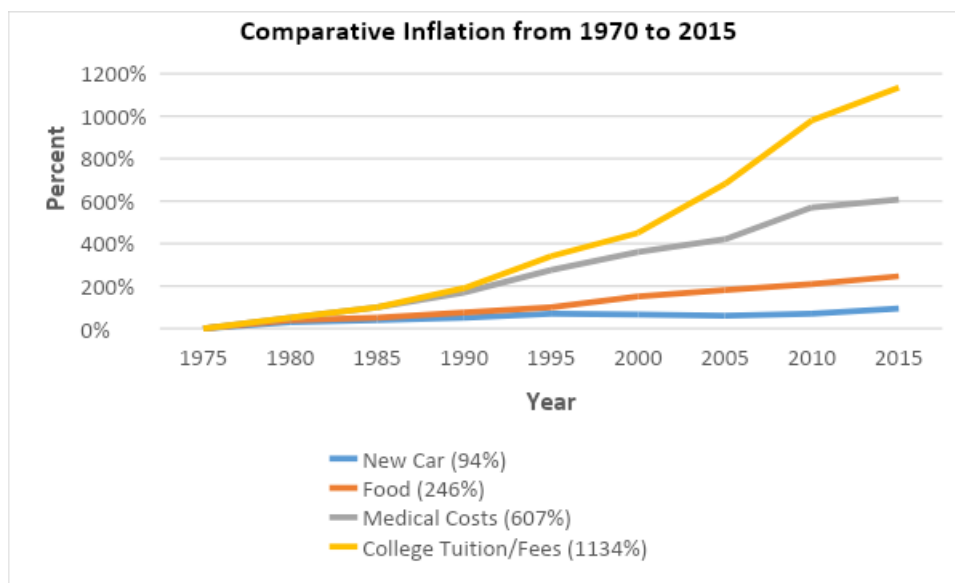


**Source:** Delta Cost Project

Scholars have identified a plausible catalyst for escalating prices. Archibald and Feldman (2008) argued dramatic tuition and spending increases in higher education (factors 2 and 3) were the result of “cost disease”, a theory first introduced by William Baumol. They postulated “technology progress that increases labor productivity (and thus reduces unit cost) is not randomly distributed across industries over time” (Archibald and Feldman, 2008). While technology driven manufacturing and process industries were able to lower unit costs since 1980 by utilizing robotics for example, service industries, including education, did not have that advantage. Why? Technology advances typically reduce labor costs and improves quality. In manufacturing, equipment, overhead and materials bear the largest portion of total costs, not the workforce, even though employees may get paid more for learning to operate under new expectations (Rhoades and Sporn, 2002). For example, Figure 3 below shows that

the cost of a new car has the lowest percentage cost increase from 1980 to 2015, mainly because auto manufacturers implemented technology (robotics) to reduce costs (RIA, 2017). Likewise, Higgins (2016) argues the food industry, (generally process driven) also drove down costs over time through automation such as Programmable Logic Controllers (PLC's). Price inflation, for durable goods and food, although apparent, lagged far behind medical and college tuition increases.

**Figure 3.**  
*College Tuition Inflation Comparatives*



**Source:** Bureau of Labor Statistics, Consumer Price Index. Note: January of 1978 is the earliest available data for College Tuition and Fees.

In education, advanced knowledge and skills of faculty, college leadership, and support personnel, such as counseling and financial aid, remained critical to student learning and that labor, plus associated benefits, constituted 70-80% of budgets (Archibald and Feldman, 2008). At the same time IT departments and software applications for classroom and administrative use in higher education institutions expanded. At the start of the 2000s, 'data-intensive research' and 'data scholarship' surfaced in natural sciences, social sciences and humanities, and business applications, necessitating colleges and universities to cultivate research capabilities and proficiency in assembling, crafting,

analyzing, understanding and utilizing multiple forms of digitized data (Borgman, 2015; Edwards et al., 2013). Investigators Guster and Brown (2012), declared “At institutional level, new forms of digital data enable administrators and managers to monitor organizational performance and improvement, as demonstrated by the rise of ‘organizational analytics’ and ‘business intelligence’ applications to support HE institutions.” Applying this concept to education, increasing class size, and reducing staff may lower costs, but at the expense of quality. To gain higher quality, component costs must increase, and thus, revenue generation as well (Archibald and Feldman, 2008). Hence the tuition and fee increases shown in Figure 3. Baumol’s contemporary, William Bowen, suggested that higher education entities try to maximize revenue sources, and “public restraint is a guarantor that keeps universities from wasteful overspending” (Archibald and Feldman, 2008).

Speculation exists that other catalysts of the accountability movement that was part of PBF 2.0 included partisan control of legislatures, gubernatorial strength, and election timing, among others. Hearn & McLendon (2013) asserted that Republican control had noteworthy impact on states espousing performance funding. Dougherty et al. (2011) replicated the suggestion that GOP majority caused heightened oversight, stating “A strong republican presence in state legislatures, the greater vulnerability of higher education to government cutbacks.”

Harnisch (2011) theorized that performance-based funding represented a shift in higher education finance from state inputs to campus outcomes, and from institutional needs to state priorities. For example, if a state desires more college graduates that are job ready in a given economic sector, they incentivize schools to move towards that goal.

In summary, Performance Funding Version 2.0 was differentiated by economic conditions, competition for limited state revenues, a stronger emphasis on ‘pay for performance,’ a focus on improving student success, and robust systems to track progress on goals. States with some model of

performance funding nearly doubled and notable emphasis placed on increasing two-year institution participation.

By late 2020, 41 states either had performance-based funding systems for public institutions in place, were developing policies, or had policies funded, but not implemented (Ortagus, Kelchen, Rosinger, & Voorhees (2020). Plans incorporated either two or four-year schools or, as shown below, often both. Other states never launched a program or started and later aborted the effort. Table 2 below shows specific information by state.

**Table 2.**

*Higher Education State Adoption of PBF 2.0 Current Status (Through 2020)*

Four-Year Schools	Two & Four-Year Schools	Two-Year Schools	In Development or in Place and Not Funded	No Current PF Policy
New Jersey	Arkansas	Alabama	Arizona	Alaska
Oregon	Colorado	Illinois	Idaho*	Delaware
	Florida	California	Maine	Georgia
	Hawaii	Connecticut	Massachusetts	Iowa
	Indiana	North Carolina	Minnesota	Maryland
	Kansas	South Carolina	Mississippi	Nebraska
	Kentucky	Texas	Missouri*	New Hampshire
	Louisiana	Virginia	New York	South Dakota
	Michigan	Washington	West Virginia	Vermont
	Montana	Wisconsin		
	Nevada	Wyoming		
	New Mexico			
	North Dakota			
	Ohio			
	Oklahoma			
	Pennsylvania			
	Rhode Island			
	Tennessee			
	Utah			
*PBF Funded, but not implemented				

Data Sources: Fain (2018); Hillman, Fryar, Crespín-Trujillo (2018); NCSL (2015); Saloman-Fernandez (2014); Marinova (2018); Ortagus, J. C., Kelchen, R., Rosinger, K., & Voorhees, N. (2020).

### Driving Performance through Measurement Criteria and Data Collection

Harnisch (2011) advocated for three main components to performance funding plans: goals, measurements, and incentives, with measurement the critical component to achieve equity among participating institutions. Unique foundational and operating circumstances of individual colleges and universities required recognition when creating measurement criteria. Consequently, effective system

dimensions included aligned and harmonized elements. Authors of *Taking the Next Step-The Promise of Intermediate Measures for Meeting Postsecondary Completion Goals* pointed to data collection as an essential strategy for meeting the measurement challenge (Offenstein & Shulock, 2010). Likewise, (Hillman, Tandberg & Fryar (2015) stated “Collecting and reporting performance data alone (regardless of the amount of money at stake) could impact institutional decision making and, ultimately, performance.”

Developing measurement processes were necessary for government leaders and other stakeholders to hold post-secondary institutions accountable for key metrics, such as student persistence and graduation or serving additional traditionally underrepresented populations. (Kelderman, 2019), specified “First is the need to collect good data, so college leaders can deeply understand their students.” Well-thought-through systems were critical to ensure focus on state goals, and data gathering/reporting occurred in a timely manner.

Multiple state plans identified persistence, milestone achievement and improved graduation rates as measures. Ohio, for example, funded fourteen universities in 2010-2011 based on the number of courses and degrees completed and weighted by program cost-effectiveness and at-risk student populations (Dougherty et al., 2014). Other states embraced graduating students in high demand occupations and STEM fields or educating students from underserved populations and non-traditional backgrounds as metrics (Rosinger et al., 2020).

Increased PBF immersion for community (and technical) colleges meant gathering meaningful data was an imperative. Compared to four-year institutions, they served students with higher risk factors for dropping out and with a more varied set of academic needs and goals (Offenstein & Shulock, 2010). This key audience was also best suited to fill critical career openings requiring some college education (Rainie & Anderson, 2017). Initially, these institutions were not adequately structured to

extract, manage, and convey required information. Primary emphasis often focused on student records, scheduling, and pedagogy.

Offenstein and Shulock, (2010) advocated for improving internal reporting structures in academics and student services and using information gleaned from the data to make recommendations and adjustments - measuring subjects such as student persistence and retention, among others.

Effective performance designs, and related monitoring and reporting systems were implemented and perfected over time as I.T. software was developed specifically for education markets. Altstadt, Fingerhut, & Kazis, (2012) called on government and education to work together to advance positive student outcomes through conscientious engagement, effective incentives, and progressive guidance, noting that enticements needed to be worth the considerable effort to gain internal stakeholder buy-in and establish infrastructure and support systems enhancements. As education researcher Kelderman explains, "A good institutional-research office will sit down with leaders to readjust priorities and look at evidence-based solutions" (Kelderman, 2019).

Establishing goals and measurement processes were refined and improved with greater focus on student persistence and success (Boggs, 2018). Additionally, Dougherty and Reddy (2011) and Gray, Harkreader & Wagar (2001, P. 36.) contended the emphasis on data collection processes escalated from adequate to critical with financial incentives at stake.

### **Phase-in of Measures**

To prepare institutions for funding changes, phase-in periods became standard practice for many PBF designs. Researchers (Harnisch, 2011; Miao, 2012) affirmed that exploiting year one to absorb and discover, colleges can look at their actual accomplishments against measurement goals and institute any corrective actions before funding actually starts. While many states allotted a one-year timeframe prior to initiating criteria and measurements, Hillman, Kelchen, and Goldrick-Rab, (2011) suggested

lawmakers understand that it takes time to set up impactful systems and lengthening the roll-out period over several years had merit. Snyder, (2015) agreed, indicating,

To prevent large, disruptive shifts in funding, the impact of new funding models should be calibrated to allow institutions time to adjust to new expectations. Paying close attention to the design principles noted above, which include multiyear averages to stabilize the data, is the first step toward ensuring a predictable model (Snyder, 2015).

Similarly, The National Conference of State Legislatures, in their July 31, 2015, report, *Performance Based Funding in Higher Education*, recommended phasing in the performance funding system to make the transition easier (NCSL, 2015). The narrative cited PBF implementation failures in states such as South Carolina, where a revised funding policy was solely based on graduation rates and initiated as part of a new state budget. The fast-track enactment met fierce resistance from overwhelmed faculty, as they struggled to understand the implications and attempted to institute changes quickly that would improve student degree attainment. Such evidence clamored for a more cautious approach and many subsequent systems included longer phase-in periods. Mauthe and Njuguna (2013) noted the significance of timing, stating:

Managing change encompasses understanding the drivers of the change and developing strategies to control both external and internal impacts on the organization while taking account of human factors; particularly attitudes and behaviors of people involved and organizational psychology.

An example of the “phase-in” methodology came from the State of Washington in 2013. Their initial PBF implementation began in 2006. The formula was viewed an exemplary model, tethering student retention, graduation, and core course (i.e., mathematics) completion at two-year colleges to state funding. Six years later disagreement surfaced if credential completion truly improved<sup>7</sup>. A state task force, responsible for developing an updated technical incentive-funding model, subsequently recommended a slow phase-in of new measures. Citing earlier PBF initiatives, the group felt the

---

<sup>7</sup> A research paper co-authored by Hillman, Tandberg, and Hicklin-Fryar using IPEDS data found only modest change in the number of Associate Degrees awarded from 2002-2012, while Washington State officials claimed a 29% increase between 2010 and 2014.

approach would ease financial uncertainty for colleges. Ohio incorporated this approach, collaborating with stakeholders within colleges to help them understand the impacts of new funding models (Washington Office of Fiscal Management Technical Incentive Funding Model Task Force, 2013). At the same time, attention should also be given to entities that are the most financially fragile by protecting them in the short-term from losing state appropriations (Kelderman, 2019).

In addition to considerate timing, carefully crafted messages were recognized as crucial during this phase-in period. Carter (2008) declared conversation and interaction, as meaningful mechanisms, can help reduce insecurities, lessen opposition, heighten dedication and investor involvement.

### **Performance Metrics**

A vital element of a performance-funding 2.0 system was developing metrics to gauge actual performance against established goals to ensure integrity and maximization of potential funding. Literature studied surfaced trends of tracking course completions, retention, and graduation rates, especially for minority and at-risk students.

States implementing PBF 2.0 worked in varying fashions to develop measurement tools. Most plans use degree completion as one essential metric (Rossinger et al., 2020). In 2010 Tennessee dropped its enrollment-based core funding approach in favor of an output-based (PBF 2.0) approach, thus providing incentives for campuses to build staffing and services for improving graduation rates, including fast-track majors, increased advising, expanded tutoring and remediation efforts, and expanded course offerings (Hearn & McClendon, 2013). Each area provided a measure applied to graduation levels.

Ohio allocated all funding based on quantifying courses and degrees completed by students rather than enrollment early in the semester (University System of Ohio Board of Regents, 2012).; Petrick, 2010). Later, Ohio tracked and provided additional funding for schools graduating Black, Indigenous People, and Hispanics (Rosinger et al., 2020).

Colorado's early metrics incorporated improvement on the Collegiate Learning Assessment and rewarding for first-to second-year retention, particularly for at-risk students (Lederman, 2008). For the 2019-20 academic year, Schrock (2019) noted Colorado revised their plan to focus on completion and transfer, especially for Pell Grant, STEM, and Health fields students; retention and progress; and institutional productivity (performance relative to size).

Jones (2017) argues states' outcomes-based funding metrics can create an equity issue. While funding objectives make sense, "when states reduce funding for institutions with lower outcomes, such as graduation rates, without taking student race/ethnicity or income into account, this often means they are defunding institutions with more low-income students and students of color, making matters worse." Recent research by HCM Strategists indicated most PBF plans include equity metrics to reinforce academic achievement by minorities, economically disadvantaged, returning adults, and veterans (Kelderman, 2019), (Rosinger, Ortagus, Kelchen, Cassell & Voorhees, 2020). Jones' observations buttressed the significance of collaboration between states and college systems in building metrics, timely and consistent review of outcomes achieved, and corrective actions taken to minimize impacts on critical student populations.

One illustration of creating a complimentary PBF approach was state government providing guidelines to educational entities and then affording them an opportunity to develop measurement targets, data collection processes, and reporting mechanisms. This practice was employed between Wisconsin and the state's Technical College System (WTCS) when outcomes-based funding was implemented in 2013 and has become quite common for new or revised performance-funding implementations nationwide. Kelderman (2019), noted the best operating plans are "not micromanaged from the legislative branch."

Wisconsin Technical College System (WTCS) leaders convened several meetings with state program directors and individual college presidents to jointly create specific outcomes, measurement

systems, and reporting processes. The collaborative proposal gained legislative approval and implementation for the 2014/15 academic year with full support of WTCS colleges (WTCSsystem, 2014 & WTCSsystem, 2015). This hybrid principal/agent theory use improved buy-in at individual colleges.

Despite new outcomes-focused metrics, developing equitable means for measuring success was tricky. After studying empirical evidence, Hillman, Kelchen, and Goldrick-Rab, (2011) articulated the difficulty of creating equitable measurement tools, claiming that “Accountability systems are inherently difficult to design and implement in higher education, and performance funding is no exception to this rule”. The State of New York’s metrics was a notable specimen. Figure 4 below shows success measures included areas potentially viewed positively or especially taxing due to data gathering challenges.

**Figure 4.**

*State of New York’s 2015 PBF Metrics*

# of students employed following degree or certificate completion and their wage gains	# of degree and certificate completions by 1) students considered academically at-risk due to factors such as economic disadvantage or other factor of under-representation within the field of study; 2) veterans; or 3) students with disabilities
# of degree or certificate completions and student transfers to other institutions	# of students who make adequate progress towards completion of a degree or certificate
# of degree completions in innovative programs designed to enable students to balance school, work, and other personal responsibilities	# of students engaged in career and employment opportunities including apprenticeships, cooperative education programs or other paid work experience that is an integral part of their academic program

(Source: National Conference of State Legislatures, 2015).

A 2016 Lumina Foundation study and subsequent issue paper had similar findings, asserting,

Despite the importance of student learning, developing a set of practical metrics that accurately and fairly measure student learning while also balancing the criteria for good College-quality metrics for outcomes-based funding is extremely challenging (Miller, 2016).

The research surfaced only Missouri's PBF metrics effectively embraced direct student learning, but suggested as states refined processes, the balance between improving student success while maintaining individual course integrity is plausible and sustainable.

Metric examples and researcher findings exemplify the criticalness of designing, communicating, and managing measurement systems under Performance-Funding 2.0 scenarios. Additionally, infrastructure investment in people and systems may be required to achieve targeted results (Klein, 2015).

### **Performance Monitoring and the Emergence of Big Data**

The process of monitoring performance outcomes for funding decisions under PBF versions 1.0 and 2.0 were different. During version 1.0, (1980 to the mid-1990's) collecting data was a tedious endeavor. Computer system use (as a business application) was still emerging, with no major "education specific" information technology provider at that time. Gathering evidence was a paper chase. Despite these trials, Wholey and Hatry (1992) suggested monitoring ample performance markers to address varied goals, outcomes, and quality measures of different stakeholders.

Monitoring processes under PBF 2.0 benefited from more widespread computer systems and rapidly increasing software sophistication in the late 1990's Ellucian (Banner®), Cognos® and PeopleSoft®. With emerging opportunities to mine data streams, monitoring across numerous performance criterion ensued. However, one specific challenge remained-the diversity of post-secondary educational systems. Williams (2014) summed up the enigma:

Part of the challenge is the structure of U.S. higher education itself. Two-year community colleges and technical colleges, four-year public and private colleges and universities, land grant institutions, and regional accreditation are all independent systems. The inherent difficulties involved in measuring such complex systems have led to the monitoring challenges most states encounter.

Dougherty and Reddy (2011) also note an inequity as to the various institutions ability to collect and analyze data and fund the process of aligning systems. Hillman (2016) also addresses the challenge, declaring:

those with the least resources may struggle to respond if they do not have the staffing, experience, or financial capability to adopt or implement new retention and completion initiatives. In order to give colleges an equal chance at competing for performance funds, it is necessary to ensure colleges are competing on equal footing where those with the fewest resources are fairly penalized for not having the capacity to respond.

In addition to the multiplicity obstruction, addressing the practical problems of translating defined goals into outcomes, weights to meaningful measures, and marking success, were challenges of PBF 2.0. Burke & Modarresi, (2000) observed, “It is this struggle in definition setting that has led to a lot of instability in some performance-based programs in higher education”. A metric and mechanism to monitor it was necessary. Monitoring often took the form of analysis of reported results and comparing against goals.

In defining a process to scrutinize how well organizations executed on goals, multiple researchers argued systems that examine performance commonly contrast accomplishments of different entities, compare current results with prior results, and actual scores to targeted levels (Millar *et al.*, 1981; Carter, 1983; Neves, Wolf, and Benton, 1986; Levitt and Joyce, 1987; U.S. Department of Labor, 1991). Observing the selected criteria provided evaluation signals. States used trends and paired them against current political and economic conditions to propose potential adjustments to goals or funding formulas.

Several examples illuminate how monitoring progressed over time. Tennessee added five additional performance indicators for the 1993 to 1997 period. This was the first time that outcomes took equal weight as inputs (enrollments), when the indicator “persistence to graduation” was implemented. By 2000, two of the four performance indicators were associated with outcomes: (1) student, alumni, and employer satisfaction surveys, and (2) Student Outcomes (attainment), with

categories of retention/persistence and job placement. Revisions to Tennessee's plan occurred again in 2015, adding measures for mission differentiation and additional rewards for "At Risk" student success (Forrest, 2021). Annual reporting provided data to monitor progress (THEC, 2015; Forrest, 2021).

Other states implemented outcome-based metrics with associated monitoring as new or revised PBF platforms were established. In 2001, Louisiana, for the first time, implemented a funding formula in part based on outcomes such as student success, articulation and transfer, efficiency, and accountability. The state's plan was revised in 2008 and based on metrics used in other southern states such as Tennessee, Kentucky, and South Carolina. High priority was given to holding institutions responsible for results. To ensure the accountability program stayed relevant, timelines for reviewing the program were established in the original plan (PAR, 2008).

Nevada's formula provided 96 percent of funding based on finishing classes and 4 percent based on student's success in advancement and degree achievement (Snyder, 2015). Monitoring progress occurred annually. Funding was governed by measuring goal achievement using published metrics (Nevada System of Higher Education, 2012).

Refinements to data collection and reporting systems provided opportunities to move away from annual review and monitoring and toward monthly, weekly, and eventually, daily. For example, around the same time as Outcomes-Based Funding began (2014-15), many Wisconsin technical colleges launched pages on their websites where colleagues viewed graphs and charts showing progress on strategic directions and goals. Large sets of data were processed by internal IT departments, analyzed by Institutional Advancement or Internal Review offices for patterns and trends, and available daily. These circadian synopses of activity came to be known as "Dashboards" and became highly visible through publication on an institution's main web page<sup>8</sup>, providing stakeholders updates and performance trends

---

<sup>8</sup> **Dashboards** often provide at-a-glance views of KPIs (key performance indicators) relevant to a particular objective or business process. The "dashboard" is often displayed on a web page which is linked to a database that allows the report to be constantly updated. (Source-Wikipedia, 2018).

quickly. Big data has been the major factor in performance monitoring improvement and individual institution success in setting and achieving goals. This fact is illustrated by the Wisconsin Technical College System and required reporting to the state on Outcomes-Based Funding. Data received annually from each respective college on OBF metrics is aggregated and comparative reports generated showing results and funding earned. Additionally, the state provides earnings projections for each criterion for the upcoming year (WTCS, 2021). Information is disseminated via a yearly publication.

### **Improving Student Outcomes**

In this section, I will describe how states utilized performance funding goals and metrics to improve student persistence and degree attainment. Then, I provide examples to illustrate how states designed goals to leverage improvement.

Under Performance Funding 2.0, multiple states implemented performance-funding approaches structured to address improving student success chances. Researchers Offenstein & Shulock (2010); Fingerhut & Kaziz (2012); Dougherty & Reddy (2011); Kelderman (2019); and the Ohio Higher Education Finance Committee (2012); declared student progress a popular plan component. For example, Offenstein and Shulock (2010) identified two critical success metrics for non-traditional students. First was a set of intermediate points that students must reach if they were going to complete a program or degree, like credits that would equal a full semester of work, and opportunities for students to complete their initial college-level mathematics course. The second progress measure surrounded behavior, specifically focusing on those actions that signified an increased chance of completion, such as enrolling in a non-traditional session (summer or winter break times); registering on-time for a semester, and few or no class withdrawals.

Researchers Rutherford & Rabovsky (2014); Kelderman (2019); Hillman, Tandberg & Fryar (2015); Belfield (2012); Jenkins et al.'s (2012); and Maio (2012), found student performance improved and more short-term certificates were awarded under PBF 2.0, but no or only modest improvements to

graduation rates. For instance, Miao studied summaries of six state PBF plans (Indiana, Louisiana, Ohio, Pennsylvania, Tennessee, and Washington) and uncovered improvements to developmental coursework (College English, Math) and student transfers up, declaring, “The examples illustrate improved student outcomes that have moved beyond enrollment and graduation” (Miao, 2012). However, Belfield (2012) noted student progress remained stalled in the State of Washington despite new Student Achievement Initiative (SAI) approach in 2007, where technical and community colleges were rewarded with a small amount of new money when their students reached certain outcome thresholds, such as achievement of competency in basic skills; pass rates for postsecondary–level mathematics and developmental coursework; and the number of degrees, certificates, and college credits granted (Dougherty & Reddy, 2011). Graduation rates remained generally unchanged because more short-term certificates were granted at the same time (Hillman, Tandberg & Fryar (2015) and a perceived insignificant investment, Jenkins et al.’s (2012).

A focus on the most vulnerable students (minorities, underprivileged, and academically or financially underprepared) was another aspect of improved student outcomes. Fingerhut & Kaziz (2012); OHEFC (2012); and Kelderman (2019) found funding schemes rewarded access, persistence, and milestone achievement of these learners. Instances include Ohio colleges with high at-risk student populations were accorded additional latitude with completion rates without risking the loss of state dollars, acknowledging the criticality of access and persistence (Ohio Higher Education Funding Commission, 2012)<sup>9</sup>, while Louisiana and Oregon factored in performance of disadvantaged students for both 2 and 4-year institutions and Arkansas and Hawaii plans sought to assist adult, minority, and low-income students (Kelderman, 2019).

---

<sup>9</sup> An at-risk component speaks to issues of access for low income and minorities and endorses retention and persistence of this group.

Attempts to help at-risk students did not always work, as illustrated by Tennessee's revised 2.0 scheme. While more bachelor's degrees were conferred, increasing funding received by most of the state's public colleges by 25 percent, Tennessee State University saw their appropriation rise only 8 percent. Kelderman (2019) concluded factors leading to lower graduation rates encompassed an open enrollment platform and lower academic and financial readiness of students.

Finally, Dougherty & Reddy (2011); Wyatt & LaCost (2016); Fingerhut & Kaziz (2012); and Kelderman (2019) declared campus development strategies and policies helped improve overall success.

Wayt and LaCost (2016) applied Kezar's (2012, 2014) framework on organizational change to research student outcomes at five major universities and discovered (1) staff demonstrated increased awareness of the importance of gathering and analyzing data, especially identifying academic points where students tend to fail, and (2) Implementing PBF measures caused general recommitment by staff to student success.

Kelderman's (2019) study suggested starting counseling prior to students enrolling, improving advising, and providing career mentoring/job shadowing; and improved communication with faculty and staff about PBF formulas, criterion, and results are factors associated with healthier student outcomes.

The mixed results demonstrated by studies cited suggests significant challenges in selecting models when establishing metrics to analyze student outcomes across a diverse set of higher education institutions and student populations. As a critical accountability component anchored in most state performance funding implementations, metrics may take future study precedence because of its potential to influence results of student recruiting and selection, support, persistence, credential completion, and graduation rates.

### **Impacts of PBF 2.0 Policy**

The various approaches to changing post-secondary institutions' behaviors and gaining specific outcomes, for example, more students persisting and graduating, has had mixed results.

In general, research showed positive policy influences on educational operations (especially where plans were jointly developed with education leaders and phased in) and a steady increase in designs with incentives to assist at-risk learners. On the flip side, except for Tennessee and Ohio, more bachelor's degrees have not been awarded.

Dougherty and Reddy (2011) cited several positive impacts emerging from PBF implementations in Florida, Ohio, Tennessee, and Washington:

- Greater awareness of campus mission, goals, outcomes, and alignment with state expectations
- Clarity between state and institution priorities
- Additional transparency/accountability
- Improved institutional productivity and performance
- Increased college self-awareness of actual outcomes (both intermediate and ultimate)
- Increased healthy competition between colleges based on publications of outcome measures
- Increased use of data during institutional planning and decision making
- Course remediation success rates improved
- Improvement to registration processes, financial aid, first-year student retention, counseling/advising, and tutoring, graduation rates and graduate placements

States such as Tennessee and Ohio continued to forge ahead with an aggressive PBF approach.

Tennessee's degree and specific outcomes-related awards totaled 91% of higher education appropriations (Johnson & Yanagiura, 2016). Graduation rates for both Associate and Baccalaureate students rose noticeably, with university degrees rising 6.9%. Ohio's formula allotted 50% of overall funding based on graduation rates. This incentives strength shortened the time to graduation (NCLS, 2015).

A separate 2005 case study of three community colleges in Florida by D.A. Bell applied Pfeffer & Salancik's (1978 and 2003) Resource Dependency Theory to understand if mandated, yet underfunded, performance measures could yield desired outcomes. Among her findings, Bell noted that collaboration between instructors on retention efforts had significant applications across all institutions. For example, Indian River Community College began monitoring course withdrawal rates and encouraging faculty members with high course withdrawal rates to work with more successful faculty members to increase

retention (Bell, 2005, pp. 129, 132). This small, yet easily operable, practice was implemented without cost, established trust, and created a form of “internal best practice” that improved instruction and persistence in students.

Performance funding benefits may also surface from efforts to close the achievement gaps for at-risk student populations. A 2011 study of Indiana, Ohio, and Tennessee’s performance funding efforts recognized that improving persistence and completion for at-risk groups was critical to the realization of productivity goals and provided monetary incentives to schools that were attentive to students who faced circumstances or characteristics that could jeopardize their ability to achieve academic goals or complete school (Aaron, Crellin, Mabe, and Wilk, 2011).

Hillman (2016) found universities in Pennsylvania did not produce more degrees even after operating under performance-based funding for nearly a decade. Douglas-Gabriel (2016) noted Indiana schools also failed to measurably boost degree production while at the same time becoming more selective and less diverse.

In a recent study to determine how outcomes-based funding impacted underrepresented and at-risk students, Kelchen (2017) looked at data from ten states and prior work of other researchers. He found only two states (Tennessee and Indiana) had incentives for colleges and universities to assist the at-risk learners as of 2005. By 2011, more plans addressed those student groups, and by 2016, the number improved to 16. A noted inconsistency was the split between inducements to enroll versus graduate minority, low-income and adult students. Kelchen found modest improvements in the graduation rates of African American students, notably in historically white universities with a reward in place, and slightly improved results for first time Hispanic populations.

One potential reason educational colleges and universities did not fulfill expectations surrounds the structure of the performance funding process. Dougherty (et. al.) found that policy abandonment stemmed from a combination of fiscal, political, and implementation issues, principally whether

legislators and governors imposed such systems on higher education from “without” or worked with higher education leadership from “within,” thereby gaining long-term support of stakeholders (Hearn & McClendon, 2013). In the prior “without” condition, “reluctant compliance” might be an initial response from college faculty or leaders, leading to degradation of efforts over time<sup>10</sup>.

A second scenario, where performance-funding fails over time, occurs when institutions or systems are overwhelmed, leading to poor, inconsistent, or failed efforts to meet goals. South Carolina’s plan experienced collapse when higher education institutions were expected to embrace PBF metrics the first year of the new budget (Burke & Modaressi, 2001).

While certain new evidence is emerging (see Hillman, Fryar & Crespín-Trujillo, 2018) showing no positive impact of PBF on bachelor’s degree attainment in Tennessee and Ohio, and an increase in short-term certificates in Washington State (Hillman, Tandberg & Fryar, 2015), the impacts of Performance-Based Funding implementations require more investigation due to the number of launches, abandonments, re-starts, updates, economic conditions, adjustments made by states, and the varied application processes to four-year and two-year systems. In addition, given the length of time some PBF processes have been in place, a longitudinal study of impacts may be valuable.

### **Unintended Consequences**

Scholars discovered unintended consequences occurring with plan implementations commonly involved “gaming” the system, mission creep (to maximize funding), excessive costs of data gathering/reporting, deceptive compliance, racial and economic disparities, lack of awareness and/or involvement of faculty and staff, and a need to increase developmental coursework due to student deficiencies in math and English.

---

<sup>10</sup> Reluctant compliance is a phrase sometimes used to describe the actions of individuals or groups that do not agree with a decision or plan of action but must conform. Consequently, only minimal participation ensues in hopes of eventual failure. Merriam-Webster describes reluctant as feeling or showing aversion, hesitation, or unwillingness; **reluctant** to get involved.

Harnisch (2011) reported numerous negative effects from implementing performance-funding systems designed to drive behaviors of colleges and universities. Dougherty and Reddy (2011) refer to this phenomenon as unintended impacts<sup>11</sup>. Specifically, Harnisch's research found these potential issues:

- May be only a partial representation of institution performance when accountability is limited to a few outcomes
- Potential manipulation of metrics to achieve desired results (participants "game" the system<sup>12</sup>)
- Mission distortion can occur as administrators seek to maximize funding
- Potential to implement more challenging entrance requirements to increase graduation rates
- Possible compromise of quality for efficiency
- Autonomy and freedom loss led to dwindling support within the organization
- Volatility within institutions that need the most help, such as those serving underrepresented populations (instability leads to little or no progress, and even plan defiance)

Other shortfalls of PBF included a lack of [accomplishments] awareness by stakeholders within the organization because performance funding typically flows seamlessly into the general operating funds of institutions. Dougherty & Reddy (2011) commented on this singularity in their report on the impacts of performance funding and policy recommendations, citing diminished faculty voice in academic governance when information is not shared. If faculty members are unaware of the extent and content of performance funding results, they are less able to help shape a response. Such practice advised that building faculty trust and support through communicating results helped avoid erosion of PBF initiatives.

With each state setting their own performance outcomes, peril surfaces if only those seeking change set the measurement criteria. Clear and accurate performance benchmarks occur if all stakeholders, including college representatives, are included in establishing performance metrics and communication is timely, broad-based, and feedback-loops in place. Jones (2013) argues that all

---

<sup>11</sup> Unintended Impacts constitute outcomes that are not intended by the enacting body, but which arise as side effects of funding institutions based on their performance.

<sup>12</sup> Gaming is defined as defined as using the rules and procedures meant to protect a **system** in order, instead, to manipulate the **system** for a desired outcome.

institutions within a system be included in drafting plan components and mission differentiation be accounted for.

Alshehri (2016) cited several unplanned consequences including deceptive compliance as an obstacle hindering performance, as institutions might time their implementation and reporting, so results look the best. This suggested an especially effective tactic when competing with peer institutions for limited dollars, or when the PBF plan and goals are open to broad interpretation. While this tactic may generate additional revenue, the internal message is that gaming the system is promoted.

Alshehri (2016) also cited multiple studies by Dougherty, Natow, and Reddy between 2013 and 2015 that surfaced excessive costs in data capture and report creation, lowering educational requirements to make results look better, and devising ways to limit student entry that would improve success in meeting performance criteria. For many institutions, hiring staff to gather and analyze data forces tough decisions to increase costs or eliminate other positions. More concerning is expecting faculty to ease student requirements or grading to move more students along to meet performance metrics, potentially resulting in graduates being under-prepared for postgraduation success.

Bethke (2015) reported an unanticipated consequence of disadvantaged students, (i.e., GED earners, African Americans, older students, part-time students, and those assigned to the lowest level of developmental courses). This group accumulated a significantly lower amount of PBF for their college than their peers. Ortagus, Kelchen & Rosinger (2020) determined entry to colleges and universities by historically under-represented learners can be constrained by policy adoption and institutions gaming the system, potentially expanding “racial and economic educational disparities.”

Impacts on performance funding from these findings are two-fold. On one hand, other institutions could use this research to design their systems to thwart entry of these groups, especially if PBF measures do not include at-risk and/or underrepresented learners. More appealing would be for plan designers and stakeholders to revise performance outcomes, incentivizing colleges, and universities

to enroll, support and graduate more individuals identified with those attributes. For example, Oregon's collaborative plan appreciated individual institutions' missions and placed responsibility on the state's Higher Education Coordinating Commission to shape plans accentuating disadvantaged students and improving in-demand, high-paying degree outcomes (Kelderman, 2019).

Wholey and Hatry's (1992) research questioned whether sufficiently valid and accurate indicators of program quality and program results pre-existed within institutions to avoid production of misleading performance results. This unexpected consequence concern stemmed from the considerable lapse of time before an organization fully understood the impacts of selected areas monitored and reported on.

An alternative unintended consequence (remedial education) impacted performance metrics.<sup>13</sup> Incoming community college student's significant deficits in both Math and English continued to hamper progress. "Both developmental education and gatekeeper courses in math and English indeed function as obstacles to completion for many students" (Zeidenberg, Jenkins, & Scott, 2012). These deficits existed largely because curriculum at the high school level "is out of alignment with what is needed to succeed in community college," (Paulson, 2013). These students required remediation to improve chances for success and persistence. State policymakers customarily place the burden on two-year colleges to perform remedial education tasks (Colby, 1987). Outcome-based funding heightened urgency by community and technical colleges to shore-up developmental coursework. Long (2015) offered two challenges that exist with remediation. One is the prohibitive cost to colleges required to perform, and the second a disparity in what constitutes a remedial course. The implications to outcomes-based funding lie in the metrics for receiving funding. Systems that do not include rewards for

---

<sup>13</sup> Remedial education (also known as developmental education) is the concept of reteaching and reinforcing previously taught basic skills to improve student outcomes in current or future coursework. Source: Study.com (2022).

admitting, supporting, and graduating at-risk students cause educational entities to devise systems (gaming) to avoid such students.

Hagedorn and McKinney (2015) cautioned about another gaming tactic: restricting access so persistence and completion results improve. Some colleges minimized recruitment efforts at high schools with larger numbers of disadvantaged students, as well as offer zero (or few) developmental or adult basic education courses, automatically improving student success metrics. Dougherty, Jones, Lahr, Natow, Pheatt and Reddy (2016) confirmed the phenomenon, declaring:

By reducing academic demands and restricting the enrollment of less-prepared students, broad-access colleges can retain and graduate more students, but only at the expense of an essential part of their social mission of helping disadvantaged students attain high-quality college degrees.

Fain (2014) reported that Indiana, Ohio, and Tennessee sought higher graduation rates and greater operating efficiencies with their redesigned plans. However, the goals came at a price. In addition to unintended consequences such as weakened academic standards and tightened admissions policies, costs of compliance, damage to cooperation between institutions, lower morale, a narrowing of the institutional mission, and threats to the faculty role in governance were all concerns.

Dougherty & Reddy (2013) argued another unplanned circumstance was many institutions lacking resources to accomplish data gathering and reporting, making compliance exhausting, demoralizing, and/or costs unaffordable.

Li (2018) cited “creaming” by both two and four-year institutions as a way to restrict student access. Two-year colleges can select students with proven readiness for college rigor, and four-year entities use GPA as a method to enroll the best and brightest.

Finally, one scenario that colleges and universities alike face periodically, notwithstanding performance funding, is shutting down programs on efficiency grounds. Sun-setting and eventually eliminating programs with low enrollments is a key tactic for higher education institutions to remain efficient and relevant. While cancelling a program could be viewed as an unintended consequence of a

decision to change funding criteria, these programs typically surface as a weakness during accreditation visits warranting action either way (Dougherty & Reddy, 2011). Most higher education institutions continually review programs for potential sun-setting just as they look to start programs in emerging or established new fields. Yet, faculty and support staff in areas affected may place blame on negotiated or mandated performance criteria for program closures<sup>14</sup>.

As specified, there are scores of unintended consequences arising from decades of performance funding implementations. Additional consequences will surface with deeper investigation of the results colleges and universities are experiencing under PBF policies. Understanding causes, communicating them to stakeholders, and applying practices to mitigate deficiencies quickly improve opportunities to create positive student and organization outcomes.

### **Performance-Based Funding and Wisconsin Technical Colleges**

The focal point of my research is to understand impacts of outcomes-based funding on Wisconsin Technical Colleges. In this section, I will describe the process that forged this new funding format in Wisconsin. I will discuss the footings for the initial proposal by Wisconsin's governor and the involvement of various stakeholders in developing the approved funding framework and percentages for the states' technical colleges. Finally, I will review the reporting process and changes to the initial PBF implementation.

In late 2012, Wisconsin's governor, Scott Walker, began to unfold a new policy initiative that recommended public higher education systems meet benchmarks to earn state funding. Walker proposed shifting a portion of general aid funding to outcomes-based funding for the state's two-year technical colleges in the 2013-15 state budget bill (WTCS-District Boards Association-April 2015). At that

---

<sup>14</sup> Sun-setting. Sunset" is another term for "discontinue" or "retire." When there are limited resources, and low attendance, retention, and poor evaluations, educational entities decide not to invest time and money into programs that no longer meet the needs of target audiences. Source: wbtssystem.com

time, the system office and 16 campuses were funded at \$516.5 million, or 44% of their overall support.

The balance came from tuition and local property taxes.

The proposal, known as Act 20, passed during the 2013 legislative session, required the Wisconsin Technical College System Board to implement a new funding formula for the colleges, partially based on outcomes that reflect state priorities (WTCS, 2021). The legislation included a graduated funding model. Initiated with the 2014-2015 academic year, 10% of state funding was based on meeting seven of nine possible criteria chosen by individual colleges. (See Appendix "A"). In 2015-2016 the allocation was 20% and in 2016-2017, 30%. The original legislation details included:

- A \$5.0 million annual increase in general state aid to technical colleges beginning in fiscal year 2014-15. The Act also required the Wisconsin Technical College System Board to:
  - Establish a new formula for allocating general state aid to technical colleges based on each college's performance relative to a particular set of criteria
  - Submit the formula for review by the Legislature's Joint Finance Committee by March 31, 2014
  - Apply the formula to 10% of general aid funding for the 2014-15 fiscal year, 20% in 2015-16, and 30% in 2016-17, and distribute the remainder of general aid based on the existing state aid formula
  - Use data for three fiscal years in the formula
  - Allow Colleges to identify 7 of the 9 criteria on which to be measured for the purposes of receiving performance funding
  - Submit a report to the Department of Administration, beginning with 2014-15 and annually thereafter, that details the total state general aid appropriation, the amount distributed to each college, the methodology for the distribution, and the colleges' performance in each area of measurement, also making the report available on the WTCS and college's websites; and
  - Include in its biennial budget request any legislative proposals that the Board recommends that relate to the criteria included in the formula. (Wisconsin Technical College System, 2016).

The sixteen individual colleges, dispersed proportionally and bounded by school district lines, have a long tradition of graduating students that fill critical manufacturing positions and responding quickly to train students in emerging or high demand occupations, a significant role in a state that ranks 2<sup>nd</sup> in percentage of workers employed in manufacturing in the United States (National Association of Manufacturers, 2014).

Analogous to other states, Wisconsin struggled to fill thousands of manufacturing job openings as the state recovered from the 2007-08 recession. Reporting on the proposal, Herzog and Schmid remarked, “Although job-seekers in the last century might have found factory work with minimal skills, modern manufacturers are so automated that a two-year technical degree has become a minimum requirement for many industries” (Herzog & Schmid, 2015).

Even with an abundant supply of potential workers, Wisconsin employers could not fill their openings because their skill needs exceeded the talent available. “For the last nine years the most difficult to fill jobs have remained the same: skilled trade workers, engineers and technicians”, said Chris Layden, managing director of Experis. “We don’t have enough people with associate degrees and that is proving itself out in the supply and demand balance,” Layden said. “We can’t just continue to say these jobs are in demand and have a limited supply” (Lockwood, 2014).

Collaborating with interested stakeholders, including the Joint Committee on Finance of the Wisconsin Legislature, the technical college system developed an outcome-based funding model for the 2014-2015 academic year with nine criteria. To partially offset some demographic variances of college districts (urban/suburban/rural), each college chose seven of the nine criteria to report on. The original criteria were:

- 1) Job placement rates
  - 2) Degrees and certificates awarded in high demand fields
  - 3) Programs or courses with industry-validated curriculum
  - 4) The transition of adult based education students to skills training
  - 5) The success rate of adults in basic education courses
  - 6) Participation in dual enrollment programs
  - 7) Workforce training provided to businesses and individuals
  - 8) Participation in collaboration or efficiency initiatives; and
  - 9) Training provided to special populations or demographic groups unique to the district
- (Source: WTCS Outcomes-Based Funding: June 2015)

The formula to populate criteria data fields utilized reporting from the previous three fiscal years. In 2015, the State of Wisconsin’s Joint Finance Committee adopted the Governor’s proposal to add a 10<sup>th</sup>

criterion to performance funding, based on the number of credits awarded for “prior learning”<sup>15</sup>. This addition allowed a district to select seven of ten, rather than seven of nine, performance criteria.

The Wisconsin Technical College System office submits a report to the Joint Committee on Finance annually that details the total general state aid appropriation, the amount distributed to each college, the methodology for the distribution, and the colleges’ performance in each area of measurement. The report must also be made available on the WTCS and colleges’ Web sites.

A challenge with Wisconsin’s performance funding criteria is the traditional independence each technical college enjoys. Each of the sixteen colleges are governed by a district board of directors. Board members, made up of private and public representatives. They, along with program advisory committees, keep a close watch on college programs, budgets, and capital expenditures.

In addressing the independent aspect of the colleges and the 30% maximum percent of state aid that was tied to performance funding, Paul Gabriel, Legal Counsel to the District Boards Association quipped in a quarterly report, “A 30% cap (with 70% of aid remaining under the traditional formula) incentivizes excellence without risking significant funding losers at the expense of winners” (WTCS-District Boards Association, 2015).

WTCS spokesperson, Conor Smyth, raised the prospect that high-performance schools also have an opportunity to warrant increased investment, observing that “the intent of this is to demonstrate system-wide outcomes in order to make a justification for additional investment,” Smith said. (Herzog & Schmid, 2015).

A review of annual state reporting on OBF from 2015 through 2021 surfaced data related to how each college performed; by criteria selected, funding earned, rank compared to peers, and total dollars

---

<sup>15</sup> A budget note describes prior learning as “relevant educational experience or training not obtained through an institution of higher education, including skills training received during military service.”

awarded. Analysis also surfaced where individual college criteria selection changes were initiated.

However, reasons for selection amendments require additional inquiry.

Performance metrics and subsequent annual outcome reporting fail to tell the entire story of impacts on individual technical colleges. True impacts are far-reaching, from hiring additional employees, to academic programming, to policies and infrastructure. Activities and their impacts are playing out over time. Patterns and trends have emerged, and organizational experiences have varied, based on criteria selection, leadership decisions, and outside influences.

Notably, recent challenges associated with the Covid-19 pandemic, such as student enrollments and attendance, program and course development and delivery, relationships with employers and high schools, and the subsequent ability for leaders to direct outcomes-based funding activities that impact results are factors in executing research and analyzing findings.

### **Research Gaps**

Questions remain after reviewing and synthesizing scholars' investigations of the PBF phenomenon. (See Appendix "B" to view "What we know" about PBF by literature strand, and Appendix "C" to view "A Summary of Authors' Findings" by literature strand.) This literature examination identified PBF's challenges, potential best practices as well as obstacles associated with progressing performance-funding models in general. However, there remains no specific narrative on two-year technical colleges. It also magnified the dearth of enquiry concerning both specific performance-based funding implementation impacts on colleges and universities, especially under PBF 2.0., an assessment of the return on investment (ROI) of performance funding applications, and challenges individual colleges or systems navigated.

Do the unique aspects of each state's government, economic realities, and educational systems make it difficult to generalize study impacts and consequences? How have declining enrollment trends affected planning, goals, measurement systems, and results? For example, should we expect a null

result of increased degrees conferred, or graduating more traditionally underrepresented and at-risk populations, when an expanding economy draws potential college students into the workforce – especially when the value of a post-secondary education is increasingly questioned?

What strategies are institutions implementing to enhance collaboration with stakeholders or initiate adjustments? Examples include policies and strategies, (1) for input on determining performance criteria, (2) to discuss implementation timing, (3) to help design of reporting systems, and (4) to improve PBF results. Previous studies indicated failing to disseminate results of PBF outcomes to institution stakeholders in a timely manner was detrimental to buy-in and engagement.

A final category where previous PBF inquiries failed to provide insight, and additional investigation could benefit overall PBF knowledge, is the development or expansion of Institutional Research (IR) areas of two-year colleges. This department traditionally has not existed within technical college campuses. However, IR departments also initiate data for review which can lead to action plans to address failing metrics.

## **Conclusions**

Literature on Performance-Based Funding now spans four decades. Initial efforts under PBF 1.0 to provide a bonus and the subsequent starts, stops, adoptions and abandonments provided the underpinnings for PBF 2.0 and the move to hold colleges and universities more accountable during a time of declining state financial support.

Plans have proved to be somewhat unique to states and their economic, social, and educational conditions. This fact is exemplified by a lack of policy diffusion. The emergence of computer systems, data collection, reporting, and performance monitoring have impacted results, analysis, and planning.

While strides have occurred in improving student persistence and helping economically and under-represented learners succeed, the number one goal of graduating more students has not improved. Challenges and consequences (both positive and negative) remain.

The knowledge gaps this study was designed to address included (1) how one two-year technical college implemented pay-for-performance and subsequent results; (2) impacts, consequences, and the return-on-investment (ROI) of a PBF 2.0 scheme; (3) how economic conditions influenced decisions and outcomes; (4) the emergence and value of Internal Research (IR) Department at a two-year institution; (5) communication strategies and effects; and (6) failing metrics parameters and tactics to address.

In the next chapter I will present the study's methodology, framework, and procedures for data collection and analysis.

### Chapter III: Research Methodology

In this section I provide context for how research was conducted. I begin with justification for a qualitative investigative approach and then transition to the study framework and procedures. Next, I provide specifics on data collection and analysis. The chapter concludes with a discussion on research trustworthiness, researcher positioning, and study limitations.

#### **Purpose Statement**

*The purpose of this study was to explore and understand leaders' perceptions of what happened when implementing Outcomes-Based Funding and the factors that contributed to those outcomes.*

This research purposely employed a phenomenological (or descriptive phenomenology) methodology at one technical college in Wisconsin to investigate positive and negative impacts of Outcomes-Based Funding on planning, policies, programs, and structures and, in turn, identified dynamics that contributed to those impacts.

#### **Rationale for a Qualitative Study**

Qualitative research is a process of naturalistic inquiry that seeks an in-depth understanding of social phenomena within their natural setting. It focuses on the "why" rather than the "what" of social phenomena and relies on the direct experiences of human beings as meaning-making agents in their everyday lives (UTA Libraries, 2022). Creswell (1994) defines qualitative research as "...an inquiry process of understanding a social or human problem based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting".

Qualitative methods are especially useful to address research focused on why people behave the way they do, examine topics that need to be explored, and present a detailed view or rich description of the phenomenon. This study sought to understand what the impacts of outcomes-based funding were and the factors that contributed to them. This study also strived to develop a grounded

theory that might be applied to understanding similar cases at other institutions. Therefore, a descriptive phenomenology design was proposed and implemented.

A strategy to interview several leaders in one organization is bolstered by several scholars. Creswell (2013) argued that qualitative, case focused, enquiries required proof from numerous sources to assure “a rich, in-depth discussion” and vigorous analysis to ensure integrity. Mills and Birks (2014) suggested qualitative studies tethered to a specific methodology and “finely textured and nuanced” generated much richer results.<sup>16</sup>

My study pursued responses by college leaders to performance funding mandates. In an article written to assist new researchers in selecting a sound methodology, Tie, Birks & Francis (2019) suggested “selecting an approach that aligns with the researcher’s philosophical position and purpose of the research study.” Since my inquiry sought to unearth planning, policies, programs, and structure decisions and effects of those decisions, the research process utilized a series of focused and strategically “open ended” questions proposed to organization leaders.

While considerable research and publications existed on state legislated performance (or outcomes)-based funding applications for public four-year colleges and universities, there was a scarcity of research on how two-year community and technical colleges have been impacted by this phenomenon. For example, Dougherty & Reddy (2011) reviewed several state plans targeting 4-year schools and noted funding amounts were relatively small, and many plan durations often-times short. Institutional effects of Performance (or Outcomes-Based) Funding on this sampling were mixed, with upticks in awareness of state priorities and college performance noted, and general improvements to student service functions. However, progress on retention, and graduation rates were insignificant and

---

<sup>16</sup> Thematic data analysis is “a widely used qualitative method where classification of data into unites of analysis is integral” (Duran et al., 2006); a flexible and useful research tool which can potentially provide a rich and detailed, yet complex account for data” (Braun and Clarke, 2006).

unintended obstacles for underserved students, such as restricting access through creaming or targeted recruiting and system gaming, surfaced in studies as well (Ortagus, J, Kelchen, R., & Rosinger, K. (2020).

By contrast, the limited research on two-year colleges surfaced a primary focus of student persistence and completion (Tandberg, et. al. (2014), Wood (2012), and Cofer & Somers (2001). Little evidence was available pertaining to specific organizational issues, practices, or impacts when implementing such alternative funding schemes.

### **Conceptual Framework-Descriptive Phenomenology Methodology**

Campbell (2015) asserted qualitative scholars are devoted to spending ample time in the research setting along with data coding and evaluation. Colaizzi's method of phenomenological data evaluation includes an approach to outline experiences of people interviewed or studied. It includes interpreting data, pinpointing noteworthy statements, and converting them into findings (Colaizzi, 1978).

Effective qualitative studies on PBF/OBF implementations conducted by Dougherty, Jones, Lahr, Pheatt, Natow, Reddy & Vikash (2014, 2015) and Crellin, Aaron, Mabe & Wilk (2011), where each compared PBF outcomes in three states; and Ness, Deupree & Gándara (2014), a PBF campus response study of both two-year community colleges and four-year universities within Tennessee, broadened my perspective on methodologies. Additionally, I espoused Merriam's (1998) philosophy on case study outcomes, which posits that "The researcher brings a construction of reality to the research situation, which interacts with other people's constructions or interpretations of the phenomenon being studied", providing still another explanation of other's ideas through my own filter.

Qualitative research is investigative. Phenomenology frameworks focus on choosing participants that have commonality such as a shared experience, but differing engagements and interpretations of that event or encounter. Therefore, the subject college selected needed to be representative of

technical colleges in Wisconsin, required robust participation and analysis, and the research process executed with credibility and trustworthiness.

For this research, a single organization within the Wisconsin Technical College System was studied. The goal was to create a hypothesis that could be applied more broadly to the other 15 WTCS entities, potentially the general two-year community college sector, and spur further inquiry.

I visited a college campus, interviewed leaders, and gathered evidence to develop an understanding of how the organization was impacted when responding to state-imposed outcomes-based funding challenges. The data gathering process involved multiple visits where I held discussions with organization leaders. Questions were formatted to gain insights on decisions and results, focusing on the criteria supporting impacts. By continual winnowing during, between, and after conversations, I developed an understanding of the impacts of Outcomes-Based Funding and the factors influencing those outcomes.

The process I designed and implemented surfaced data and concepts utilized in creation of theoretical underpinnings or a grounded theory. Charmaz (2014) suggests "Grounded theory refers to a set of systematic inductive methods for conducting qualitative research aimed toward theory development. These analyses provide focused, abstract, conceptual theories that explain the studied empirical phenomena."

Being mindful of the case study framework and research objectives, including validation of findings, helped drive data gathering and analysis.

## **Procedures**

### **Institutional Characteristics**

Prior to finding a particular college where interviews could take place, I reviewed the makeup of the Wisconsin Technical College System. The WTCS is comprised of a state office and individual colleges spread across the state. Each of these colleges provide short-term certificates, one-year technical

diplomas, two-year associate degrees and specialized training for businesses and industry. College districts are comprised of a multitude of high school districts that form geographic regions. Each district has a flagship location, typically in the largest community, and multiple campuses to ensure education accessibility for students.

For selection insights, I broke colleges into three location categories: relatively urban, suburban, and rural. I enlisted Pew Research Center's (May 2018) publication on social and demographic trends and student FTE's (WTCSysstem, 2020) as sources for roughly placing colleges. One reason for breaking down institution locations is they often serve unique populations based on specific attributes. This was a factor in achieving both positive and negative results under PBF criteria. Examples included a college district with multiple hospital systems and leadership strategically decides to expand infrastructure for an existing nursing program to address a high-demand occupation, while a rural district might have a large underserved, first-time student, significant incarcerated population, and/or low-income population demographic and thus place greater emphasis on counseling, Adult Basic Education (ABE), and financial aid access. I used Yin's case replication argument as motive for this decision: "A rationale for multiple case designs has its strength in replication logic. In the case of literal replication, cases are selected to predict similar results" (Yin 2014). In a comparable manner, and utilizing multiple interviews within the organization, differentiated college experiences with PBF, enlisting theoretical replication ideology (Yin, 2017).<sup>17</sup> Figure 5 below shows college categorization from which one organization was selected.

**Figure 5.**  
*Wisconsin Technical College Locations*

<b>Relatively Urban</b>	<b>Suburban</b>	<b>Rural</b>
Milwaukee Area	Waukesha County	Mid-State
Madison College	Western	Southwest

<sup>17</sup> Theoretical replication definition. Produces contrasting results but for predictable reasons (a theoretical replication) (Yin, 1994: 46).

Northeast Wisconsin	Blackhawk	Nicolet College
Fox Valley	Chippewa Valley	Lakeshore
Gateway	Northcentral	Northwood
	Moraine Park	

Placing Source: Pew Research Center Social & Demographic Trends. [Pewsocialtrends.org](http://Pewsocialtrends.org)

This study intended to gain insights on impacts of outcomes-based funding over an extended period of time and at one organization. I submitted research applications to two technical college IRB offices. One approved my request. I received confirmation in writing. However, the targeted college required approval of my study from UW-Madison's IRB office and signed consent forms from participants. I completed the necessary steps to secure UW-Madison research authorization and provided documentation to the technical college's IRB office. Approval to proceed was then granted and communicated electronically.

### **Sampling Methods in a Phenomenological Study**

I employed purposeful sampling to identify a college campus to interview participants and gather pertinent data. Purposeful sampling use is extensive in qualitative studies to identify and choose cases with abundant evidence related to the phenomenon being studied (Palinkas et. al., 2013). There are 16 technical colleges in the WTCS. I commenced narrowed the search by selecting a college and leaders that met two characteristics. First, an extensive review of annual OBF state reporting surfaced colleges that had both positive and negative outcomes on reported criteria over the five-year period. The second characteristic was ease of entry to the organization. Using connections to colleagues from prior employment in the WTCS, contacts were made until I found an organization amenable to having this research performed at their institution.

From a practical research perspective, enough data needed to be surfaced to respond to reliability expectations. A study by Guest, Bunce & Johnson (2006) found high-incidence codes in initial

samples, when evaluated, tended to keep their frequency over time. To extricate enough data, ten people in leadership roles were interviewed. This provided a robust and valid interpretation of the research data. However, for this research, study findings were not expedited by reaching a coding saturation point prior to performing all planned interviews. In one study, Guest, Bunce, & Johnson (2006) remarked, "Saturation is an important concept because it provides an indication of data validity and therefore is often included in criteria to assess the quality of qualitative research." Completing all interviews and questions were necessary to achieve saturation.

### **Participant Characteristics**

This case study required interviewing people in leadership roles. Identifying and verifying interviewees was accomplished through a review of the college's website. I examined the college's directory, noted those in executive leadership positions and second level administrators. An introductory letter was sent to potential participants. Information regarding a required interview was provided along with a process to complete and return a signed consent form if they chose to assist with the study. Once consent forms were received, interviews were scheduled. A copy of the required consent form is included. (See Appendix "D").

Interview participants included the President of The College, and the Vice-President of Academics. Other interviews were comprised of V.P.s in two other key positions; the CIO; Director of Institutional Effectiveness; Campus Deans; and other Deans/Directors.

I applied the semi-standardized interview process. Ryan, Coughlan, and Cronin (2009) describe this approach as having enough flexibility for the interviewer to sometimes vacate predetermined subject matter and investigate topics the interviewee may introduce. Conversations were one-to-one, allowing for capture of non-verbal signals, body language, and eye contact. This tactic aided in understanding a given communication. Another element of my interview plan was to utilize open-ended queries to prompt the interviewee to convey a more detailed storyline, rather than just respond to set

questions. For example, asking questions such as “What surprised you?,” provided an opportunity for leaders to reflect on how PBF has guided strategy formation, implementation, and impacts; elements essential to developing study findings. The attributes described here ensure my approach was consistent with the research question and objectives.

Researchers McGrath, Palmgren, and Liljedahl (2019) argued the relationship between the interviewer and interviewee is one of “co-creators of data, where the interviewer’s previous knowledge may play an important part in understanding of the context or the experiences of the interviewee”. My past roles as dean and director in the WTCS provided valuable aptitudes, familiarities, and skills that assisted in recognizing context the interviewees were describing, which assimilated to better coding.

### **Data Collection**

Four forms of data collection were planned to create a broad understanding of the PBF phenomenon. Interviews, Documentation, Archival Records (such as organizational records, maps, and service records), and Physical Artifacts were selected from Yin’s (2018) six common sources of evidence. Variation using these data compilation methods enhanced information depth and quality, leading to more robust analysis.

Interviewing was the critical method of gathering pertinent data for this study. Dates and times for each interview session were coordinated with the help of the Administrative Assistant to the V.P. of Academics. Prior to interviews, the researcher made sure to have a signed consent form in hand for every participant. All but one interviewee had pre-completed the consent authorization form. That one individual signed the form prior to my conducting the questions and answer session. Subjects were informed that conversations were being digitally audio recorded and that there was a sixty-minute time limit, as stated in the consent form. Each person was briefed about the confidential nature of the study and that anonymity would be maintained. Background of the research project, the purpose of the study, a typed set of interview questions, and a current copy of the approved ten OBF criteria were provided to

each examinee. Digital recording commenced prior to questions being introduced by the researcher and responses, clarification, and discussion followed. Interviews were completed after any interviewee questions or concerns on the project were addressed.

I conducted interviews using an interview guide with seven questions. (Interview questions can be found at Appendix "E"). Audio recordings of our conversations were created. Concurrently, I scribed notes and, at times, probed with follow-up questions if a response required clarification or expansion. On two occasions, I was offered artifacts tied directly to the study. Upon completion of each interview, I transcribed the audio files, created electronic text files from handwritten observations, and did initial coding, being open to what emerged from the data. This was a discovery, or inductive, phase.

Once all interviews were conducted, I utilized the constant comparative methodology to examine responses to each question. By reviewing the digital transcripts and separating responses for each of the seven questions posed, I established rough inductive-based themes and recorded those in the margin as Analytical Notes (AN).

I utilized a six-stage collection and analysis process created by multiple authors as my guide through the post-interview process. (See Appendix "F"). Supplementing the data collection process were archival records, comprised of both individual college and WTCS state office files and the physical artifacts collected from two individuals. Some files were accessed electronically. Archival files were inserted at appropriate points in the analysis and coding. Artifacts were reviewed and information created supplemental data for coding prior to secure storage.

Glaser and Strauss's (1967) "constant comparative" model in categorizing and evaluating data was embedded in my investigation. By a continual gathering and initial coding process, I developed categories for further analysis.

During the data gathering and coding processes, categories emerged. They appeared valid, but additional evaluation was necessary to reach a saturation point. By assigning categories and populating them with pertinent data, reviewing, and applying any adjustments, eventual saturation occurred.

Impacts to programming, infrastructure, outreach activities, and strategic staffing changes specifically related to addressing OBF funding criteria were among discussion topics translated into data, then analyzed and coded. Relevant artifacts such as strategic planning materials, reports, and documents were offered, accepted, and examined to supplement the formulation of individual storylines.<sup>18</sup> Personal observations provided gap information for concept creation and inductive coding.

To close the data collection loop, I extracted aggregate information via state published reports. Each technical college reports PBF criteria results data annually to the WTCS. The WTCS generates an annual collective summary report for state government and other stakeholders. That supplemental data was reviewed and analyzed for inclusion in this study.

## **Data Analysis and Interpretation**

### **Interview Data Analysis Procedures**

Merriam (1998) explains data analysis as “the process of making sense out of the data.” For this project, consolidation, reduction, and interpretation were essential. Moreover, analysis gained rigor as data collection and examination progressed.

Nowell, Norris, & White (2017) advocate for thoroughness in establishing the analysis phase, stating, “If readers are not clear about how researchers analyzed their data or what assumptions informed their analysis, evaluating the trustworthiness of the research process is difficult.” I reviewed transcripts a second time, looking for potential conceptual frameworks to describe theoretical themes emerging from the data.

---

<sup>18</sup> A **story** or narrative is a connected series of events told through words (written or spoken), imagery (still and moving), body language, performance, music, or any other form of communication. Reference: Literaryterms.net.

Gilgun (2008) noted “Conceptual frameworks are the sources of hypotheses and sensitizing concepts”, which postulate ideas that concentrate and focus enquiry. As I re-examined the information collected, I made Theoretical Notes (TN) in margins. I then paired the themes against my original research question, attempting to discover correlations.

I utilized thematic analysis as I scoured the data multiple times. Thematic analysis is “a method for identifying, analyzing, organizing, describing, and reporting themes found with a data set” (Braun & Clarke, 2006). Braun & Clarke (2006) embraced “thematic analysis as a useful and flexible method for qualitative research,” and that it has firm footings when compared to other qualitative analysis platforms seeking themes and patterns.

Meticulous thematic analysis generates reliable and perceptive outcomes (Braun & Clarke, 2006). Furthermore, Thorne (2000) considered data analysis as the utmost complicated stage of qualitative inquiry. Buttressing this concept, Nowell, et al. (2017) stated “If readers are not clear about how researchers analyzed their data or what assumptions informed their analysis, evaluation the trustworthiness of the research process is difficult.”

Yin (2002) advocated researchers acquire the necessary skills to evaluate both quantitative and qualitative evidence, as both will surface during enquiries. As a novice investigator, it was critical to subscribe to guidelines when analysis began. Stake (1995) suggested utilizing both Categorical Aggregation and Direct Interpretation as strategies. Finally, as data collection and scrutiny progressed, it was critical to be attentive to Nowell’s, et al. (2017) proclamation, “thematic analysis is actually an iterative and reflective process that develops over time and involves a constant moving back and forth between phases.” Although occurring naturally, I was conscious of this construct while proceeding.

To be thorough, I employed three additional **analysis techniques** to assist in making sense of interview data and reports. Pattern matching, explanation building, and logic models were each critical to developing themes. Pattern matching utilized the theoretical propositions paired against case

findings. Yin (2018) views this technique as advantageous for validity and can help explain the “how and why an organization operates the way it does” and attains certain results (explanation building). Finally, the logic model strategy fit perfectly in analyzing one distinct theme. Yin’s (2018) descriptor for this instance included “the events are staged in repeated cause-effect-cause-effect patterns, whereby and outcome (event) at an earlier stage can become the stimulus (causal event) for the next stage” (Peterson & Bickman, 1992), (Rog & Huebner, 1992).

### **Coding**

Data extraction was a key stage in the iterative coding process. During this time, important pieces of data emerged, potentially pertinent to the main research question (Braun & Clarke, 2006; Merriam, 2009). Codes arose from extracted transcribed data. As suggested by Braun & Clarke (2006), this inductive method of creating codes continually gets re-reviewed as new interviews are incorporated. As data was ‘chunked’ with other (similar) information, I paralleled the approach used by (Miles et al., 2014) who advocated for asking “What is this about”, to assign a first code and later develop detailed descriptions for each area. As interviews and data collection continued, and new codes emerged, I compared originals to them to confirm new codes were unique.

Qualitative coding must be iterative by design. Maxwell (2005) affirmed this priority, stating “You will need to continually assess how your design is actually working during the research and how it influences and is influenced by the context in which you are operating.”

I used a constant comparative model to analyze data generated from audio tapes, notes, and artifacts. Publications on qualitative case study research and methods by Yin (2014, 2016, 2017) were a primary source for inspiration for design guidance and, specifically, inductive approaches to performing, coding, and analyzing qualitative studies.

Creating code categories and then generating themes were the next stages in my analysis. Baxter and Jack (2008) referred to the merging of codes to groupings as “braiding various strands of data

together to promote a greater understanding of the case and strengthen findings.” Themes resulted from recognizing the prominent aspects and labeling them accordingly. Referred to as the “deductive” approach, patterns and features became clear and verification of what surfaced began.

Since the case study method was used in this research, Yin’s (1994) principle was applicable. He states, “Cases which confirm the propositions enhance confidence in the validity of the concepts and their relationships; cases which disconfirm the relationships can provide an opportunity to refine the theory.” I was mindful of this phenomenon, as the analysis stages progressed.

The initial ‘burning question,’ literature review, design of the investigative process, specific research questions, data accumulation, and analysis, aligned to create a theoretical story of technical college positive and negative impacts and the factors influencing them under the outcomes-based funding challenge. Inductive coding processes leveraged both theory-driven codebooks from interviews and data driven codebooks assembled from various artifacts collected.<sup>19</sup> A secondary process, deductive coding, developed a greater understanding of similarities and contrasts.<sup>20</sup> As stated by (Hyde, 2000), “What is required in any research program is not a qualitative stage followed by a quantitative stage, but an inductive stage followed by a deductive one.” Applying the stratification concept as constant comparative coding and analysis takes place, the intention was not to create a frequency of occurrence table, but to broaden and simplify emerging theories (Hyde, 2000). I narrowed down themes and categories identified in initial coding by reading the notes made while conducting that initial coding. Then, I identified themes or groupings that appeared related, eventually merging some. The deductive coding scheme surfaced from a supposition that equally defined entities, for example, campus deans, will respond to OBF challenges and experience outcomes in like manner, and these occurrences may be

---

<sup>19</sup> **Inductive coding.** Inductive analysis refers to approaches that primarily use detailed readings of raw data to derive concepts, themes, or a model through interpretations made from the raw data by an evaluator or researcher. Source: Thomas (2006).

<sup>20</sup> **Deductive coding.** Starting with a predefined set of codes, assign those codes to the new qualitative data. These codes might come from previous research, or you might already know what themes you are interested in analyzing. Deductive coding is also called concept-driven coding. Source: Thematic.com

in concert with, or contrast to, their (leadership) counterparts. Finally, I contextualized the data to represent the findings. This involved weaving data that were validated by interviews, documentation, and artifacts, together to apply the results.

### **Memos**

Memo writing was an essential part of the research process. Memo preparation occurred during or directly after data collection phases. It also occurred any time the researcher was compelled to make a note. Memos provided the researcher the opportunity to collect thoughts and document them in rough format at any point for possible later use. Reviewing notes periodically was helpful in maintaining a research direction or striking off to validate a new finding. They were always dated. Like lab notebooks, meeting notes, and journaling, memos are a critical parcel to the final product. Rogers (2018) in his analysis of Saldaña book, *Coding Manual for Qualitative Researchers*, noted Saldaña (2016) states that writing memos help researchers reflect and note “coding processes and code choices; how the process of inquiry is taking shape; and the emergent patterns, categories and subcategories, themes, and concepts in your data...possibly leading toward theory.” Charmaz (2014) specified researchers should just scribe their thoughts; and title and decide their value later. These notes were a form of data that was coded and categorized.

Memo writing provided me a chance to reflect and jot down thoughts, ideas, and questions that surfaced during the research process. I looked at memos as a form of glue that held ideas together or strengthened converging data. It also served as a guidepost at times, keeping me cognizant of my place in developing a theory or a course of action being pondered. It served as an appropriate spot for reflection.

### **Trustworthiness**

I employed (& Lincoln and Guba's, 1985) refined trustworthiness criteria (credibility, transferability, dependability, and confirmability) to assess the rigor of my research outcomes. Several

strategies were recommended to aid in the quest for trustworthiness. Among these approaches, I engaged member checking and personal characteristics suggested by (Guba & Lincoln, 1981), adaptability, sensitivity and clarification, and summarization skills.<sup>21</sup>

Triangulation of qualitative study methods to construct a thorough grasp of a phenomena is a practice authored by (Patton, 1999) to help confirmability. I used triangulation of data sources (interviews, artifacts, observations, and reports) to ensure quality analysis of findings. Guba (1981) argued “trustworthiness through triangulation enhances the credibility, dependability, and ‘confirmability’ in qualitative studies.”<sup>22</sup>

Transferability of findings is subject to comparative studies of two-year community colleges and may not be across all data sets. For example, researchers might find that student retention and/or completion issues surfaced in studies at both two-year community colleges and this study. However, based on how PBF was enacted in other states, there may, or may not be correlations related to retention or completion cause findings. It may be a matter of state funding, student demographics, or other factors.

### **Ethical Considerations**

There was the potential for ethical issues to surface a result of the process used to collect information. I mitigated these situations by maintaining the anonymity of participants and location. I replaced the actual college name with a pseudonym identity. The researcher documented the code for the location separate from other materials. The final research document does not contain any identifiers that would allow someone to associate a participant with a particular position or location.

---

<sup>21</sup> Member checking, also known as participant or respondent validation, is a technique for exploring the credibility of results. (Source: SAGE Journals: Qualitative Health Research.

<sup>22</sup> Triangulation is the application and combination of several [research methods](#) in the study of the same phenomenon. (Source: (Patton, 1999).

## **Researcher Positionality**

I have been keenly interested in this topic since the introduction of Outcomes-Based Funding in Wisconsin's proposed state budget in 2013-14. Coupled with a strong business background from my undergraduate degree and 22 years in leadership roles at a Fortune 500 firm, I approached this study from the lens of a former dean and director with more than 17 years of experience within the Wisconsin Technical College System.<sup>23</sup> I have a strong understanding of operations within the WTCS and intricate knowledge of individual college leadership, management, financial, and operational practices through my employment at two distinct colleges within the system.

I enjoyed multiple and long-standing interactions with college leadership teams and peers at specific colleges. In addition, I built relationships with colleagues, business leaders, and state government officials through my specific roles and responsibilities. For example, I performed an ancillary role as legislative liaison for several years, working on behalf of the college president to build relationships and gain support of legislators and other state officials for initiatives impacting the WTCS and college districts. I also functioned as Wisconsin Technical College System representative to the Wisconsin Economic Development Association for more than 10 years. These experiences, a Masters' Degree in Career and Technical Education, UW-Madison ELPA coursework, and years working with college faculty and staff provided the proper training, experiences, and education to execute qualitative research. My education, intricate knowledge of WTCS colleges, and strong relationship building skills also shaped how data was collected and analyzed.

## **Limitations and Future Study Recommendations**

This research was subject to several limitations. First, it was limited to one two-year college within the Wisconsin Technical College System. It did not include two-year colleges that are elements of

---

<sup>23</sup>*Fortune 500 definition: A list of 500 of the largest companies in the United States compiled by Fortune magazine every year.* Source: Investopedia.com

the University of Wisconsin System nor institutions in other states. Most prior studies were dedicated to four-year colleges and universities, or a combination of four-year universities and two-year community colleges. Second, this study did not address any consequences of a change in state government leadership, other than actual funding. Third, this study included only multiple hierarchical levels of executive and management level leadership interviews at one college. Fourth, there was limited data available at the selected institution, causing gaps in analysis. Fifth, information and data were “self-reported” and, therefore, subject to error.

Despite these limitations, this study provides insights on how Outcomes-Based Funding influences a myriad of organizational and operational characteristics such as communication, strategic planning, decision making, generation and use of internal and external data, complacency, competition, and collaboration. It also reveals consequences of this alternative funding structure. Together, the study findings may contribute to learning and comprehension at other two and four-year higher education institutions.

## Chapter Four: Analysis and Findings

### Introduction

This chapter presents my findings from a descriptive phenomenology study of one technical college in the state of Wisconsin. I was interested in understanding how leaders navigated their organization through a funding scheme change to an outcomes-based funding model. Data was collected using interviews of 10 administrative leaders conducted over a two-week period, artifacts provided by interviewees, and annual state reporting of Outcomes-Based Funding results from a seven-year period (2015-2021). Yin (2018) advocated for numerous informants to demonstrate analysis depth, writing that “Any study finding or conclusion is likely to be more convincing and accurate if it is based on several different sources of information” (Yin, 2018).

The purpose of this study was to explore and understand leaders’ perceptions of what happened when implementing Outcomes-Based Funding and the elements that contributed to those outcomes.

Utilizing descriptive phenomenology methodology and grounded theory, the goal was to create hypotheses that can be applied in greater context and encourage further inquiry.

In this section, I will explain how outcomes-based funding works for the technical colleges in Wisconsin, including how results are measured for the categories they chose to participate in and the process used by colleges to report those results to the state. Then, I will cover how the state analyzes results, ranks each college by category, and aggregates OBF funds back to the schools. Once I’ve outlined the context for OBF, I profile the themes discovered and the findings for each. Sources are triangulated wherever possible. Theoretical propositions are presented and revisited after findings are presented. Since this is a qualitative study, extensive use of interview quotes helps provide findings with clarity. A summary of discoveries, with analysis of proposition results and final conclusions, wrap up the chapter.

For anonymity purposes, the college where research commenced has been given the pseudonym name of **Popular College**. In addition, I have substituted pseudonyms for the actual interviewee names when quoted.

### **Understanding How Outcomes-Based Funding Works in Wisconsin**

In an effort to increase job placements, especially in high-demand fields, Republican Governor, Scott Walker proposed a partial funding change for the Wisconsin Technical College System in 2013 (Healy, 2013). The proposal would impact the colleges starting with the 2014-15 academic year and assure that state priorities would be reflected in WTCS goals. Walker's proposal was approved and included in the budget.

A Republican led state legislature made leaders of the WTCS accountable to create measurement criteria (outcomes) that would be tied to funding. Nine performance criteria were developed, with a tenth one added later. Colleges were required to pick seven of the criteria annually to receive financial rewards on. The formula was adopted and put in place, including a gradual increase in the reward amounts from 10% of total funding year one to 30% year three and beyond.

Each year, "25% of the total outcomes-based funding is divided equally among the ten statutorily-defined outcomes criteria as the base allocation for each criterion. The remaining 75% of outcomes-based funding is then distributed among all criteria proportionally, based on the number of colleges selecting each criterion" (WTCS. 2022). For example, if \$30 million was the total pot of dollars available for all criteria, \$7.5 Million is divided equally among the ten, or \$750K each. The remaining \$22.5 million is divided based on the number of colleges selecting each individual criterion. Colleges are paid based on the numbers they report, such as the number of students participating in dual-enrollment programs. Colleges are ranked based on the numbers they reported. The highest number gets the #1 ranking and the dollars are distributed based on the percent of the total their reported number represents. For example, if the total dual enrollments reported to the state were 5000 and "X" college

reported 500 of those (10%), and let's say \$2 million was allocated to that particular criterion, "X" college would receive \$200K in that measurement area. The same process is repeated for each of the ten criteria. See Appendix "G" for an example of an annual distribution of OBF dollars across all categories. NOTE: The example provided is from the year after my study was completed.

My goal was to find out how leaders responded to the OBF implementation, what reactions and adjustments transpired with annual OBF reporting and dollar distributions, and their insights on how Popular College fared in executing their OBF strategies internally and compared to other colleges.

### **Overall Analysis**

Overall, the college's attention to the Outcomes-Based Funding phenomenon increased over time, as results helped clarify future direction. Impacts of operating under a new subsidy formula were mixed due to a number of factors, including communication, the use of data and reporting, and choices made. It appeared queries about OBF related decisions and intended/unintended consequences caused the deepest reflection and preparation by respondents. Researcher notes recorded enhanced facial expressions and voice inflection when conversing with individuals regarding these topics.

Popular College learned from their experiences with OBF and its impacts, resulting in adjustments to improve performance. Ultimately, accounting for financial, operational, and organizational variations, overall effects rendered the policy change somewhat inconsequential.

### **Analysis Underpinnings**

I began my findings analysis process by assessing theoretical propositions utilized in constructing this study. Yin (2018) suggests theoretical schemes used in establishing the purpose of a study underpin analytic generalization(s). I was mindful that when utilizing a descriptive phenomenology study, the researcher must be cautious to not focus on any propositions during data gathering and just be open to the story that develops naturally (Braun & Clarke, 2006). In addition, during the analysis phase it was

critical to 1) set any researcher bias aside, and 2) remember it may be challenging to construct findings that can be generalized (Sundler et al., 2019).

My theoretical propositions related to Outcomes-Based Funding at Wisconsin Technical Colleges included:

1. Internal communications were not broad based
2. OBF was integrated into strategic planning processes
3. Infrastructures were developed to address selected reporting criteria
4. Funding percentage increases caused greater focus on results
5. Data collection and reporting took on greater importance
6. There were consequences to OBF related decisions

Three main themes arose from my effort to comprehend the value placed on the OBF phenomenon over a seven-year period.

1. The importance of communication and educating everyone early in the process
2. The benefits of collaboration, data, reporting, and strategic planning Integration
3. Decisions, intended and unintended consequences

### **Theme 1: The importance of communication and educating everyone early in the process**

Findings:

Data gathered suggests that Popular College's communication and prioritization regarding Outcomes-Based Funding remained at higher leadership levels over the first several years of implementation. As yearly funding results started to highlight areas of strength and weakness, OBF attentiveness grew.

**Helen:** "Initially, we treated it importantly, but not as importantly as we should have. So, last year's (2020) discussion really kind of hit me as wow, it's becoming more significant. We really need to pay more attention."

An embedded culture of 'doing things for the right reasons' assisted in the slow saturation of OBF information into the organization. Comments buttressed the college's history of making decisions in support of students and community and not tied to any state funding scheme. Numerous quotes appeared to resonate with the organization's philosophy.

**Brin:** “How we serve our district, really, that’s our driver. How we’re serving our businesses within our district, how we’re serving our community, how we’re serving our high schools, our students, our future students.”

**Quinn:** “Our Strategic Planning is the way I think it should be, you know, based on not so much the outcomes-based criteria, but our local needs and what we can improve upon.”

**Helen:** “Our Strategic Plan is around the things we need to continue to do, the right things for our businesses that we serve as well as the local community in general.”

Additional comments suggested early negativity toward OBF may have caused a reluctance to discuss it with employees. One observer noted,

**Holly:** “There was a lot of negativity. Maybe it was just the fear because it was something new. But also, they were afraid it would impact funding negatively for the colleges. They weren’t sure how this as all going to pan out. And, I think maybe colleges felt this was forced upon them.”

Multiple observations concerned strengthening OBF communications at all levels. Kosten (2016) argued that “for outcomes-based funding to achieve success, institutions need a robust blueprint and direction; efficient, reliable and amenable data structures; clear and open communication; and the involvement of campus executives and leaders (including faculty) through shared trust and accountability.” Popular College’s communication challenges, as well as gains, were substantiated through quotes participants offered pertaining to the organization.

**Brin:** “I believe all leaders should have a really good understanding of this. I don’t believe that we do. I don’t know if senior leaders do and they’re the ones that really need to understand it so when they’re making decisions, strategic decisions, they should be more at the forefront. I believe it needs to be much more at the table.”

**Helen:** “Last year was the first year I remember where (for example) a dean’s group, we sat around, we looked at the [OBF] chart. It [OBF chart] was in the college updates. The entire college knew exactly where we sat on each one of the metrics how much money we brought in. I don’t know that in the first five years that we ever even really talked about it [OBF]. So, you know, if we’re going to do things differently, I’d like to see us talk about them [OBF criteria] if we’re going to include them in the strategic plan, or at least make sure everyone’s aware.”

**Rod:** “I will tell you that, just because this is something that hadn’t happened [before], now [because of OBF] I actually meet with each one of the deans three times a year now and their teams. So, getting more involved in their strategy and day to day operations.”

A sub-theme of OBF information transfer was also evident. After seven years operating under the OBF funding scheme, my observations from this study and query responses revealed administrative interviewees at Popular College still seemed to wrestle with answering the question of “Why” it [OBF] was initially implemented. Thoughts expressed ranged from influencing behaviors to competition.

**Helen:** “They [OBF criteria] put in some accountability. But I don’t know that it’s driven the quality or the behaviors. I think, legislatively all of this was to answer some, to be frankly honest, to answer some legislative frustration.”

“I think it almost curtails colleges working together, so the collaboration-it’s almost like instead of working together, you’re trying to figure out how you can beat them. I think there should be more emphasis on how we can collaborate and specialize and not duplicate and compete.”

**Candy:** “You know, it’s interesting to me, like, I don’t think we talk about all of these things, necessarily in the big picture as [in] the way you’re pulling it all together and presenting it to us. It makes me wonder if there should be more dialogue around this so that people understand the ‘why.’ Public policy, the bigger picture-the way the state works, that was a personal learning opportunity for me to be like, yeah, you should care about this a little more.”

Aligning with what appeared to be an emerging internal trend to place additional emphasis on OBF in planning and communicating to faculty and staff, two respondents commented,

**Rod:** “It did surprise me that we’ve tried to, in many ways, shift gears, change things to improve.”

**Brin:** “I think we should all do a little better educating our staff on what this means, and why it’s important.”

Outcomes-Based Funding communication challenges and associated understanding and impacts of decisions encompassed multiple organization levels; an experience that only recently showed signs of improvement.

## **Theme 2: The benefits of collaboration, data, reporting, and strategic planning integration**

I wanted to learn about Outcomes-Based Funding impacts on college strategic planning and related data collection and reporting processes. To do so, I asked questions about the inclusion of OBF in strategic planning and the process to choose outcomes and make corrections.

Findings:

The first finding in theme two was that OBF appeared to slightly affect strategic planning and specifically 1) only in recent years, and 2) due to availability of data and increased funding at stake. In early implementation years (2015 to 2018), there was no notable inclusion of OBF in the strategic planning process. Respondents consistently indicated that OBF did not “drive” strategic planning. As one dean stated, “There has been very little discussion of it. We have not changed how we do business. We have not really garnered or moved our structure around trying to maximize Outcomes-Based Funding.” OBF impacts on strategic planning improved as data and reporting systems were scrutinized and exploited. State reporting and associated embedded trends created awareness, analysis, and culminated in strategy modifications. Several comments supported these findings.

**Anne:** “Throughout the last several years, we’ve been using the data more to help us with strategic planning to identify those areas of focus and continuing, you know, be intentional about where we focus our resources.”

**Hector:** “I would say we’ve become more strategic about it. We are looking at developing internal reports. After last year’s discussion, we are looking at some internal reports to measure actively how we’re doing relative to OBF.”

**Quinn:** “[OBF has been in strategic planning] very little up until this past year, honestly. This past year is the first time that we took a really deep dive into how we’ve performed comparatively. In the past, the state puts out projections and our college just picked the ones that were projected to do the best.”

Leaders failed to express whether OBF has created a slight financial gain, a fiscal boom, or monetary challenges. Despite implied neutrality from multiple years under the alternate funding structure, a second finding showed those interviewed did express some intrinsic benefits derived from experiencing Outcomes-Based Funding. This finding is supported by interview excerpts.

**Archie:** “The majority of those items (criteria) that were selected are really keys to the success of the technical college system and the economy.”

**Helen:** “I think it has been a surprise as it starts to highlight things, they (colleges) do well, where everybody’s focus is. I think that the good piece is it might have helped us as a state start to see where our Centers of Excellence were. So, who are the top three in each of these outcomes? Because those are people we should be talking to for modeling best practices across the state.”

**Holly:** “What I really like about outcomes-based funding, it’s a great opportunity for continuous improvement. You’re looking not only how are you doing as an institution from year to year, but then also benchmarking against other schools. Anytime you have access to data to compare yourself and identify opportunities for improvement, I see that as a really positive thing.”

Interviewees also suggested benefits of working within a funding system that includes an earned element included collaboration, focus, and visibility. Supporting comments showed administrators embraced current prospects and challenges.

**Anne:** “The collaboration is still quite strong. One of my initial concerns when hearing about this was there’d be increased competitiveness, and if that would impact our collaboration. But I know at least amongst my peers, we still are as collaborative as we were.”

**Helen:** “I think [OBF] has given us some of the visibility that we weren’t getting before. So that, internally and externally, that’s been good.”

**Quinn:** “I think there should be more emphasis on how we can collaborate and specialize and not duplicate and compete.”

Next, I sought to understand how the organization adjusted their selection of outcomes to be measured on, as percentages of funding increased from 10% to 30% and organizational leaders pursued strategies enabling maximum funding. Two additional findings emerged. First, the college utilized end-of-year state reporting on OBF early on, as a sole source to validate their subsequent criteria selection. Second, they were not prepared for other colleges taking action to improve their share of the OBF funding pie.

Over the first several years of funding, Popular College felt little need to adjust how criteria were selected. Why? At the end of each fiscal year, the state provided reports showing funding earned along with projections for the subsequent year. One administrator quipped, “At our college, they just looked at what were the top seven measures and that’s how they chose which ones will go into the formula next year.” An executive officer validated the argument for retaining this status quo early in the process:

“We didn’t do this [make adjustments to maximize OBF] because our numbers were relatively close to the new state aid in the outcomes-based formula change. So, it wasn’t

the situation where we lost hundreds of thousands of dollars with the change. In the first few years we actually came out ahead.”

After funding levels reached 30% (Fiscal 2016-17) the same year-end reports mentioned above indicated other colleges in the system may have throttled-up efforts to improve infrastructure directly related to certain OBF criteria, such as dual enrollment. Administrative team member, Gwen, verified what reports were suggesting, stating,

“In hindsight, we should have been more attentive to this. They [our sister colleges] took this [OBF reports] much more seriously. For example, dual enrollment, hardly anybody was in that space, or maybe just minimally. They [sister colleges] took a really hard, close, look at that. And so, where we were maybe nine-10% of our dual enrollment students would come directly to us after high school, “X” technical college was reporting 20-25%. And now they’re close to 30%. Because they rearranged their physical structure. They invested differently and they put a lot of resourcing into ‘what can we do to ensure dual enrollment students come to “name” technical college?’ We did not do that early on. Now, this year we’re trying to pay more attention to that.”

Providing further confirmation that a focus on OBF results has increased only in recent years, a Campus Dean remarked, “I would say that, at least over the past couple of years that I’ve been here, this has become a much more important discussion.”

The second finding relative to criteria selection adjustments surrounds the use of data and reporting. Four respondents cited improving data ‘reporting and use’ to assist in critical decision making. One Campus Dean commented, “This last couple of years, we’ve really been diving into more of that data to see how we compare to other colleges, and then trying to identify again, where are our strengths and our opportunities

Popular College found that integrating OBF into strategic planning became fundamental. This is not to say their focus changed from planning based on what makes sense for their district businesses, communities, and students. However, data and reporting provided an impetus for change.

### **Theme 3: Decisions, Intended and Unintended Consequences**

Prior theoretical research on Performance Funding advised that in existing state implementations, the strategy does not improve credential achievement and graduation percentages (Baskin, 2019). Those interviewed did not comment specifically on graduation or credentialing rates at Popular College. However, one comment emerged as evidence of potentially lower graduation rates. A dean declared, “We are just getting to the point now, with the third year of COVID-19 reduced enrollments, right, which were already declining beforehand.” What is not known is the reasons for lower enrollments. Beyond COVID-19 impacts, it is plausible that fewer students were in the secondary feeder system due to population trends; virtual education leading to reduced interest in post-secondary education; and/or a robust economy causing potential students to directly enter the job market.

#### Findings:

Whitford (2020) noted multiple performance-funding investigations over a 20- year timespan surfaced no effects on institutional outcomes. I found that Popular College administrators seemed in agreement that OBF has not enabled significant operational or financial impacts for their organization. Comments from interviewees supported this verdict.

**Quinn:** “People thought it was going to have a much more dramatic impact than what it did. I don’t think, personally, it’s had the effect that they wanted it to have.”

**Archie:** “It hasn’t had the wholesale change on how we do business.”

**Helen:** “The other big surprise is that this [technical college subsidies] really hasn’t changed. When you look the allocations across the system, this [OBF] did nothing to change who go what. I’ll bet you the money allocates in exactly the same way, just split out differently amongst [colleges].”

**Gwen:** “We didn’t do this [make adjustments as the percentages rose from 10 to 30%] early on because our numbers [state funding] were relatively close to the new state aid in the outcomes-based funding formula change. In the first few years, we actually came out ahead...we we’re getting more state aid allocation than some of our sister colleges.”

Unfortunately, there is no way to compare the potential trajectory of funding under the previous structure as opposed to total subsidies under a partial OBF formula. The state has shown to be dynamic

in biennial funding policy for the WTCS. For example, in 2019 the legislature approved an additional \$25.3 million for the system-an amount over and above OBF (Wisconsin Budget Project, 2019). Although deeper investigation is warranted, evidence seems to indicate neither graduation rates nor financial position have improved under Outcomes-Based Funding at Popular College.

Question four asked what OBF decisions led to favorable outcomes, and which led to negative results. My query was meant to surface decisions on criteria selection, adjustments made year-to-year to maximize funding, and what drove decisions. There was marked uniformity in findings, signifying strong agreement among leaders on the value these criteria provided to Popular College and agreement on after-effects.

Positive outcomes included revenue earned from robust Workforce Training and Adult Basic Education (ABE) results. An administrator quipped, “Adult Basic Education (ABE) success, for example, which is criteria #5, we do a remarkably good job in that space. And Workforce Training, (Name) and the team-phenomenal growth in that space.”

State data and college artifacts supported responses of participants, as the organization showed consistency, scoring high (top 20% of colleges) in dollars earned in Workforce Training and exhibiting marked improvement in the ABE Success category once OBF reached the 30 percent level (moved from top 40% to top 20% in OBF funding of all colleges selecting).

How to read the tables below:

**Year** = The Academic and Outcomes-Based Funding year completed

**Colleges Selecting** = There are 16 technical colleges. This number represents the number of colleges selecting that particular category to earn OBF subsidies

**Rank** = Where Popular College ranked in OBF earned for that category

**Table 3.**

*Outcomes-Based Funding - \$ Earned*

*Rank Among College’s selecting **Workforce Training***

Year	2015	2016	2017	2018	2019	2020	2021
Colleges Selecting Workforce Training Category	10	11	9	10	9	7	7
Popular College’s Rank	3	2	2	2	2	2	3

**Source: Wisconsin Technical College System-Annual State OBF Funding Report**

**Table 4.**

*Outcomes-Based Funding - \$ Earned*  
*Rank Among College's selecting **ABE Success***

Year	2015	2016	2017	2018	2019	2020	2021
Colleges Selecting ABE Success Category	13	13	14	14	9	14	14
Popular College's Rank	6	6	6	6	4	3	3

**Source: Wisconsin Technical College System-Annual State OBF Funding Report**

One undesirable outcome that stood out was the decision not to invest on a consistent basis in Dual Enrollment. The college was performing quite well compared to peers based on state reporting of OBF results through the first four years. However, when PBF funding was raised to 30% starting in 2017, interviewees noted other technical colleges placed emphasis on investing in Dual Enrollment and subsequently outperformed Popular College in OBF funds earned for 2018, 2019 and 2020. Depleting revenues caused the college to supplant Dual Enrollment with an alternate criterion for 2021 reporting.

One administrator commented,

“We usually, typically have dual enrollments, usually, almost always one of our indicators. [It] was not this past year. And part of it is our colleagues grew in that space faster than we did. So that was one that was not, that was not an indicator for us this year.” “I thought we were doing a pretty good job in that space. Those [other colleges] were doing it better. So, I would say, that’s a negative.”

A second interviewee responded similarly to the Dual Enrollment transition from strong contributor to being replaced, stating,

“So dual enrollment, it just says here that we’ve declined over the past three years. Multiple colleges have substantially increased in this area. So, we were too complacent, right? We didn’t keep up with that growth because we were already strong in that space. So, if our college held steady, but everybody else increased, then we’re automatically going to see a decrease in our funding.”

Leaders also noted the success of the Special Populations sector. This includes veterans, students with disabilities, Pell Grant recipients, students of color, incarcerated learners, and dislocated workers. Conditions within the college’s district made selecting Special Populations desirable year to year. The table below shows Popular College consistently scored in the top one third for OBF earnings versus other colleges in this commonly selected criterion.

**Table 5.***Outcomes-Based Funding - \$ Earned**Rank Among College's selecting **Special Populations***

Year	2015	2016	2017	2018	2019	2020	2021
Colleges Selecting Special Populations Category	14	15	15	15	12	14	14
Popular College's Category Rank-Funds Earned	5	5	5	4	3	3	3

**Source: Wisconsin Technical College System-Annual State OBF Funding Report**

There were several measurement areas where the colleges' selections led to positive outcomes. For example, the decision to focus on developing Workforce Training, Adult Basic Education, Special Populations programming, and increase efforts to expand coursework with Industry Validated Curriculum were administrative decisions that had a positive effect. Figure 6 below depicts categories where funds earned were strong.

**Figure 6.***Administrative decisions leading to positive OBF category performance*

<b>Decisions Leading to Positive OBF Category Earning Results</b>			
<b>Workforce Training</b>	<b>Adult Basic Education Success</b>	<b>Special Populations Success</b>	<b>Industry Validated Curriculum</b>

As previously noted, the Dual Enrollment category was a consistently strong contributor to OBF until competitors invested resources and Popular College did not. That administrative decision led to declining revenues and eventual removal from the selection list, as shown in Figure 7.

**Figure 7.***Administrative decisions leading to negative OBF category performance*

<b>Decisions Leading to Lower OBF Category Earnings Results</b>
<b>Dual Enrollment</b>

Performance From 2015 to 2021. (Source: Wisconsin Technical College System OBF Annual Reports)

In addition, leaders stated they could have improved results in the category 'Transitioning ABE Students to Academic Programs' by investing time and energy. Evidence is provided by these quotes:

**Gwen:** "I'd like to see more of these [ABE students] come into an academic program after they get their GED, GSED, or advance to their ELL program."

**Holly:** “Currently, there’s some emphasis looking at transitioning ELL students into program students.”

**Anne:** “Things we can do better for our college, our Dual Enrollment and our Adult Basic Education transfers.”

Question five asked what intended and unintended consequences surfaced at Popular College and what impacts did they have. Findings showed two distinct categories that materialized from responses; 1) those knotted to the State Government’s Implementation of OBF (SGIOBF), and 2) consequences associated with the College’s Specific Criteria selections (CSC).

Several leaders cited improved accountability, increased job placement, graduating additional students in high demand fields, and competition between colleges as planned (intended) consequences of SGIOBF. As one Vice-President noted, “So, [an] intended [consequence] was to put focus on specific areas for each of the Technical Colleges, which I think was very positive, again, High Demand Fields, Dual Enrollment, and ABE.” And, the college’s CIO showed awareness of OBF consequences, declaring, “The importance of Dual Credit, that’s the biggest one that like jumps off this page for me. Job Placement, High Demand Fields, and also Workforce Training were probably intended...I can’t imagine that’s by chance, even though I’ve never thought about it through this lens.”

In contrast, the ability of colleges to compare their results with peers was an unanticipated SGIOBF. The Director of Institutional Effectiveness quipped, “One of the great things about Outcomes-Based Funding is it’s a really easy opportunity for districts to benchmark against one another.”

Popular College leaders purposely chose Workforce Training as a key measurement. Interviews provided evidence and I was able to triangulate this finding by reviewing historical data provided by annual Wisconsin Technical College System Outcomes-Based Funding Reports and the colleges Institutional Effectiveness 2021 report, which indicated OBF subsidies earned in this sector have been consistently positive, providing an intended consequence of this college specific criteria selection (CSC).

A Vice-President commented “Workforce Training has performed really well” and the College President stated, “And, Workforce Training, (Name) and the team...phenomenal growth in that space.”

Multiple respondents said complacency surrounding Dual Enrollment led to the unintended consequence of lost revenue. This category scored well and generated substantial OBF for the college the first few years. When other colleges invested resources to improve results, Popular College held firm, eventually causing them to fall behind competitors in OBF allocation for this category. Three years of significant Dual Enrollment declines caused the college to recently remove the category as one of their seven measurement areas.

Another unintended consequence finding may have been inadvertently initiated by the WTCS office. Hoping to be helpful, they provided OBF subsidy results each year end, by category, and for all 16 colleges. They also offered funding projections for all categories for the next fiscal year, resulting in an ability for colleges to make quick and effortless selections of measurement areas instead of leaders intentionally investigating trends and potentially making more relevant choices. One V.P. declared “Unintended, I think probably was kind of gaming the system and making the decision so easy for which ones to choose.” NOTE: Since this process is not “gaming” in the traditional sense, I have termed it “syphoning” the system.<sup>24</sup>

Possibly the greatest unintended consequence I found surrounded data and reporting. As a result of the OBF phenomenon, the organization has embraced technology more effectively to help with everything from strategic planning, to sharing data, to decision making.

**Anne:** “Throughout the last several years, we’ve been using the data more and more to help us with strategic planning and identify those areas of focus and be intentional about where we focus our resources. We have continued focus on accuracy of data going into the systems and then the ability to report and help us make those decisions with using that data.”

**Hector:** “We made sure we’re going to monitor [OBF] within our Institutional Effectiveness Office. And we’re going to build reporting solutions to track it.”

---

<sup>24</sup> Syphoning: draw off or transfer over a period of time, especially illegally or unfairly. (Source: Oxford Dictionary).

**Rod:** “We’re building some new reporting structures so that people are not waiting to get simple reports.”

**Anne:** “I think it has been a learning opportunity to, you know, continue to help us use data more effectively within the organization.”

One final unintended consequence focused on workforce training. Popular College had a strong history of working with employers to upskill employees utilizing customized training modules. OBF rewarded colleges for selling employers credit-based solutions. This created a conundrum for administrators: Do you give employers what they’ve asked for only, or try to encourage classes for college credit? A quote by the Dean sums up the challenge the organization faced<sup>25</sup>.

“On the customized training side, almost none of what we do is credit oriented because the employer, if the employers wanted credit, they’d be sending people to open enrollment programs. But, what it’s done is it’s shifted for some colleges, and it for us to some extent, as well, is, now when you’re working with a customer on what the right solution is, now you’re pondering in your head... Oh, like how much is this going to shift to credit? Why do I need to get it over here in Outcomes-Based funding, because I could do the exact same work, but this is going to return more money on the credit side.”

“I don’t think anybody ever intended the consequence to be ‘now I’m trying to shove something at an employer that they’re not really asking for-when they’re hiring us for customized training.’ It’s about skill development. They don’t want the extra homework. They don’t want all the things that go along with all that credit base, or they’d be sending them to open enrollment.”

“So now we’re starting to force customers into solutions that aren’t in their best interest. So that’s, that’s for me, the biggest unintended consequence.”

### **COVID-19 and its Unintended Impact**

Leaders cited the recent COVID-19 pandemic and subsequent decisions by many high school faculty and healthcare workers (the college trains healthcare workers in several disciplines) to vacate their chosen professions as an unfortunate, unintended, and unrelated consequence. The V.P. of

---

<sup>25</sup> Upskill definition. To provide (someone, such as an employee) with more advanced skills through additional education and training. Source: Merriam-Webster.com.

Student Services stated, “I’d have to say COVID is [a challenge]. We just took a measure of our Spring [enrollment] and our Health Programs are all down at this point. And I’m sure that’s a COVID thing.”

That same scenario may have negatively impacted the college’s dual enrollment category, as many high school students learned remotely for extended timeframes and were unable to, or chose not to, earn college credits coupled with regular high school credits for college validated coursework. The V.P. of Administration detailed, “I don’t think the [Dual Enrollment] numbers are going to be that great next year. Part of it is COVID had a significant impact. The mass exodus of [High School] teachers, part of it is COVID related, I have no doubt.”

Given the state of the economy in 2013-14 (in which many jobs were available as the economy picked up steam heading out of a 2007-2010 recession and an amplified skill set needed for many positions), if one were to dissect the 10 criteria included in the funding strategy, they might conclude the state was interested in graduating more students, upskilling the current workforce, and strengthening partnerships between colleges and high schools and colleges to colleges. A question seeking analysis might be: Were the colleges on their way to meeting state Outcomes-Based Funding objectives prior to COVID-19 and both high school and college coursework becoming virtual and eventually leading to enrollment declines?

### **Summary**

My analysis and findings from the case study affirmed some theoretical prepositions and discarded others. As a reminder, below were the prepositions:

1. Internal communications were not broad based
2. OBF was integrated into strategic planning processes
3. Infrastructures were developed to address selected reporting criteria
4. Funding percentage increases caused greater focus on results
5. Data collection and reporting took on greater importance
6. There were consequences to OBF related decisions

The inclusion of OBF in strategic planning (2) seemed peripheral at best through the first five years. It has become more of a focal point during the past two years. The college is clearly focused on what is best for students and the community versus attempting to maximize any alternative funding scheme. The data suggests internal communication related to OBF (1) was deficient at several levels for years, but experienced improvement from 2020 to 2022.

Responses indicate that increases in the percentage of allocations tied to OBF (4) caused some colleges to take actions to improve their apportionment faster than Popular College, causing them (Popular College) to lose status in at least one criterion (Dual Enrollment). However, this challenge triggered the college to place greater focus on OBF planning. This outcome implies there are consequences to OBF decisions (6). In this case, standing pat, or being complacent and not ramping up Dual Enrollment resources meant The College forfeited substantial OBF subsidies. That lesson led to greater use of data and reports (5) in the strategic planning process and specifically, the OBF impacts.

Propositions regarding infrastructure proved negative. Conclusions distinctly indicated only minimal infrastructure improvements occurred, primarily in later years; 1) after OBF results indicated measurement areas where potential gains could be made (Workforce Training) and 2) Dual Enrollment. Staffing additions accounted for the only infrastructure changes at Popular College.

One interesting outcome emerged in the area of data collection and usage. Leaders clearly indicated that one lesson learned was to utilize data more effectively. I was looking for evidence of investment of resources in internal data mining and report development related to OBF. Data usage took on greater meaning after an accumulation of results. However, responses showed that the data referred to was from state reporting and not created internally. There was progress in recent years on internal reports to efficiently track measurement area progress, but it was only expressed by the leader in that area. Therefore, the result is neither observed nor totally absent.

Overall, findings indicated Popular College experienced neither detrimental nor significantly positive financial results over a seven-year campaign of partial state subsidies based on specific measurements. Struggles with communication, early strategic focus/complacency, resource investment, and data extraction/use were factors that may have contributed to financial results. A robust Workforce Training area and ample dual enrollments positively impacted the college's OBF revenues to date, albeit additional subsidies could have been earned in recent years if a) additional investment happened and b) COVID-19 had not impacted both student interest and high school instructor employment.

Since state OBF inception, Popular College administrators may have experienced the importance of strategic collection, understanding, and use of data to create information, potentially leading to faster and better decisions when policies such as OBF are implemented. Findings revealed organization leadership recently became more engaged with OBF details after years of experiencing results and implementing adjustments. Above all, Popular College's focus on customers and not a funding method may have worked favorably to balance the revenue scorecard and prepare the college for future funding iterations. Table 6 below indicates how outcomes compared to postulation.

**Table 6.**  
*Theoretical Propositions versus Actual Outcomes*

<b>Theoretical Propositions and Actual Outcomes</b>	<b>Observed</b>	<b>Not Observed</b>
Internal communications were not broad based	√	
Infrastructures were developed to address selected reporting criteria		√
Funding percentage increases caused greater focus on results	√	
There were consequences to OBF related decisions	√	
OBF was integrated into strategic planning processes		√*
Data collection and reporting took on greater importance	√	
OBF improved persistence and graduation rates		√**

*\*Integration of OBF into Strategic Planning was expected years earlier*

*\*\* Was not included in theoretical propositions. Added here as it was the reason for PBF 2.0 implementations. No data to prove/disprove if rates changed at Popular College*

**Conclusion**

This chapter has covered the findings from my study of Outcomes-Based Funding impacts and the factors that contributed to those impacts over a seven-year period at one technical college in Wisconsin. Despite the intentions of the Governor and legislators at the time of adoption, administrators at Popular College successfully transversed the possible pitfalls of the policy and succeeded at managing the college effectively.

## Chapter V: Discussion Summary

### Introduction

The purpose of this research was to explore and understand *leaders' perceptions of what happened* when outcomes-based funding was implemented at one Wisconsin technical college and the elements guiding the results experienced. The study used grounded theory and descriptive phenomenology methodology.

Ten administrators were interviewed using a seven-question interview guide. I focused on a system of colleges that had been performing partially under state mandated outcomes-based subsidies for seven years.

This chapter encompasses six sections. The first section discusses principal impacts identified by the study and their importance. Next, I will illustrate a conceptual model, utilizing the most significant findings. Then, I compare study findings with relevant empirical research. These segments are followed by implications of the study for practice, implications and recommendations for future research, and a summary of the chapter.

### Principal Impacts and Their Importance

Conclusions and findings are based on analysis of interviews, notes, and artifacts and subsequent development of theories emerging from this investigation. The findings are summarized below. Since one point of this research was to understand the factors associated with the impacts identified, I include those here.

1. Impacts of OBF on Popular College's strategic planning were mixed. It was only in recent years that Outcomes-Based Funding has become a relevant strategic planning influence, prompted by a monetary impact that included an increase to 30% funding based on outcomes, which increased subsidies, but also fueled competition for category earnings.

Despite this new influence, the institution maintained a focus on district constituents in its annual planning process.

Contrasting factors limited the impact of OBF on annual strategic planning. These two factors were: A) an allegiance to district businesses, students and the communities served guided future planning; and B) a lack of attentiveness to rival colleges and/or their own investment to maintain or grow OBF revenues in certain categories eventually influenced planning. The importance of this finding lies in balancing strategies to meet college goals and the inclusion of an increasingly important income stream and its elements into the planning process.

2. OBF impacts on organization and physical structures are slight. The college did not amend its physical structure or organizational processes to address criteria in the new funding scheme. Minimal staffing changes occurred and added positions appear to be after learning of competitors bolstering positions, improving their revenue streams, and causing Popular College's OBF revenue declines.

Factors influencing the decisions to initially not invest, and then (more recently) only slightly invest in organization staffing, not infrastructure, included: A) availability of state data; B) data eventually provided a realization that positive OBF impacts could be gleaned by adding resources; C) The college made improvements to infrastructure prior to the implementation of OBF to help students navigate the enrollment and student support processes easier.

Two things are important to note from this finding. First, the use of state data to aid in OBF related choices helped Popular College improve data driven decision-making; second, it was financially beneficial initially, but then flopped as other colleges increased their resources long before Popular College noticed; and third, the expectation that colleges would invest in infrastructure as a response to several measurement areas tied to student success, such as

ABE, ABE Transition, Job Placement, High Demand Fields, Dual Enrollment and Special Populations did not take place here. Popular College had already invested in physical structures prior to OBF and just added one person to bolster category earnings potential.

3. The graduated increase in OBF funding from 10% (2014-15) to 30% (2016-17) essentially improved leaders' OBF decisions. In early years, little attention was given to criteria selection as financial implications were negligible. Most often, selections were just made based on state reports of results and projected revenue for the upcoming year. Once funding was at 30% consistently, the organization discovered opportunities to generate additional revenue by analyzing trends plus reacted to competitor colleges initiatives that pulled subsidies away from Popular College. Responses included adding faculty resources and analyzing/improving funding criteria choices.

Factors related to this finding included A) early complacency; B) inattentiveness to aggressiveness of rival colleges to improve their OBF; and C) availability of reports to assist in decision making. This was a learning opportunity for Popular College. OBF funding is dynamic, and the institution might have 1) utilized available data more effectively, and 2) continually scanned the horizon for strengths, weaknesses, opportunities, and threats, just as they would when doing strategic planning.

4. College leaders' OBF-related decisions had both positive and negative impacts. On the positive side, decisions to focus on Workforce Training and Adult Basic Education (ABE) categories created strong revenues. Contributing to an eventual negative outcome in the dual enrollment category was administration's contentment to use annual state projections as a single data point for selecting categories to be measured on for subsidies transitioned early strong revenue generation to eventual negative financial results, due to unanticipated

competitor investment. Administration's contentment to use annual state projections as a single data point helped the college understand the impacts of their decisions and develop corrective actions.

Factors leading to positive funding outcomes were: A) demographics of the district provided ample workforce training opportunities and potential ABE students that could move into a college program, providing significant OBF revenue from these categories; and B) traditional strength of these two college areas. Factors contributing to a negative outcome in dual enrollment were A) reliance on a single data source for early year decisions; B) no reinvestment; and C) the impact of COVID-19 on high school enrollments and attendance.

The importance of this finding is specific to continued OBF success. Where attention and resources were provided, those segments thrived. The organization could have researched actions by competitors, responded earlier to improve or maintain their own dual enrollment category results, and strategized on minimizing long-term COVID-19 impacts.

5. Multiple intended and unintended consequences resulted from OBF's implementation. In 2013, Wisconsin's ACT 20, which created OBF, sought intended consequences of accountability, increased graduation rates, job placements, and more enrollments in high-demand programs by moving to a modified funding scheme (Kelchen, 2013). Findings indicated alignment on these outcomes, but also showed creating competition among colleges and upskilling the current workforce as additional intended consequences.

Upskilling workers (through workforce training) was a consistent success. Competition surfaced once funding reached 30%.

Unintended consequences of note included enticing employers looking for customized workforce training to consider "for credit" solutions, and ABE students to enroll in a program so the college could earn more OBF. Complacency and a tendency to syphon the

system (relying on state reports to select measurement criteria), along with the impacts of COVID, created unintended consequences of teacher exodus, decreased program enrollment, and lost potential OBF revenue<sup>26</sup>.

Factors influencing intended consequences were: A) how the criteria were developed; and B) the graduated percent increase in funding creating a competitive environment. Of utmost importance was the foresight the Wisconsin Legislature had to authorize the WTCS to develop the OBF measurement categories instead of a group of politicians, businesses, and interested stakeholders. Providing those impacted the opportunity for input led to favorable outcomes for the state and technical colleges.

Unintended consequences factors were A) a strong job market negatively impacting enrollments (prior to COVID) and that downward trend exacerbated through 2021; B) the onset of COVID-19 and an unknown outcome if enrollments and graduation rates would have improved; C) complacency, or standing pat, when choosing criteria to earn subsidies; D) using data and reporting to make decisions and adjustments; and E) the desire to maximize OBF income<sup>27</sup>.

It is important to note that unintended consequences caused more emotional responses and angst among interviewees, suggesting an inability to control some situations.

6. Those interviewed noted surprises as years under OBF progressed. One surprise was Popular College experienced aggressiveness of competitor colleges when vying for funding. Another surprise was that annual state reporting on OBF results helped highlight areas where colleges excelled. A third surprise was that the funding percentage has not changed after peaking at 30%. Finally, a modification in funding has not changed how the organization

---

<sup>26</sup> Wisconsin ACT 20 required the Wisconsin Technical College System Board to implement a new formula for allocating a portion of general state aid to technical colleges based on outcomes identified in state statute.

<sup>27</sup> "Stand Pat" Definition: to oppose or resist change. Source, Merriam-Webster Dictionary.

strategically plans. Leaders remained consistently focused on students, district businesses, and communities served.

Factors impacting this finding include: A) dynamics of district students; B) analysis of internal and external data; and C) the policy has not become political.

There are a few important lessons from the findings. First, the OBF funding scheme did not alter what Popular College leaders value. Students, businesses, and communities are at the forefront of decisions. Second, when change occurs (in this instance, the increased funding percentages) and multiple organizations (schools) are involved, expect reactions from competitors and plan contingency responses that will maintain or enhance a current position. Third, organizations can learn and improve by being attentive to what competitors and collaborators do well, ultimately changing their own outcomes.

7. The OBF phenomenon brought opportunities for continuous improvement, adjustments to communication practices, continued collaboration, benchmarking, and competition. The most interesting finding from inquiring what respondents wished to add about their experience with OBF was the need for broad policy communication and greater discussion about “why” it (OBF) exists. A second finding expressed was the challenge of competition versus collaboration between colleges. Finally, surfacing and capitalizing on “centers of excellence” emerging from OBF implementation and its measurement categories. Influential factors were A) awareness that engaging other levels of the organization can improve understanding, buy-in, and potentially impact results; B) the subsidies at stake heighten potential competitive nature, C) visibility of OBF results for all colleges, plus ease of data analysis with availability of WTCS created reports can foster collaboration, and enhance success of colleges through sharing.

## Summary of Findings and Comparison to Empirical Research

Overall, several themes materialized from this study and the factors associated with conclusions drawn. These six themes tie back to research question responses and most appear in the literature review conducted, although some themes manifest differently.

- 1) The importance of OBF criteria selection and integration into strategic planning increased over time.
- 2) Data reporting, analysis, and usage improved since OBF inception (2014-15)
- 3) Organizational awareness of OBF was deficient, but improved in recent years
- 4) OBF related decisions led to both positive and negative outcomes
- 5) Syphoning, a subtle and inadvertent form of “gaming the system” emerged
- 6) OBF has impacted both peer competition and collaboration

A closer look at theme one revealed while participants were consistent in emphasizing Outcomes-Based Funding, it did not drive strategic planning for the organization initially, but recent use of OBF related internal reports and associated data helped identify areas to concentrate resources. Criteria selection took on greater importance when OBF percentages maxed out at 30% and funding waned in traditionally strong categories due to other colleges aggressively adding resources, improving results, and increasing their allocations.

Of note, is the potential to select different criteria for assessment annually. Throughout the literature review and investigation of other formats, I did not find another performance funding structure that allowed participating colleges to adjust their potential funding in this manner. Therefore, this finding may be exclusive to performance funding in higher education.

Increased use of data had several key effects and helped Popular College identify areas of focus.

- 1) Data and reporting helped maintain a traditionally strong category for the college [Adult Basic Education (ABE) Success] and, more recently, 2) helped them move ABE Transition to one of their seven

measurement criteria. 3) Comparing reporting on Workforce Training with other colleges' results prompted reinvestment in that category. Popular College used the data as a catalyst to change two funding categories and add Credit for Prior Learning for the 2018-2019 reporting year. These findings align with findings in the literature. Wholey and Hatry (1992), Carter (1983), Levitt and Joyce (1987), and Millar, (1981) *et. al.*, declared value in comparing present results with previous ones. Students in ABE are considered "at risk" and following success of these students coincides with researchers Forrest (2021) and THEC, (2015) suggestion to utilize data to monitor progress.

Snyder (2015), and Nevada System of Higher Education (2012), advised using published metrics for allocations. This is in accord with study findings that indicated graduating the OBF percentages from 10% to 30% took on greater significance for Popular College as they made decisions on allocation categories. For example, data indicated other system colleges concentrated efforts and resources in 2016 and 2017, significantly increasing dual enrollments and their related OBF allotments starting in 2017-2018. The investment by rivals was partially at the expense of Popular College starting the second year of 30% OBF at stake. State reporting provided necessary data for Popular College to question what was happening and work to mitigate subsidy shortfalls. The finding also parallels research by Jones (2017) and Kelderman (2019) on metric use to bolster academic achievement of by minorities and economically disadvantaged students, and Offenstein and Shulock (2010), who espoused using information gathered from data to make adjustments.

Empirical research by Hillman, Tandberg & Fryar (2015) noted gathering relevant data and preparing reports can factor into an organization's decision making. This is consistent with study findings. Popular College used data as a catalyst to switch OBF categories for the 2019-2020 reporting year. In addition, they became more intentional in OBF category selection and internal communication as it penetrated strategic planning. The trend of increased data sharing, data dependency for decision

making, and improved communication practices ultimately assisted the organization in minimizing the impacts of the COVID-19 pandemic.

Faculty and staff had little knowledge of OBF the first several years of implementation. Research findings uncovered Popular College spent little effort from 2015 to 2019 communicating downward. Information and decisions were concentrated at the executive level and paralleled Dougherty & Reddy's (2011) discovery; where because subsidies flow effortlessly into general operation funds of institutions, faculty and staff are often unaware of PBF results and therefore do not assist in making corrections or bolstering funding even more via their input. This discovery also contradicts Wyatt and LaCost (2016), and Kelderman (2019), who asserted successful implementations included critical communication to faculty and staff on formulas. Doing so caused increased awareness regarding gathering and scrutinizing data and general recommitment to student success. Dougherty & Reddy (2011) noted employees develop a greater awareness of mission, goals, outcomes, and alignment with (state) expectations. The reliance on state reporting to make next-year measurement area selections was a significant factor in slow OBF saturation within the organization.

Snyder (2015), Harnisch (2011), and Miao (2012) advocated for phasing in plans and allocations to allow institutions to learn, make necessary adjustments, and set up infrastructure. Notably, the phase-in process typically provided time up front before allocations became effective. Being attentive to what is at stake during and after phase-in is on the shoulders of the participating colleges. Ironically, the phase in for Wisconsin's Technical Colleges consisted of no 'learning year' and a beginning allocation of 10% funding at stake. Findings disclosed Popular College did not make infrastructure changes and was reliant on state reports and projections for easy criteria selection during the first three years as OBF subsidies were increased from 10% to 20% to 30% respectively. Those same reports caused corrective actions in later years of the research period as allocations were impacted negatively. By comparison, South Carolina, where performance funding started at 100%, and directly after budget approval, failed

miserably and led to policy abandonment (Burke and Modaressi, 2001). Public universities in South Carolina never had the chance to prepare, much less make changes.

This study found leaders steered the organization toward both positive and negative outcomes. Four measurement category decisions had positive financial impacts on the institution. Workforce Training, ABE Success, ABE Transition, and Special Populations have provided significant OBF dollars over the seven-year period. The college also decided to invest time and energy toward transitioning English Language Learner (ELL) students into programs the past three years, earning significant OBF dollars in the ABE Transition measurement area. This finding is supported by Alstadt, Fingerhut, and Kazis (2012) research, who found positive results were likely due to meticulous engagement, effective incentives, and progressive leadership. Success in aforementioned categories also aligns with the findings of Fingerhut & Kazis (2012), OHEFC (2012), and Kelderman (2019). They suggest funding schemes reward access, persistence, and milestone achievement of underprivileged, academically, or financially vulnerable students.

Findings indicated slow communication to faculty and staff at the onset of OBF and leader's complacency concerning the Dual Enrollment category were decisions leading to negative outcomes. Wyatt & LaCost (2016) remarked, when staff are involved, they 1) recognize the value of gathering and analyzing data, and 2) work harder on student success, both of which may have improved results. Kelderman (2019) noted faculty and communication on PBF formulas, categories, and results, caused greater student success. Engaging faculty and staff early may, or may not, have improved results. The factor associated with this finding was A) the decision to keep OBF details at leadership level.

The OBF scheme at Popular College provided notable intended and unintended consequences, though unplanned outcomes dominated conversation. Interviewees cited the state's desire for colleges to focus on rich payback areas such as job placement, high demand occupations, dual enrollments, and adult basic education, along with competition and accountability as intended consequences. This finding

coincided with Klein (2015), who confirmed the state's interest in improving accountability, student perseverance and degree achievement. Likewise, Harnish (2011) noted the swing from states providing funding based on enrollments to desiring job ready graduates and other priorities.

A second intended consequence involved an interesting dynamic. Bethke (2015) and Ortagus, Kelchen & Rosinger (2020) reported disadvantaged students provided significantly less performance funding due to an enhanced need for developmental courses, an unanticipated consequence. It was just the opposite for Popular College and the other system colleges. State approved OBF measures anticipated success and rewarded colleges for assisting under-represented, at-risk, and special population students, such as those in ABE coursework trying to earn a GED or to enroll in a program. Fingerhut & Kazis (2012) and Kelderman (2019) discovered several Performance-Funding policies that compensated colleges for concentrating on success of susceptible students. Supporting factors were A) the amount of OBF at stake, and B) a history of Technical College expertise and success in working with challenging student populations.

"Syphoning" the system, refers to situations where colleges use state reports for easy selection of the highest return OBF categories instead of diligently investigating opportunities. This was an unintended and unique consequence found in the study. Due to each college's ability to select seven of ten criteria annually, scanning reports for results offers opportunities to stay with previous selections or modify the plan. In Popular Colleges case, early year syphoning led to complacency, eventually causing lost OBF revenue.

Syphoning data annually also had a positive effect. Popular College eventually became more strategic in selecting criteria by observing trends for both their college and competitors.

Unlike traditional system gaming detailed by Fain (2014), such as grade inflation and tightening admissions standards to graduate a greater percentage of students, and constraining entry by policy espousal (Ortagus, Kelchen & Rosinger, 2020) and Hagedorn & McKinney (2015), or manipulation of

metrics to achieve results (Dougherty and Reddy (2011), this study revealed outcomes of syphoning state data eventually led to less revenue in at least one category.

### **The COVID-19 Factor**

The unintended consequences of COVID-19 on OBF were clearly identifiable. Popular College enrollments declined, as did high school entrants to dual credit and other programs such as Health Care careers, impacting outcomes-based subsidies. One in five Health Care workers left full-time positions in favor of temporary assignments to avoid anxiety, work overload, and burnout (Ollove, 2022). A trend the media reported, and many potential health program students noted and decided to forego entry until this past year (Kremer, 2022). Factors tied to COVID were A) an exodus of teachers (both high school and college) leaving fewer dual credit instructors, and health care worker resignations, causing some potential students to not enroll; B) Program enrollment declines at both high schools and Popular College. Reports showed the pandemic reduced overall enrollments by 13.5% from 2020 through 2021 (Kremer, 2022), potentially impacting performance in eight of ten OBF categories. COVID's impact on colleges was further complicated by the increased number of high school students taking coursework online. This reduced the number of students taking dual credit coursework offered by technical colleges, an area already beleaguered by high school teachers choosing not to earn credentials to teach college level courses because Wisconsin's ACT 10 eliminated incentives to earn additional certifications.

### **Findings Conclusions**

In summary, this study found alignment with previous research in several areas including, internal communication issues, data gathering and usage, and positive and negative decision outcomes. There was partial affiliation to previous research in areas such as providing subsidies for enrolling and credentialing underprivileged or at-risk students, gaming the system, and competition.

New and unique findings include 1) the ability to select/change measurement areas by college annually. A review of empirical research did not surface any other performance-funding structures utilizing this design; 2) a transition of OBF from politically motivated to a routine funding policy (a non-political factor), due to the criteria being mapped out by the organization impacted (WTCS), their focus on measurement criteria that have potential to positively impact the economy of the state, and an absence of any issues. As one interviewee noted, “The majority of those criteria that were selected are really keys to the success of the technical college system and the economy”; and 3) Popular College’s ability to learn from missteps made the first several years and improve their creation, understanding, and use of OBF related data assisted in strategically managing challenges brought on by COVID-19.

Overall, this study reaffirms the goal of Performance-Based Funding 2.0- the shift from state funding based on enrollments to college and campus outputs and state priorities (Harnish, 2011). This is evidenced by the criterion established to earn partial subsidies, all of which are tethered to student success and preparing them for employment. The study also showed that a politically rooted change in funding formats proved somewhat inconsequential as the college continued to focus on the needs of their students, businesses, and communities they serve.

### **Implications of the Study**

The findings of this study have contributed to the understanding of Performance-Based Funding for higher education. This study has generated conclusions showing the value of communication, inclusion in strategic planning, data generation and use, competition, and collaboration. Findings both concur and contradict with empirical research and provide theoretical and practical implications for people researching the topic and higher education officials operating under a pay-for-performance policy.

### **Implications for Researchers Studying Performance-Based Funding**

1. Performance-based funding continues to be a reality for higher education. As of 2020, 41 states had some form of Performance-Based Funding (Whitford, 2020). This study partially

- fills a gap in literature on Performance-Based Funding, providing perspective from administrative leaders at a two-year technical college.
2. This study has revealed leaders can remain focused on core values and principles that drive organization decisions, despite a change in state funding methodology. This critical success element remains intact only if funding formats do not divert leaders' attention solely to earning subsidies. OBF dollars at stake should be high enough to warrant attention, but not drive the organization's strategic direction.
  3. This study reinforces prior empirical research that found the amount of funding at stake matters. Organizations place more emphasis on data retrieval and use as incentives rise (Dougherty & Reddy, 2011), and (Gray, Harkreader & Wagar, 2001, P. 36.) The amount of funding at stake must also be large enough for higher education institutions to work hard to achieve results. Washington State's effort with technical and community colleges to push students to reach milestones and graduate failed due to paltry dollars at stake (Hillman, Tandberg, & Fryar, 2015). This research pointed out as funding percentages grew, leaders spent additional time responding to lost revenue and changing criteria selections.
  4. PBF-version 2.0's primary focus was on student persistence and improving graduation rates (McKeown-Moak, 2013). The findings show moving to forms of Performance-Based Funding may or may not improve accountability and performance quality of public colleges and universities. This study showed the organization learned to use data more effectively and benchmark against competitors. The ten criteria established, plus the annual reporting requirement, created accountability. However, it failed to show improved persistence or graduation rates. Two potential causes are not influenced by college actions. 1) years of a strong job market may, or may not, have caused potential students to bypass coursework

- for a paycheck; and 2) the negative impact COVID-19 had on student interest and persistence, as documented in the research.
5. This study established funding structures, criteria selection, and reporting results may or may not generate competition among participating colleges or universities. Competition was created by rival colleges taking action to bolster OBF revenues, especially when subsidies reached the 30% plateau. State reporting on results and projections were catalysts for college responses. This may or may not hold true for other studies, depending on how funding subsidies are structured.
  6. Overarching state assistance with maintaining annual PBF/OBF reporting processes may or may not be beneficial to colleges. This enquiry showed state aggregated reporting and projections created unintended complacency in early years for the subject organization, followed by an uptick in OBF attentiveness due to emerging trends.
  7. This study verified that flexibility in criteria selection may or may not be a valuable approach when developing outcomes colleges report on. Allowing colleges an opportunity to select seven of ten possible reporting categories was done strategically by the WTCS to account for the diversity of size, population demographics, and program offerings distributed among its 16 colleges. When state's structure alternative funding schemes for higher education, officials may want to consider participating institution characteristics to level the playing field. An example where this would have been impactful was Tennessee's revised 2.0 policy, where Tennessee State received decreased funding due to their unique open enrollment policy, lower academic standards, and lower financial readiness of students (Kelderman, 2019). Offering options in criterion selection is one way to achieve this goal.
  8. Unanticipated events, such as the COVID-19 pandemic may, or may not impact research activities and outcomes. Performing research where data spans a timeframe that includes

exclusive incidents, can potentially provide skewed or unique data that requires special consideration and/or analysis. In qualitative research, interviewee respondents might or might not, struggle to connect the exclusive event to the data they provide.

### **For Educators**

1. This study indicated investing to improve funding results may or may not be effective. Educators operating under a PBF scheme should consider tracking performance trends, and if the opportunity exists to improve results through actions the organization may authorize, that venture should be considered. Adding infrastructure was shown to be effective, as was changing measurement categories. The latter may, or may not, be an option.
2. Findings suggested establishing data collection systems to report on internal/external trends may or may not be beneficial to OBF decision-making. This study provided compelling evidence that acquiring and using data became essential to choices leaders made in attempts to maximize funding. Hillman (2016) cautions that not every higher education entity has staff, knowledge, and financial resources to invest in data collection. The responsibility lies with plan designers to establish level footings for funding participants.
3. Research data highlighted that educating everyone in the college about new funding schemes and continual communication is an effective strategy to engage employees and may or may not contribute to financial results. The organization studied did not communicate OBF specifics broadly for several years, thus potentially missing out on benefits. Dougherty & Reddy (2011) discovered communication related to PBF implementations improved institutional productivity and performance; increased data use; and improved the student experience from financial aid to graduation rates.
4. This study showed well-structured OBF funding schemes may or may not highlight where individual colleges perform well. Depending on the criteria and optional selection processes,

if annual state reporting occurs, those may provide performance clues. For example, if a particular college continuously ranks 1<sup>st</sup> or 2<sup>nd</sup> in ABE transitions to program students, they may have a strong process in place. Data from this research clearly pointed out which colleges performed well in certain criteria, prompting further investigation.

5. Findings show OBF implementations are formatted to have intended consequences and may or may not have unintended consequences. A scan of state approved reporting measures pointed to increased accountability, competition, and student success as intended consequences. Research also indicated a multitude of unintended consequences ranging from syphoning the system to complacency, to enticing students in incumbent worker training to take credit courses, to COVID creating downturns in dual enrollment and healthcare training. Educators, PBF stakeholders, and researchers should be aware that intended and unintended consequences may occur with any performance funding system.

### **Recommendations for Future Research**

This study contributed to the body of knowledge on Performance-Based Funding for higher education in the United States. Specifically, it has provided insights on how this alternative financing process impacted one organization within the 16-college Wisconsin Technical College System.

As research progressed from interviews to artifact collection to a review of state reporting, I made notes about interesting tangents or areas where little evidence surfaced on a topic breached by an interviewee. During data analysis, I generated potential topics needing deeper investigation.

Suggestions for future research are as follows:

1. Student persistence and graduation rates received muted attention during this investigation due to the impacts of a strong job market between 2014 and 2018 (USBLS, 2022) causing some potential students to work instead of enrolling in college and the ensuing COVID-19 pandemic from 2019 to 2021. Because persistence and graduation rates are key metrics of

- the Performance-Based Funding agenda, a longitudinal study of impacts on student retention, short-term certificate completion, and Associate Degree graduation rates may be of value and compared to Hillman, Tandberg & Fryar's 2015 research showing no positive impact of PBF on bachelor's degrees conferred.
2. This study found several intended and unintended consequences of implementing Outcomes-Based Funding for one Wisconsin Technical College. A study asking the same question at all colleges in the system would potentially surface both similar and different findings that would contribute to understanding the results of this research and potentially influence future studies on the BPF phenomenon.
  3. A topic that surfaced from my investigation involved the budgetary impact of OBF across all colleges in the system. Has OBF in Wisconsin really changed the money colleges are receiving from the state or just a unique way to slice the pie? I recommend a future study comparing the funding process prior to 2014 with OBF under the assumption the former allocation format continued. It may, or may not answer the question-Was changing funding schemes worth the effort?
  4. Interviewing faculty, non-management staff, or college presidents may, or may not provide other unique perspectives on specific Performance-Based Funding enactment in Wisconsin. A suggested qualitative study using the same questions as this enquiry may provide an excellent findings comparison and either confirm or challenge this study's findings.
  5. The impact of the pandemic on credential and degree awards is an ideal topic for an additional longitudinal study that may, or may not, aid colleges with future planning, especially when operating during an exclusive event.
  6. In qualitative research, and especially where interviews are a key data gathering technique, much can be learned from asking a simple question like "What surprised you?" This

interview technique, acquired from a qualitative research techniques class with Dr. Clif Conrad, was utilized in this study and may be helpful when clarifying specific topics pursued in qualitative research.

### **Overall Summary**

The Performance-Based Funding phenomenon for public higher education now spans five decades. It has been a financial tool for states wanting to change the narrative from rewarding colleges and universities for general student enrollment to one that seeks greater accountability for results, providing partial subsidies for achieving outcomes, such as student persistence and graduation (Klein, 2015). This research discovered multiple impacts of implementing an incentive-based system at a two-year college, many of which were compared and contrasted with empirical studies. The uniqueness of this study lies in its investigation focus; administrative leaders at one technical college. This study provides performance-based funding insights unique to two-year technical colleges and serves as both an underpinning and scaffold for future exploration.

## References

- Aaron, D., Crellin, M, Mabe, D., & Wilk, C. (2011). *Catalyst for Completion: Performance-Based Funding in Higher Education: A case study of three states*. New England Board of Higher Education. Policy and Research. Boston, MA. Retrieved from [http://www.nebhe.org/info/pdf/PerformanceFunding\\_NEBHE.pdf](http://www.nebhe.org/info/pdf/PerformanceFunding_NEBHE.pdf)
- Albright, B. N. (2009). *Tip sheet: Higher education performance funding 2.0* (Making Opportunity Affordable Initiative). Indianapolis, IN: Lumina Foundation. Retrieved from <http://www.collegeproductivity.org/sites/default/files/resources/TipsheetonPerformanceFunding.pdf>
- Alexander, F. (2000). The Changing Face of Accountability: Monitoring and Assessing Institutional Performance in Higher Education. *Journal of Higher Education*, Vol. 71, No 4. (July, August 2000). Retrieved from [https://www.jstor.org/stable/2649146?seq=1#page\\_scan\\_tab\\_contents](https://www.jstor.org/stable/2649146?seq=1#page_scan_tab_contents)
- Alhazmi, A. and Kaufman, A. (2022, April 25). Phenomenological Qualitative Methods Applied to the Analysis of Cross-Cultural Experience in Novel Educational Social Contexts. *Frontiers in Psychology*. Retrieved from <https://www.frontiersin.org/articles/10.3389/fpsyg.2022.785134/full#:~:text=The%20qualitative%20method%20of%20phenomenology,aspects%20of%20human%20social%20experience.>
- Alshehri, Y. (2016). Performance-Based Funding: History, Origins, Outcomes, and Obstacles. *Journal of Higher Education*. Vol. 16(4). Retrieved from [http://www.nabusinesspress.com/JHETP/AlshehriYM\\_Web16\\_4\\_.pdf](http://www.nabusinesspress.com/JHETP/AlshehriYM_Web16_4_.pdf)
- Altstadt, D. (Ed.). (2012). *Tying Funding to Community College Outcomes: Models, Tools, and Recommendations for States*. Boston, MA: Jobs for the Future.
- Altstadt, D., Fingerhut E., Kazis, R. (2012). *Tying Funding to Community College Outcomes: Models, Tools, and Recommendations for States*. Jobs for the Future. Retrieved from <http://www.jff.org/publications/tying-funding-community-college-outcomes-models-tools-and-recommendations-states>
- Argyris, C., & Schön, D. (1996). *Organizational Learning II: Theory, methods, and practice*. Reading, MA: Addison-Wesley.
- Archibald, R. & Feldman, D. (2008). Explaining Increases in Higher Education Costs. *The Journal of Higher Education*, 79(3), 268-295. Retrieved from <http://web.b.ebscohost.com.ezproxy.library.wisc.edu/ehost/pdfviewer/pdfviewer?vid=1&sid=7599f3b7-af2d-4d0a-96f9-4551758e9834%40sessionmgr104>
- Baxter, P. and Jack, S. (2008) Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13, 544-559.

- Belfield, C. R. (2012). Washington state student achievement initiative: Achievement points analysis for academic years 2007–2011. Retrieved from <http://ccrc.tc.columbia.edu/media/k2/attachments/sai-achievement-point-analysis.pdf>  
[Google Scholar](#)
- Bell, D. A. (2005). *Changing Organizational Stories: The effects of Performance-based Funding on Three Community Colleges in Florida* (Doctoral Dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. AAAT 3210509).
- Bethke, R. (2015, April 1). Performance-based Funding Could Disrupt Community Colleges. *eCampus News*. Retrieved from <http://www.ecampusnews.com/funding/performance-based-funding-012/>
- BLS, (2022). Occupational Employment and Wage Statistics. Bureau of Labor Statistics. Retrieved from <https://www.bls.gov/oes/>
- Boggs, B. (2018, November). *Outcomes-based Funding as an Evolving State Appropriation*. National Conference of State Legislatures. Paper No. 4., Page 4. Retrieved from [http://www.ncsl.org/Portals/1/Documents/educ/Outcome-basedFunding\\_v02.pdf](http://www.ncsl.org/Portals/1/Documents/educ/Outcome-basedFunding_v02.pdf)
- Borgman, C. (2015). *Big Data, Little Data, No Data: Scholarship in the Networked World*. The MIT Press.
- Braun, V. & Clarke, V. (2006): Using thematic analysis in psychology, *Qualitative Research in Psychology*, 3:2, 77-101. Retrieved from <https://chip.uconn.edu/wp-content/uploads/sites/1245/2019/05/Braun-Clarke-2006-Thematic-Analysis.pdf>
- Burke, J. (Ed.). (2002). *Funding public colleges and universities for performance: Popularity, problems, and prospects*. Albany, NY: Rockefeller Institute Press.
- Burke, J., and Modaressi, S. (2000). *To Keep or Not to Keep Performance Funding: Signals from Stakeholders*. *The Journal of Higher Education*, Vol. 71, No.4, pp 432-453.
- Burke, J. and Modaressi, S. (2001). *Performance Funding Programs-Assessing Their Stability*. *Research in Higher Education*. Vol 42, No. 1, 2001. Retrieved from <https://link.springer.com/article/10.1023%2FA%3A1018764511093>
- Campbell, S., (2015). Conducting Case Study Research. *Clinical Laboratory Science*, 28(3), 201-204. Retrieved from <http://clsjournal.ascls.org/content/ascls/28/3/201.full.pdf>
- Carter, R. (1983). *The Accountable Agency*. Beverly Hills, CA: Sage Publications.
- Carter, K. (2008). *The Performance Budget Revisited: A Report on State Budget Reform - Legislative Finance*, Paper #91, Denver, National Conference of State Legislatures, pp. 2-3

- Charmaz, K. (2003). Grounded theory - objectivist and constructivist methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (pp. 249-291). London: Sage
- Charmaz, K (2014). *Constructing Grounded Theory-2<sup>nd</sup> Edition*. SAGE. Retrieved from [https://books.google.com/books?hl=en&lr=&id=v\\_GGAwAAQBAJ&oi=fnd&pg=PP1&dq=charmaz+2014&ots=YXSuMazzl3&sig=DrN0HLz9PmVrERT6-M-DTfGcNAQ#v=onepage&q=charmaz%202014&f=false](https://books.google.com/books?hl=en&lr=&id=v_GGAwAAQBAJ&oi=fnd&pg=PP1&dq=charmaz+2014&ots=YXSuMazzl3&sig=DrN0HLz9PmVrERT6-M-DTfGcNAQ#v=onepage&q=charmaz%202014&f=false)
- Cofer, J., Somers, P. (2001, December 1). What Influences Student Persistence at Two-Year Colleges? *Community College Review*. Retrieved from <https://journals.sagepub.com/doi/abs/10.1177/009155210102900304>
- Colaizzi, P.F. (1978). Psychological research as the phenomenologist views it.
- Colby, A. (1987). Controversies Surrounding Developmental Education in the Community College. ERIC Digest. Retrieved from <https://www.ericdigests.org/pre-926/community.htm>
- Crellin, M., Aaron, D., Mabe, D., Wilk, C. (2011). Catalyst for completion: Performance-based funding in higher education. New England Board of Higher Education. Retrieved from [www.nebhe.org/info/pdf/PerformanceFunding\\_NEBHE.pdf](http://www.nebhe.org/info/pdf/PerformanceFunding_NEBHE.pdf)
- Creswell, J. W. (2013). *Qualitative Inquiry & Research Design: Choosing among Five Approaches* (3rd ed.). Thousand Oaks, CA: SAGE.
- Creswell, J. W. (1994) *Research Design: Qualitative & Quantitative Approaches*. Thousand Oaks CA: Sage.
- Delta Cost Project, (2015, May). Delta Cost Project: Trends in College Spending.
- Denzin, N., Lincoln, Y. (2011). *The SAGE Handbook of Qualitative Research* 5th Edition. Sage Publications. Thousand Oaks, CA
- Dougherty, K., & Hong, E. (2006). Performance Accountability as Imperfect Panacea: The Community College Experience. In T. Bailey & V. Morest (Eds.), *Defending the Community College Equity Agenda* (pp. 51-86). Baltimore, MD: Johns Hopkins University Press.
- Dougherty, K., Jones, S., Lahr, H., Natow, R., Pheatt, L., and Reddy, V., (2016). Does Performance Funding Work? *Inside Higher Ed*. October 6, 2016. Retrieved from <https://www.insidehighered.com/views/2016/10/06/evaluation-whether-performance-funding-higher-education-works-essay>
- Dougherty, K., Jones, S., Lahr, H., Natow, R., Pheatt, L., Vikash, R. (2014). Unintended Impacts of Performance Funding on Community Colleges and Universities in Three States. Community College Research Center. Retrieved from <https://ccrc.tc.columbia.edu/publications/unintended-impacts-performance-funding.html>
- Dougherty, K., Jones, S., Lahr, H., Natow, R., Pheatt, L., Vikash, R. (2015). Organizational Learning by Colleges Responding to Performance Funding: Deliberative Structures and Their Challenges.

- Community College Research Center. Retrieved from <https://ccrc.tc.columbia.edu/publications/organizational-learning-deliberative-structures.html>
- Dougherty, K., & Natow, R. (2015). *The Politics of Performance Funding for Higher Education: Origins, Discontinuities, and Transformations*. Baltimore: Johns Hopkins University Press., doi:10.1353/book.39586.
- Dougherty, K., Natow, R., Hare, R. & Vega, B. (2010). The Political Origins of State-Level Performance Funding For Higher Education: The Cases of Florida, Illinois, Missouri, South Carolina, Tennessee, and Washington. Community College Research Center. October 2010. Retrieved from [https://asccc.org/sites/default/files/Perf%20Based%20Funding%20CCRC\[1\].pdf](https://asccc.org/sites/default/files/Perf%20Based%20Funding%20CCRC[1].pdf)
- Dougherty, K. & Reddy, V. (2011). The Impacts of State Performance Funding Systems on Higher Education Institutions: Research Literature Review and Policy Recommendations. Retrieved from <http://files.eric.ed.gov/fulltext/ED527751.pdf>
- Dougherty, K. & Reddy V. (2013). Performance Funding for Higher Education. What are the Mechanisms? What are the Impacts? San Francisco: Jossey-Bass. Retrieved from <http://ccrc.tc.columbia.edu/publications/performance-funding-mechanisms-impacts.html>
- Douglas-Gabriel, D. (2016, May 26). States that tie higher education funding to performance have it all wrong, report says. *The Washington Post*. Retrieved from <https://www.washingtonpost.com/news/grade-point/wp/2016/05/26/states-that-tie-higher-education-funding-to-performance-have-it-all-wrong-report-says/>
- Duran, R. P., Eisenhart, M. A., Erickson, F. D., Grant, C. A., Green, J. L., Hedges, L. V., . . . Schneider, B. L. (2006). Standards for reporting on empirical social science research in AERA publications: American Educational Research Association. *Educational Researcher*, 35(6), 33–40.
- Edwards, Lawrence, and Robert Z. Lawrence. 2013. *Rising Tide: Is Growth in Emerging Economies Good for the United States?* Washington: Peterson Institute for International Economics.
- Fain, P. (2014). Performance-based funding provokes concern among college administrators. *Inside Higher Ed*. November 19, 2014. Retrieved from <https://www.insidehighered.com/print/news/2014/11/19/performance-based-funding-provokes-concern-among-college-administrators>
- Fain, P. (2017). Study on Performance-Based Funding in Three States. *Inside Higher Ed*. July 21, 2017. Retrieved from <https://www.insidehighered.com/quicktakes/2017/07/21/study-performance-based-funding-3-states>
- Fain, P. (2018, June 12). As California Goes: California Finalizes Performance Funding Formula for its Community Colleges. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/news/2018/06/12/calif-finalizes-performance-funding-formula-its-community-colleges>

- Fingerhut, E & Kazis, R. (2012). Tying Funding to Community College Outcomes-Models, Tools, And Recommendations for States. *Jobs for The Future*. April, 2012. Retrieved from <http://www.jff.org/publications/tying-funding-community-college-outcomes-models-tools-and-recommendations-states>
- Forrest, T (2021). Tennessee's Performance Funding Model: A Mixed Methods Study Designed to Predict Future Success. Retrieved from <https://scholar.utc.edu/cgi/viewcontent.cgi?article=1892&context=theses>
- Gailmard, S. (2012). Accountability and Principal-Agent Models. In *Oxford Handbook of Public Accountability*; (p. 1.) forthcoming. Oxford University Press. Retrieved from [https://www.law.berkeley.edu/files/csIs/Gailmard\\_-\\_Accountability\\_and\\_Principal-Agent\\_Models\(2\).pdf](https://www.law.berkeley.edu/files/csIs/Gailmard_-_Accountability_and_Principal-Agent_Models(2).pdf)
- Gauld, R. (2016). Principal-Agent Theory of Organizations. *Global Encyclopedia of Public Administration, Public Policy, and Governance*. Retrieved from [https://link.springer.com/referenceworkentry/10.1007/978-3-319-31816-5\\_72-1?noAccess=true](https://link.springer.com/referenceworkentry/10.1007/978-3-319-31816-5_72-1?noAccess=true)
- Gilgun, J. (2008). Deductive Qualitative Analysis as Middle Ground: Guided Qualitative Research. Retrieved from [https://www.academia.edu/8221520/Deductive\\_Qualitative\\_Analysis\\_as\\_Middle\\_Ground](https://www.academia.edu/8221520/Deductive_Qualitative_Analysis_as_Middle_Ground)
- Glaser, B., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Mill Valley, CA: Sociology Press.
- Gray, D., Harkreader, S., & Wagar, D. (2001, November). *OPPAGA Program Review*. Report No. 1-56. Workforce Development Education Program. Florida Department of Education. Retrieved from <http://www.oppaga.state.fl.us/reports/pdf/0156rpt.pdf>
- Guba, E. (1981) Criteria for Assessing the Trustworthiness of Naturalistic Inquiries. *ECTJ* 29. Article 75. Retrieved from <https://link.springer.com/article/10.1007/BF02766777#citeas>
- Guest, G., Bunce, A., Johnson, L. (2006). How Many Interviews are Enough? An Experiment with Data Saturation and Variability. Retrieved from <https://chip.uconn.edu/wp-content/uploads/sites/1245/2019/05/Guest-et-al-2006-Saturation.pdf>
- Guster, D., & Brown, C. G. (2012). The application of business intelligence to higher education: Technical and managerial perspectives. *Journal of Information Technology Management*, 23(2), 42-62.
- Hagedorn, L., & McKinney, L. (2015). Performance-Based Funding for Community Colleges in Texas: Are Colleges Disadvantaged by Serving the Most Disadvantaged Students? Retrieved from <http://greatertexasfoundation.org/wp-content/uploads/2015/03/McKinney-Full-White-final.pdf>

- Harnisch, T., (2011). *Performance-Based Funding: A Re-emerging Strategy in Public Higher Education Financing*. Higher Education Policy Brief. Washington, D.C.: American Association of State Colleges and Universities. Retrieved from [https://www.aascu.org/uploadedfiles/aascu/content/root/policyandadvocacy/policypublications/performance\\_funding\\_aascu\\_june2011.pdf](https://www.aascu.org/uploadedfiles/aascu/content/root/policyandadvocacy/policypublications/performance_funding_aascu_june2011.pdf)
- Healy, B. (2013, February 18). Walker wants Major Education Reforms Included in Budget. McIver Institute. Retrieved from <https://www.maciverinstitute.com/2013/02/walker-wants-major-education-reform-included-in-budget/>
- Hearn, J. & McLendon, M. (2013). The Resurgent Interest in Performance-Based Funding for Higher Education. *Academe*; Nov/Dec2013, Vol. 99 Issue 6, p25. Retrieved from <http://connection.ebscohost.com/c/articles/92675589/resurgent-interest-performance-based-funding-higher-education>
- Herzog, K., Schmid, J. (2015). Walker seeks performance-based funding for technical colleges. *Milwaukee Journal-Sentinel*. [Milwaukee]. 4, February, 2015. Retrieved from <http://archive.jsonline.com/business/walker-seeks-performance-based-funding-for-tech-colleges-b99439310z1-290846231.html>
- Higgins, T. (2016, September 9). *The Evolution of Industrial Automation in the Food and Beverage Industry*. Food Processing. Retrieved from <https://www.foodprocessing.com/articles/2016/evolution-industrial-automation/>
- Hillman, N. (2016). Why Performance-Based College Funding Doesn't Work. College Completion Series, Part 4. May 25, 2016. The Century Foundation. Retrieved from <https://tcf.org/content/report/why-performance-based-college-funding-doesnt-work/>
- Hillman, N., Kelchen, R., & Goldrick-Rab, S. (2011). *Recommendations for the effective and equitable implementation of Performance-Based Funding for Wisconsin Higher Education*. (WISCAPE Policy Brief. Madison, WI: University of Wisconsin-Madison, Wisconsin Center for the Advancement of Postsecondary Education (WISCAPE). Retrieved from [https://www.mus.edu/data/Reports/Wisconsin\\_Study\\_Performance\\_Funding.pdf](https://www.mus.edu/data/Reports/Wisconsin_Study_Performance_Funding.pdf)
- Hillman, N., Tandberg, D., & Fryar, A. (2015). Evaluating the Impacts of "New" Performance Funding in Higher Education. *Educational Evaluation and Policy Analysis*, 37(4), 501-519.
- Hillman, N., Fryar, A., Crespín-Trujillo, V. (2018, February). Evaluating the Impact of Performance Funding in Ohio and Tennessee. *American Educational Research Journal*. Vol. 55, No. 1. pp 144-170. Retrieved from <https://journals.sagepub.com/doi/pdf/10.3102/0002831217732951>
- Hyde, K. (2000). Recognizing Deductive Processes in Qualitative Research. Retrieved from [https://www.researchgate.net/publication/235260463\\_Recognising\\_deductive\\_process\\_in\\_qualitative\\_research](https://www.researchgate.net/publication/235260463_Recognising_deductive_process_in_qualitative_research)

- Jenkins, P. D., Wachen, J., Moore, C., Shulock, N. (2012). Washington state student achievement initiative policy study: Final report. New York, NY: Community College Research Center, Columbia University. Retrieved from <http://ccrc.tc.columbia.edu/media/k2/attachments/student-achievement-initiative-final-report.pdf> [Google Scholar](#)
- Johnson, N. & Yanagiura, T. (2016). *Early Results of Outcomes-Based Funding in Tennessee*. Issues Paper. March, 2016. Lumina Foundation. Retrieved from <https://www.luminafoundation.org/files/resources/early-results-tn-0314-1.pdf>
- Jones, D. (2013). Outcomes Based Funding: The Wave of Implementation. National Center for Higher Education Management Systems. Retrieved from [https://www.insidehighered.com/sites/default/server\\_files/files/Outcomes-Based%20Funding%20Report%20\(Final\).pdf](https://www.insidehighered.com/sites/default/server_files/files/Outcomes-Based%20Funding%20Report%20(Final).pdf)
- Jones, T. (2017, November 6). Can Equity Be Bought? A Look at Outcomes-Based Funding in Higher Ed. The Education Trust. Retrieved from <https://edtrust.org/the-equity-line/can-equity-bought-outcomes-based-funding/>
- Kelchin, R. (2017). Do Performance-Based Funding Policies Affect Underrepresented Student Enrollment? Retrieved from [https://kelchenoneducation.files.wordpress.com/2018/03/kelchen\\_pbf\\_prepub\\_jhe.pdf](https://kelchenoneducation.files.wordpress.com/2018/03/kelchen_pbf_prepub_jhe.pdf)
- Kelderman, E. (2019). The Looming Enrollment Crisis: How Colleges are Responding to shifting demographics and New Student Needs. *Chronicle of Higher Education*, [2019].
- Kezar, A. (2012). Understanding Sensemaking/Sensegiving in Transformational Change Processes From the Bottom Up. *Higher Education*, 65(6), 761-780.
- Kezar, Adrianna. 2014. *How Colleges Change: Understanding, Leading, and Enacting Change*. New York: Routledge.
- Klein, S. G. (2015). *Using Performance-Based Funding to Incentivize Change* (RTI Press publication OP-0020-1501). Research Triangle Park, NC: RTI Press.
- Kosten, L., (2016, June). Outcomes-Based Funding and Responsibility Center Management: Combining the Best of State and Institutional Budget Models to Achieve Shared Goals. *Lumina Foundation*. <https://files.eric.ed.gov/fulltext/ED587419.pdf>
- Kremer, R. (2022, December 8). Enrollment at Wisconsin technical colleges grows by more than 10 percent. Wisconsin Public Radio Report. Retrieved from <https://www.wpr.org/enrollment-wisconsin-technical-colleges-grows-wtcs-factbook>
- Lane, J-E (2005). *Public Administration and Public Management. The principal-agent perspective*. Retrieved from [file:///C:/Users/kathr/Desktop/10.4324\\_9780203029763\\_previewpdf.pdf](file:///C:/Users/kathr/Desktop/10.4324_9780203029763_previewpdf.pdf)

- Lane, J. (2012 ). Higher Education and Economic Competitiveness. *Colleges and Universities as Economic Drivers: Measuring Higher Education's Contribution to Economic Development*. Chapter 1. pp 1-20. Retrieved from [https://www.researchgate.net/publication/271387344\\_Higher\\_Education\\_and\\_Economic\\_Competitiveness](https://www.researchgate.net/publication/271387344_Higher_Education_and_Economic_Competitiveness)
- Lederman, D (2008, December 17). Performance Funding 2.0. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/news/2008/12/17/perform>
- Levitt, M., & Joyce, M. (1987). *The Growth and Efficiency of Public Spending*. Cambridge: Cambridge University Press.
- Li, A.Y. (2014). Covet Thy Neighbor or “Reverse Policy Diffusion”? State Adoption of Performance Funding 2.0. *Research in Higher Education*, November 2017, Volume 58, pp 746–771. Retrieved from <https://link-springer-com.ezproxy.library.wisc.edu/content/pdf/10.1007%2Fs11162-016-9444-9.pdf>
- Li, A.Y. (2014). Performance Funding in the States: An Increasingly Ubiquitous Public Policy for Higher Education. *Higher Education in Review*, 11, pp 1–29. Retrieved from <https://www.researchgate.net/publication/303408515>
- Li, A.Y. (2017). Dramatic Declines in Higher Education Appropriations: State Conditions for Budget Punctuations. *Research in Higher Education*, Volume 58, pp 395-429. Retrieved from <https://link-springer-com.ezproxy.library.wisc.edu/article/10.1007/s11162-016-9432-0>
- Li, A.Y. (2018, October 29). Lessons Learned: A Case Study of Performance Funding in Higher Education. Third Way. Retrieved from <https://www.thirdway.org/report/lessons-learned-a-case-study-of-performance-funding-in-higher-education>
- Libguides, UTA, (2022). Quantitative and Qualitative Research. UTA Libraries. Retrieved from [https://libguides.uta.edu/quantitative\\_and\\_qualitative\\_research/qual](https://libguides.uta.edu/quantitative_and_qualitative_research/qual)
- Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Sage.
- Lockwood, D. (2014). Wisconsin’s Skills Gap Won’t Go Away, But Employers Might. *Milwaukee Business Journal*. Milwaukee. 18 September, 2014. Retrieved from <https://www.bizjournals.com/milwaukee/blog/2014/09/wisconsins-skills-gap-wont-go-away-but-employers.html>
- Long, B. (2015). The Remediation Debate: Are we serving the needs of underprepared college students? National Center for Public Policy and Higher Education. Retrieved from <http://www.highereducation.org/crosstalk/ct0405/voices0405-long.shtml>
- Louisiana Board of Regents (2018). Outcomes-Based Funding Formula. Retrieved from <https://regents.la.gov/divisions/finance-facilities/outcomes-based-funding-formula/>

- Marinova, A. (2018). Performance Funding for Community Colleges: A Short-lived Experiment, or Blueprint for the Future? The Boston Foundation. Retrieved from <https://www.tbf.org/blog/2018/december/community-college-funding-followup>
- Maxwell, J. (2005). *Qualitative Research Design: An Interactive Approach / Joseph A. Maxwell*. Second edition. Thousand Oaks, CA: Sage Publications, 2006. Print.
- McGrath, C., Palmgren, P., & Liljedahl, M. (2019) Twelve tips for conducting qualitative research interviews, *Medical Teacher*, 41:9, 1002-1006, DOI: [10.1080/0142159X.2018.1497149](https://doi.org/10.1080/0142159X.2018.1497149)
- McLendon, M., Hearn, J. (2013, January). The Resurgent Interest in Performance-Based Funding for Higher Education. *The Academe*. Retrieved from [https://www.researchgate.net/publication/257832421\\_The\\_Resurgent\\_Interest\\_in\\_Performance-Based\\_Funding\\_for\\_Higher\\_Education](https://www.researchgate.net/publication/257832421_The_Resurgent_Interest_in_Performance-Based_Funding_for_Higher_Education)
- McLendon, M., Hearn, J., & Deaton, R. (2006). Called to Account: Analyzing the Origins and Spread of State Performance-Accountability Policies for Higher Education. *Educational Evaluation and Policy Analysis*, 28(1), 1-24. Retrieved December 14, 2020, from <http://www.jstor.org/stable/3699540>
- McCready, B. (2013). Performance-Based Funding (WISCAPE Policy Brief). Madison, WI: University of Wisconsin– Madison, Wisconsin Center for the Advancement of Postsecondary Education (WISCAPE). Retrieved from <https://www.wiscapewisc.edu/docs/wiscapedocuments/pb014.pdf?sfvrsn=4>
- McKeown-Moak, M. (2013). The “New” Performance Funding in Higher Education. *Educational Considerations*: Vol. 40: No. 2. <https://doi.org/10.4148/0146-9282.1082>
- McKeown-Moak, M. & Mullin Christopher M. (2015). *Bridging the Great Divide: Translating Research into Policy*. Vol. 8, Iss. 2, 2015. NASPA Journal About Women in Higher Education.
- Merriam, S. 1998. *Qualitative Research and Case Study Applications in Education*. San Francisco: Jossey-Bass Publishers.
- Merriam, S. B. (2009). *Qualitative Research: A Guide to Design and Implementation*. San Francisco, CA: Jossey-Bass.
- Miao, K. (2012). Performance-Based Funding of Higher Education: A Detailed Look at Best Practices in 6 States. Center for American Progress, August 2012. Retrieved from [https://www.americanprogress.org/wp-content/uploads/issues/2012/08/pdf/performance\\_funding.pdf](https://www.americanprogress.org/wp-content/uploads/issues/2012/08/pdf/performance_funding.pdf)
- Millar, R and Millar, A., eds. (1981, September). *Developing Client Outcome Monitoring Systems: A guide for State and Local Social Service Agencies*. Washington, DC: The Urban Institute.

- Miller, T. (2016, March). *Higher Education Outcomes-Based Funding Models and Academic Quality*. (Lumina Issue Papers). Retrieved from <https://www.luminafoundation.org/files/resources/ensuring-quality-1.pdf>
- Miles, M.B., Huberman, A.M. and Saldana, J. (2014) *Qualitative Data Analysis: A Methods Sourcebook*. Sage, London.
- Mills, J. & Birks, M. (2014). Introducing qualitative research. In *Qualitative methodology* (pp. 2-16). SAGE Publications, Inc., <https://www-doi-org.ezproxy.library.wisc.edu/10.4135/978147NCPPE>. (2010). Beyond the Rhetoric. Improving College Readiness Through Coherent State Policy. The National Center for Public Policy and Higher Education. Retrieved from [http://www.highereducation.org/reports/college\\_readiness/CollegeReadiness.pdf](http://www.highereducation.org/reports/college_readiness/CollegeReadiness.pdf)
- National Association of Manufacturers (2014) Data and Reports. Retrieved from [http://documents.nam.org/Nam.org\\_Web\\_Archive/www.nam.org/Searchf979.html?catid=313&sortby=atoz](http://documents.nam.org/Nam.org_Web_Archive/www.nam.org/Searchf979.html?catid=313&sortby=atoz)
- National Conference of State Legislatures. (2015, September 8). Higher Education Appropriations. Retrieved from <http://www.ncsl.org/research/education/higher-education-appropriations.aspx>
- Ness, E., Deupree, M., & Gándara, D. (2014). Campus responses to outcomes-based funding in Tennessee: Robust, aligned, and contested. Retrieved from <https://www.tn.gov/assets/entities/thec/attachments/FordFoundationPaper.pdf>
- Nevada System of Higher Education. (2012). Budget Cut Impacts on NSHE Institutions. Retrieved from [http://system.nevada.edu/tasks/sites/Nshe/assets/File/Initiatives/2013legislative/Institution%20Budget%20Cut%20Impact\\_FINAL.pdf](http://system.nevada.edu/tasks/sites/Nshe/assets/File/Initiatives/2013legislative/Institution%20Budget%20Cut%20Impact_FINAL.pdf)
- Neves, C., Wolf, J., & Benton, B., (1986). The Use of Management Indicators in Monitoring the Performance of Human Service Agencies. In Joseph S. Wholey, Mark A. Abramson, and Christopher Bellavita, eds., *Performance and Credibility*. Lexington, MA: D.C. Heather 129-0148.
- Nowell, L., Norris, J., White, D., Moules, N. (2017, Oct 2). *Thematic Analysis: Striving to Meet the Trustworthiness Criteria*. International Journal of Qualitative Methods. <https://journals.sagepub.com/doi/pdf/10.1177/1609406917733847>
- Offenstein, J., & Shulock, N. (2010). The Completion Arch: Measuring Community College Student Success. The College Board. Retrieved from <http://media.collegeboard.com/digitalServices/pdf/advocacy/arch/The-Completion-Arch-Progress-What-the-Research-Tells-Us.pdf>
- Offenstein, J., & Shulock, N. (2010). Taking the Next Step: The Promise of Intermediate Measures for Meeting Post-Secondary Completion Goals. Retrieved from [http://www.jff.org/sites/default/files/publications/ATD\\_TakingtheNextStep\\_092810.pdf](http://www.jff.org/sites/default/files/publications/ATD_TakingtheNextStep_092810.pdf)

- Ohio Higher Education Funding Commission. (2012). Recommendations of the Ohio Higher Education Funding Commission. November, 2012. Retrieved from <https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/financial/ssi/Ohio%20Higher%20Education%20Funding%20Commission%20-%20Report.pdf>
- Ollove, M (2022, March 25). Health Worker Shortage Causes States to Scramble. PEW Stateline Article. Retrieved from <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2022/03/25/health-worker-shortage-forces-states-to-scramble>
- Ortagus, J. C., Kelchen, R., Rosinger, K., & Voorhees, N. (2020). Performance-Based Funding in American Higher Education: A Systematic Synthesis of the Intended and Unintended Consequences. *Educational Evaluation and Policy Analysis*, 42(4), 520–550. <https://doi.org/10.3102/0162373720953128>
- Palinkas, L., Horwitz, S., Green, C., Wisdom, J., Duan, N., and Hoagwood, K. (2013). Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Administration and policy in mental health*. 42. 10.1007/s10488-013-0528-y. Retrieved from [https://www.researchgate.net/publication/258315317\\_Purposeful\\_Sampling\\_for\\_Qualitative\\_Data\\_Collection\\_and\\_Analysis\\_in\\_Mixed\\_Method\\_Implementation\\_Research](https://www.researchgate.net/publication/258315317_Purposeful_Sampling_for_Qualitative_Data_Collection_and_Analysis_in_Mixed_Method_Implementation_Research)
- PAR. (2008). Higher Education Performance Funding: Louisiana’s Options. Public Affairs Research Council of Louisiana, Inc. May, 2008. Publication 316. Retrieved from <http://parlouisiana.org/wp-content/uploads/2016/03/Higher-Education-Performance-Funding-Louisianas-Options.pdf>
- Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health services research*, 34(5 Pt 2), 1189–1208. <https://pubmed.ncbi.nlm.nih.gov/10591279/>
- Patton, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice*. Sage publications.
- Paulson, A. (2013). Study: Community colleges lack rigor, but incoming students are ill prepared. *Christian Science Monitor*, May 7, 2013. Retrieved from <http://www.csmonitor.com/USA/Education/2013/0507/Study-Community-colleges-lack-rigor-but-incoming-students-ill-prepared>
- Peel, K. (2020). A Beginner’s Guide to Applied Educational Research using Thematic Analysis. *Practical Assessment, Research, and Evaluation*: Vol 25. Article 2. Retrieved from <https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1390&context=pare>
- Peterson, K., & Bickman, L. (1992). Using Program Theory in Quality Assessments of Children’s Mental Health Services. In H.T. Chen & P. Rossi (Eds.), *Using Theory to Improve Program and Policy Evaluations* (pp. 165-176). New York: Greenwood.
- Petrick, R. (2010, February). *Funding based on course completions: The Ohio model (v.1.0)*. Presentation to the Texas Higher Education Coordinating Board, Austin, TX.

- Pew Research Center (2018). Social and Demographic Trends. Retrieved from [https://www.pewsocialtrends.org/2018/05/22/demographic-and-economic-trends-in-urban-suburban-and-rural-communities/psd\\_05-22-18\\_community-type-01-01/](https://www.pewsocialtrends.org/2018/05/22/demographic-and-economic-trends-in-urban-suburban-and-rural-communities/psd_05-22-18_community-type-01-01/)
- Pfeffer, J., & Salancik, G. (1978-2003). *The External Control of Organizations: A Resource Dependency Theory*. Stanford, CA., Stanford University Press.
- Qualitative Research Methods (2018) Qualitative Research Methods: A Data Collectors Field Guide. Retrieved from <https://course.ccs.neu.edu/is4800sp12/resources/qualmethods.pdf>
- Rhoades, G., Sporn, B. (2002). New Models of Management and Shifting Modes and Costs of Production: Europe and the United States. *Tertiary Education and Management* 8, 3–28. <https://doi.org/10.1023/A:1017973006062>
- RIA (2017, January 17). The History of Robotics in the Automotive Industry. Robotics Industry Association. Retrieved from <https://www.robotics.org/blog-article.cfm/The-History-of-Robotics-in-the-Automotive-Industry/24>
- Rainie, L. & Anderson, J., (2017, May). *The Future of Jobs & Jobs Training*. Pew Research Center. Retrieved from <https://www.pewresearch.org/internet/2017/05/03/the-future-of-jobs-and-jobs-training/>
- Rog, D. & Huebner, R. (1992). Using Research and Theory in Developing Innovative Programs for Homeless Individuals. In H. T. Chen & P. Rossi (Eds.), *Using Theory to Improve Program and Policy Evaluations* (pp. 1290-144). New York. Greenwood.
- Rogers, R. (2018). Coding and Writing Analytic Memos on Qualitative Data: A Review of Johnny Saldaña's The Coding Manual for Qualitative Researchers. *The Qualitative Report*, 23(4), 889-892. Retrieved from <https://nsuworks.nova.edu/tqr/vol23/iss4/12>
- Rosinger, K., Ortagus, J., Kelchen, R., Cassell, A., & Voorhees, N. (2020, January). *The Landscape of Performance-Based Funding in 2020*. InformEd States. Policy Brief. Retrieved from [https://static1.squarespace.com/static/5d9f9fae6a122515ee074363/t/5e3454ad239e650b8423af24/1580487858341/IS\\_Brief\\_LandscapeofPBF-2020.pdf](https://static1.squarespace.com/static/5d9f9fae6a122515ee074363/t/5e3454ad239e650b8423af24/1580487858341/IS_Brief_LandscapeofPBF-2020.pdf)
- Rutherford, A., & Rabovsky, T (2014, August 10). Evaluating Impacts of Performance Funding Policies on Student Outcomes in Higher Education. *American Academy of Political and Social Science*. SAGE Journals. Retrieved from <https://journals-sagepub-com.ezproxy.library.wisc.edu/doi/full/10.1177/0002716214541048>
- Ryan, F., Coughlan, M., & Cronin, P. (2009, June). *Interviewing in Qualitative Research: The One-to-One Interview*. *International Journal of Therapy and Rehabilitation*. Retrieved from <file:///C:/Users/x/Documents/Onetooneinterviewing.pdf>
- Sandford, T. and Hunter, J. (2011, November 30). Impact of Performance-funding on Retention and Graduation Rates. *Education Policy Analysis Archives*. Volume 19. Number 33., Arizona State University. Retrieved from <https://epaa.asu.edu/ojs/article/view/949/939>

- Saldana, J. (2016). *The Coding Manual for Qualitative Researchers* (3rd ed.). London: Sage.
- Savenye, W.C., Robinson, R.S. (2005). Using qualitative research methods in higher education. *J. Comput. High. Educ.* **16**, 65–95. Retrieved from <https://doi.org/10.1007/BF02961475>
- Schoen, J.W. (2015, June 16). Why Does a College Degree Cost So Much? *CNBC*. Retrieved from <http://www.cnbc.com/2015/06/16/why-college-costs-are-so-high-and-rising.html>
- Schrock, J. (2019). Higher Education: Past, Present, Future. Retrieved from <https://cdhe.colorado.gov/sites/highered/files/documents/CHE-Retreat-Presentation.pdf>
- Shulock, N. (2011). Concerns about performance-based funding and ways that states are addressing the concerns. Sacramento, CA: Institute for Higher Education Leadership and Policy. Retrieved from [http://www.csus.edu/ihelp/PDFs/B\\_performance%20funding\\_05-11.pdf](http://www.csus.edu/ihelp/PDFs/B_performance%20funding_05-11.pdf) [Google Scholar](#)
- Snyder, M. (2011). *Role of performance funding in higher education's reform agenda: A glance at some state trends*. Presentation given at the October 2011 Annual Legislative Institute on Higher Education, National Conference of State Legislatures, Denver, CO.
- Snyder, M. (2015). Driving Better Outcomes: Typology and Principles to Inform Outcomes-Based Funding Models. <http://hcmstrategists.com/drivingoutcomes/wp-content/themes/hcm/pdf/Driving%20Outcomes.pdf>
- Sparks, E., & Waits, M.J. (2011). *Degrees for what jobs? Raising expectations for universities and colleges in a global economy*. Washington, DC: National Governors Association, NGA Center for Best Practices. Retrieved from <http://www.nga.org/files/live/sites/NGA/files/pdf/1103DEGREESJOBSPDF>
- Strauss, A., & Corbin, J. (1994). *Grounded theory methodology: An overview*. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (p. 273–285). Sage Publications, Inc.
- Sundler, A., Lindberg, E., Nilsson, C., and Palmer, L. (2019, April 7). Quantitative Thematic Analysis based on descriptive phenomenology. Wiley On-Line Library. Retrieved from <https://onlinelibrary.wiley.com/doi/10.1002/nop2.275>
- Tandberg, D., Hillman, N., Barakat, M. (2014, December). *State Higher Education Performance Funding for Community Colleges: Diverse Effects and Policy Implications*. *Teachers College Record* **116** (12). Retrieved from [https://www.researchgate.net/publication/279333029\\_State\\_Higher\\_Education\\_Performance\\_Funding\\_for\\_Community\\_Colleges\\_Diverse\\_Effects\\_and\\_Policy\\_Implications](https://www.researchgate.net/publication/279333029_State_Higher_Education_Performance_Funding_for_Community_Colleges_Diverse_Effects_and_Policy_Implications)
- Tennessee Higher Education Commission (2015). 2014-2015 Tennessee Higher Education Fact Book. Nashville, TN. Retrieved from [https://www.tn.gov/assets/entities/thec/attachments/LM2012\\_Joint%20Report%20Pre-K-Higher%20Ed%202012%20FINAL.pdf](https://www.tn.gov/assets/entities/thec/attachments/LM2012_Joint%20Report%20Pre-K-Higher%20Ed%202012%20FINAL.pdf)

- The PEW Charitable Trusts. April 13, 2017. *Fiscal 50: State Trends and Analysis*. Retrieved from <http://www.pewtrusts.org/en/multimedia/data-visualizations/2014/fiscal-50#ind0>
- Thomas, D. (2006). A General Inductive Approach for Analyzing Qualitative Evaluation Data. Retrieved from [https://www.researchgate.net/profile/David\\_Thomas11/publication/224029397\\_A\\_General\\_Inductive\\_Approach\\_for\\_Analyzing\\_Qualitative\\_Evaluation\\_Data/links/0fcfd50a2aed82ade9000000/A-General-Inductive-Approach-for-Analyzing-Qualitative-Evaluation-Data.pdf](https://www.researchgate.net/profile/David_Thomas11/publication/224029397_A_General_Inductive_Approach_for_Analyzing_Qualitative_Evaluation_Data/links/0fcfd50a2aed82ade9000000/A-General-Inductive-Approach-for-Analyzing-Qualitative-Evaluation-Data.pdf)
- Thorne, S. (2000). Data analysis in qualitative research. *Evidence Based Nursing*, 3, 68–70. doi:10.1136/ebn.3.3.68
- Tie, Y., Birks, M., & Francis, K. (2019). Grounded Theory Research: A Design Framework for Novice Researchers. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6318722/>
- University System of Ohio Board of Regents. (2012). Task force on Complete College Ohio: *Task force report and recommendations*. Columbus, OH: Board of Regents. Retrieved from [https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/completion/CCO-task-force-report\\_FINAL.pdf](https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/completion/CCO-task-force-report_FINAL.pdf)
- Urban Institute. (2015). State and Local Initiatives-State and Local Spending. Retrieved from <https://www.urban.org/policy-centers/cross-center-initiatives/state-local-finance-initiative/projects/state-and-local-backgrounders/state-and-local-expenditures>
- Urban Institute, (2019). State and Local Expenditures. Retrieved from <https://www.urban.org/policy-centers/cross-center-initiatives/state-and-local-finance-initiative/state-and-local-backgrounders/state-and-local-expenditures#:~:text=The%20National%20Association%20of%20State,from%2020%20percent%20in%202008.&text=Highway%20and%20road%20spending%20was,corrections%20spending%20was%203%20percent.>
- U.S. Department of Education. (2011). *College completion tool kit*. Washington, D.C.: Author. Retrieved from [http://www.whitehouse.gov/sites/default/files/college\\_completion\\_tool\\_kit.pdf](http://www.whitehouse.gov/sites/default/files/college_completion_tool_kit.pdf)
- U.S. Department of Labor. (1991). *Performance Measurement in Federal Job Training and Education Programs*. Paper prepared by the Division of Performance Management and Evaluation, Employment and Training Administration.
- U.S. Bureau of Labor Statistics. (2022, April 28). Employment situation summary. Retrieved from <https://fred.stlouisfed.org/series/WIUR> .
- U.S. Bureau of Labor Statistics. (2022, November 18). Unemployment Rate in Wisconsin. Retrieved from <https://fred.stlouisfed.org/series/WIUR>
- UTA Libraries. (2022). Quantitative and Qualitative Research. What is Qualitative Research? Retrieved from [https://libguides.uta.edu/quantitative\\_and\\_qualitative\\_research/qual](https://libguides.uta.edu/quantitative_and_qualitative_research/qual)

- Washington Office of Fiscal Management (2013, December 31). Technical Incentive Funding Model Task Force Report. Retrieved from [https://ofm.wa.gov/sites/default/files/public/legacy/reports/Technical\\_Incentive\\_Funding\\_Model\\_TaskForce\\_Report.pdf](https://ofm.wa.gov/sites/default/files/public/legacy/reports/Technical_Incentive_Funding_Model_TaskForce_Report.pdf)
- Wayt, L. & LaCost, B. (2016, April 1). Transitioning to Performance-Based State Funding: Concerns, Commitment, and Cautious Optimism. *Educational Considerations*. Volume 43, Number 2. Retrieved from <https://newprairiepress.org/cgi/viewcontent.cgi?referer=&httpsredir=1&frbrVersion=2&article=1024&context=edconsiderations>
- Whitford, E. (2020, September 16). Report Examines Years of Performance-Based Funding Studies. The Chronicle of Higher Education. Retrieved from <https://www.insidehighered.com/quicktakes/2020/09/16/report-examines-years-performance-based-funding-studies>
- Williams, E. (2014). *Tennessee: The Birth and Development of Performance-based Funding in Higher Education*. (Honors Theses). Retrieved from <http://scholar.utc.edu/cgi/viewcontent.cgi?article=1009&context=honors-theses>
- Wisconsin Budget Project (2019). Summary of the 2019-21 Budget for Higher Education. Retrieved from <http://www.wisconsinbudgetproject.org>
- Wholey, J. & Hatry, H., (1992). The Case for Performance Monitoring. *Public Administration Review*. Vol. 52, No. 6 (Nov. - Dec., 1992), pp. 604-610. Wiley.
- Wood, J (2012). Examining academic variables affecting the persistence and attainment of black male collegians: a focus on academic performance and integration in the two-year college. *Race Ethnicity and Education 2012*, 1–22, iFirst article. Retrieved from <https://jlukewood.com/wp-content/uploads/2012/06/examining-academic-variables2.pdf>
- WTCSsystem, (2014). Formula for Allocating WTCS Performance Funding. June, 2014. Retrieved from <http://www.wtcsystem.edu/wtcsexternal/cmsspages/getdocumentfile.aspx?nodeguid=a1e49e6f-8d6b-4a12-b625-f9f5bc316dd2>
- WTCSsystem, (2015). Wisconsin Technical College System Board. 2012-15 Strategic Directions Final Report. November 2015. Retrieved from <http://www.wtcsystem.edu/wtcsexternal/cmsspages/getdocumentfile.aspx?nodeguid=bc8dff01-df92-4684-a207-ee53020b4531>
- WTCSsystem, (2016). Outcomes-Based Funding. 2015-16 Report for the Wisconsin Technical College System. May, 2016.
- WTCSsystem, (2020). About Wisconsin Technical Colleges. Retrieved from <https://www.wistechcolleges.org/about-wisconsins-technical-colleges>

- WTCSsystem (2020). 2018-19 Factbook: Student Data. Retrieved from <https://wtcsystem.edu/WtcsExternal/CMSPages/GetDocumentFile.aspx?nodeguid=f119d3ce-4ac9-4bb6-b819-df85f9eea257&lang=en-US>
- WTCSsystem, (2021). Strategic Directions. Retrieved from <https://www.wtcsystem.edu/impact/publications/2021-2025-wtcs-strategic-directions/>
- WTCSsystem, (2022). 2021-2022 Student Fact Book.
- WTCS-District Boards Association. (24, April, 2015). *Three of Four Technical College Priorities are Secured in Initial Budget Voting; Action Pending on Fourth*. Budget Update. Retrieved from <http://districtboards.org/advocacy/conconbudgetupdate042415.pdf>
- Yin, R. (1994). *Case study research: Design and methods*. (2nd ed., 1st ed., 1984; rev. ed., 1989). Thousand Oaks, CA: Sage Publications.
- Yin, R. K. (2002). *Case study research: Design and methods*. Thousand Oaks, CA: SAGE Publications.
- Yin, R. (2014). *Case Study Research Design and Methods* (5th ed.). Sage Publications.
- Yin, R. (2016). *Qualitative Research from Start to Finish* (2nd ed). Guilford Press.
- Yin, R. (2017) *Case Study Research and Applications: Design and Methods* (2nd ed). Sage Publications.
- Yin, R. (2018) *Case Study Research and Applications: Design and Methods* (6th ed). Sage Publications
- Zeidenberg, M., Jenkins, D., & Scott, M. (2012, November). Not Just Math and English: Courses That Pose Obstacles to Community College Completion. Community College Research Center. Retrieved from <https://ccrc.tc.columbia.edu/media/k2/attachments/not-just-math-and-english.pdf>
- Zumeta, W., (2001). Public Policy and Accountability in Higher Education: Lessons from the Past and Present for the New Millennium. *The States and Public Higher Education Policy: Affordability, Access, and Accountability*, pp. 155-197. Baltimore, MD: Johns Hopkins University Press. Retrieved from [https://books.google.com/books?hl=en&lr=&id=Zx38ukL2rGYC&oi=fnd&pg=PA155&dq=Zumeta,+W.,+\(2001\).&ots=ttWS4nQ9tP&sig=VuwTGsuQt2YVnr6cNBXshfllcLY#v=onepage&q=Zumeta%2C%20W.%2C%20\(2001\).&f=false](https://books.google.com/books?hl=en&lr=&id=Zx38ukL2rGYC&oi=fnd&pg=PA155&dq=Zumeta,+W.,+(2001).&ots=ttWS4nQ9tP&sig=VuwTGsuQt2YVnr6cNBXshfllcLY#v=onepage&q=Zumeta%2C%20W.%2C%20(2001).&f=false)

## Appendix A

### Initial (June 2014) Formula for Allocating WTCS Performance Funding Selection of Seven of the Nine Performance Criteria Required

The statute provides that performance funding be based on a college's performance with respect to seven of the nine performance criteria. Annually, each college will designate which of the seven criteria will be used for its allocation. This annual designation will be made prior to aid being calculated for each fiscal year.

#### Criteria #1: Job Placement

Statutory Language: The placement rate of students in jobs related to students' programs of study.

#### Criteria #2: High Demand Fields

Statutory Language: The number of degrees and certificates awarded in high-demand fields. The board and the department of workforce development shall jointly determine what constitutes high-demand fields and revise the determination as necessary.

#### Criteria #3: Industry-Validated Curriculum

Statutory Language: The number of programs or courses with industry-validated curriculum.

#### Criteria #4: ABE Transition

Statutory Language: The transition of adult students from basic education to skills training.

#### Criteria #5: ABE Services and Success

Statutory Language: The number of adult students served by basic education courses, adult high school or English language learning courses, or courses that combine basic skills and occupational training as a means of expediting basic skills remediation, and the success rate of adult students completing such courses.

#### Criteria #6: Dual Enrollment

Statutory Language: Participation in dual enrollment programs.

#### Criteria #7: Workforce Training

Statutory Language: The workforce training provided to businesses and individuals.

#### Criteria #8: Collaboration

Statutory Language: Participation in statewide or regional collaboration or efficiency initiatives.

#### PBF Criteria #9: Special Populations

Statutory Language: Training or other services provided to special populations or demographic groups that can be considered unique to the district.

## Appendix B

### Performance-Based Funding Literature Review

#### What We Know-by Literature Strand

1. PBF 1.0
  - a. States spending less on higher education
  - b. Funding in form of a bonus
  - c. Slow adaptations after Tennessee's initial 1979 launch
  - d. Many starts, stops, redo's due to insignificant funding, poor designs, no shared goals
  - e. Focus on completion and not persistence
2. PBF 2.0
  - a. Tax revenue shortages hastened declining state support (along with competition among agencies) for higher education along with desire to make institutions more efficient
  - b. Lumina Foundation funded Quality Improvement Efforts in 11 states-thus 2.0
  - c. Instead of bonus, funding tied to reaching goals
  - d. Shift from state funding for enrollment & campus needs to state priorities (graduates)
  - e. Focus on degrees conferred, retention, transfers up
  - f. Recession in 2007 increased number of college students
  - g. Students and Parent bore brunt of mounting costs
  - h. Results-more short-term certificates, not A/D or Bachelors' degrees
  - i. Question whether costs now outweigh value of degree
3. Measurement/Data
  - a. Data collection a key to measuring results
  - b. Persistence, milestone achievement, graduation rates in many plans
  - c. Underserved populations and non-traditional student's success
  - d. Measurement critical at two-year schools critical due to serving at-risk and varied need students.
  - e. Goals and measurement systems improved to help persistence
  - f. Data and measurement now critical due to amount of funding at stake
4. Phase-in
  - a. Use first year to adjust to new parameters before funding change starts
  - b. Roll out over several years to allow for system integration and use multi-year averages
  - c. Phase-in to ease financial burden
  - d. Messaging/communication critical to gain support and dedication
5. Performance Metrics
  - a. Most plans use degree completion as a key metric along with credits earned, persistence and transfers out
  - b. Using outcomes difficult to manage as educating a college student is not simple
  - c. Equity metrics are important: minority achievements (retention & progress), economically disadvantaged. Otherwise hurts students of low income and color
  - d. Communicating and managing measurement systems critical to success
6. Performance Monitoring

- a. With 2.0, now have robust computer systems to assist with data gathering and measurement.
  - b. Monitoring challenges exist due to 4-year, 2-year, community, technical variances
  - c. Inequity exists between small and large organizations. Need equal footing
  - d. Most monitoring occurs on annual basis
  - e. Dashboards provide immediate feedback on progress
7. Improving Student Outcomes
- a. Link between PBF and campus/organizational policy development to improve student achievement
  - b. Milestone achievement critical- i.e., credits earned, college math and English completion, and continuous enrollments good predictors
  - c. Reward progress (California and Washington)
  - d. Overall results show little or no improvement in graduation rates
  - e. Suggestions to improve instruction-eliminating unnecessary courses (not related to degree), no electives, earlier student counselling/mentoring
8. Impacts
- a. No strong link between PBF and student success or degree completion
  - b. Internally, more awareness of mission and goals and alignment to state expectations, more transparency, accountability, additional use of data for planning/decisions. Improved up front registration and support. Healthy competition between schools
  - c. Persistence seems to have improved (Indiana, Ohio, Tennessee)
  - d. Policy abandonment due to fiscal, political, implementation, and “overwhelming the organization” issues
  - e. As of 2016 modest gains in graduation of black and Hispanic students (16 state study)
  - f. More short-term certificates (NOTE- Impact of robust economy here?)
9. Unintended Consequences
- a. Hard to gauge institution performance-few outcomes, gaming, mission distortion, lack of awareness (Money seen at top only), creaming students, quality compromising, dwindling internal support, plan defiance.
  - b. Unless faculty included, can be extremely detrimental.
  - c. Unless all included in development of plan, support lacks.
  - d. Deceptive compliance (timing reports to look good).
  - e. Gaming system when competing with rival institutions, lowering standards, limit student entry and/or move along despite performance
  - f. Do programs have quality reporting systems?
  - g. Lack of alignment with high schools causes incoming deficits and math and English
  - h. 2-year schools do all the remediation. Yet, costly to implement
  - i. Restricting access is a tactic to improve results. Minimize recruiting at certain schools
  - j. More short-term certificates lead to lower overall wages
  - k. Colleges in best financial position are better at serving students. Funding per student is a strong predictor of graduation
  - l. Weakened academic standards, tight admissions, cost of compliance (especially institutions lacking resources), lower morale and less faculty involvement/collaboration between colleges

10. OBF and WI Technical Colleges

- a. Started in 2013-14 and in place for seven years
- b. Graduating funding 10% to 30% year three
- c. 10 criteria-pick 7 to measure. Can change year-to-year
- d. Impacts?

11. Research Gaps

- a. Uniqueness of each state makes it difficult to generalize results
- b. Declining enrollment trends impact (due to strong economy and COVID-19)
- c. What strategies are leading to improved results?
- d. Impacts of institutional research departments
- e. Case study (N=1). Can this be generalized for state?

## Appendix C

### Performance-Based Funding Literature Review

Table Summarizing Authors' Findings By Literature Strand

Author	Findings
<b>Performance Funding 1.0</b>	
Hillman, 2016	States spending less on Higher Ed
Kansas Board of Regents, 2019	Funding R&D for Job placement and economic development
Dougherty & Natow; Dougherty & Reddy; Rosinger 2015, 2013, 2020	PBF has gained attention as an alternative to traditional funding
McClendon, 2013	Slow adoption of initial PBF 1.0
Dougherty & Reddy, 2011	First PBF was in form of a bonus (inducement to achieve metrics tied to outcomes)
Williams, 2014	Tennessee initial incentive 2% above normal fund
Hearn & McClendon, 2013	21 states with PBF by 2001
Miao, 2012	Starts and stops of PBF were due to design flaws such as lack of accounting for institutional differentiation and focus on degree completion and not persistence. Also, not enough money allocated
Hillman, Kelchen, Goldrick-Rab, 2011	Lack of significant inducements, too many self-interests, and no shared goals meant rocky existence first three decades
McKeown-Maok & Mullin, 2015	Early models underpinned next generation (2.0)
<b>Performance Funding 2.0</b>	
Kelderman, 2019	Declining tax revenue and state support for higher education started PBF 2.0
Hearn & McClendon, 2013	Lumina Foundation funding for Quality Improvement in 11 states tied state funding to quality improvements (2.0)
Hillman, Tandberg & Fryar, 2015	Other support came from Gates Foundation, National Governor's Assoc., and Complete College America. Little effect on retention or A/D production. More short-term certificates
Dougherty & Ready, 2011	Instead of bonus, funding tied to reaching goals
McKeown-Moak, 2013	Goals-Degrees conferred, retention, transfers upward
Kelderman, 2019	2007 Economic depression led to increased college enrollments
Urban Institute, 2015	Unemployment, State revenues lag, public welfare programs and agency competition led to less money available for higher education
Hillman, 2016	State's divestiture led to greater burden on students/parents (higher tuition)

Dougherty et al., 2014	Desire to motivate and make higher ed efficient were two factors leading to PBF 2.0 ascent
Klein, 2015	Government Financial Aid, student loan policies, poor persistence, and graduation were other factors
Harnisch, 2011 Li, 2018	Example: Louisiana Grad Act 2010-Schools required to have, baseline, short and long-term measures, benchmarks, long range targets and annual reporting -Graduate more students to fill worker shortage (fourth factor)
Hearn & McClendon, 2013	Competing demands for limited state dollars in an unsettled political environment
Albright, 2009; Harnisch, 2011; Lederman, 2008; Snyder, 2011; Sparks and Waits, 2011	PBF 2.0 in Ohio, Tennessee, Washington received endorsement from USDOE and NGA provide credibility to improve funding mechanisms and accountability
Johnson & Yanagiura, 2016	Tennessee's revised program 68% total state funding (four-year) and 49% for two-year schools
Kelderman, 2019	Tennessee created one system for community colleges, simplified transfers and increased dual-enrollment opportunities for H.S. students
Schoen, 2015	Escalating tuition-does cost outweigh value of higher education
Kelderman, 2019	Skepticism over increased college cost and Degree value. At same time Obama wanted to lead world in college grads by 2020, generating demand for post-secondary education.
Archibald & Feldman, 2008	Cost disease-led to higher tuition and spending by colleges. Can't create efficiencies like business
Higgins, 2016	Food industry drives down cost by automation
Archibald & Feldman	Advanced knowledge/skills by administrators, faculty, and support staff critical-70-80% of total operating costs. Revenue generation must increase, hence tuition.
Hearn & McClendon, 2013	Partisan control of legislatures, gubernatorial strength, election timing-factors in accountability movement
Dougherty, et al., 2011	Republican control caused heightened oversight
Harnisch, 2011	Shift from state inputs to campus outcomes and from institutional needs to state priorities
<b>Driving Perf Through Measurement/Data</b>	
Harnisch, 2011	Advocated for three components to PBF Plans-goals, measurements, and incentives. Measurement critical to achieve equity between institutions
Offenstein & Shulock, 2010	Data collection key to measuring results

Hillman, Tandberg & Fryar, 2015	Collecting & Reporting Perf Data impact decisions and ultimately performance
Kelderman, 2019	Collect good data to understand students
Dougherty et al., 2014	Persistence, milestone achievement and graduation rates identified in many plans. Ohio funding based on courses & degrees completed and weighted by program cost effectiveness and at-risk students
Rosinger, 2020	Others states-high demand occupations, STEM fields, and serving underserved populations and non-traditional students
Offenstein & Shulock, 2010	Data collection imperative at Two-year schools. They serve more at-risk students and have more varied academic needs. Improve reporting in academics and student services. Use data to adjust and improve persistence and retention
Rainie & Anderson, 2017	Same two-year students more likely to fill critical jobs requiring some college education
Alstadt, Fingerhut & Kazis, 2012	Government and Higher Ed should work together on conscientious engagement, effective incentives, and guidance so stakeholders buy-in and infrastructure and support systems improve.
Kelderman, 2019	Institutional Research Dept should help leaders readjust priorities and develop evidence-based solutions
Boggs, 2018	Goals and Measurement processes were refined and more focused on student persistence and success
Dougherty, Reddy, & Gray, Harkreader and Wagar	Emphasis on data collection escalated from adequate to critical due to financial incentives at stake.
<b>Phase-in of Measures</b>	
Harnisch, 2011; Miao, 2012	Exploit year one to absorb and discover-look at actual accomplishments against measures and then take any corrective action prior to funding start
Hillman, Kelchen, and Goldrick-Rab, 2011 and also Snyder, 2015	Roll out over several years to allow time to set up impactful systems and use multiyear averages
NCSL, 2015	Recommended phasing in funding schemes to allow adjustments
	NOTE: South Carolina debacle (implemented too fast for school officials and faculty to respond)
Mauthe & Njuguna, 2013	Timing-managing change requires strategies to control internal and external impacts, including human factor (attitudes and behaviors)
Washington Office of Fiscal Management Technical Incentive, 2013	Slow phase in to ease financial uncertainty

Kelderman, 2019	Give attention to most financially fragile and vulnerable schools
Carter, 2008	Messaging, conversations, and interaction help reduce insecurities, lesson opposition and boost dedication and involvement
<b>Performance Metrics</b>	
Rosinger et al., 2020	Most plans use degree completion as a key metric along with retention, transfer up, credit accumulation.
Hillman, 2016	Using outcomes as a management tool is difficult in public service-tasks not routine and inherently hard to measure. Creating a college graduate is anything but simple
Rosinger et. al. 2020	Graduating low-income students is a metric in 80% of PBF plans
Hearn & McClendon, 2013	Tennessee's new plan (2010) metrics were graduation rates, esp. fast track majors, increased advising, tutoring, and remediation and expanded course offerings
Ohio Bd of Regents-N.D.; Petrick, 2010	Number of courses and degrees completed. Later added black and indigenous, Hispanic graduates
Lederman, 2008	Colorado-Improvements on assessment and 1 <sup>st</sup> to 2 <sup>nd</sup> year retention-especially for at-risk students
Schrock, 2019	2019-20 Colorado changed to focus on completion, transfer up-Pell grant, STEM, health care. Also, retention and progress; institutional productivity
Jones, 2017	Metrics can create equity issues. Reduced funding when goals not met impacts low income, students of color
Kelderman, 2019; Rosinger, Ortagus, Kelchen, Cassell and Voorhees, 2020	Most plans now include equity metrics to reinforce academic achievement by minorities, economically disadvantaged, returning adults, and Veterans
WTCS, 2014 and 2015	Metrics set by collaboration. State allowed college system to develop targets, data collection and reporting systems.
Hillman, Kelchen & Goldrick-Rab, 2011	Difficult to create measurement tools and implement in higher education. Cited example in New York State that had challenging metrics
Miller, 2016; Lumina Foundation, 2016	Designing practical metrics to measure student learning with balance of good college quality extremely challenging
Klein, 2015	Designing, communicating, and managing measurement systems is critical in 2.0. Infrastructure investments in people and systems may be a requirement to meet targets.

<b>Performance Monitoring and Big Data</b>	
	1.0 vs. 2.0 vastly different. Systems just emerging late in 1.0. Before that paper chase
Wholey & Hatry, 1992	Suggested monitoring multiple markers to address variation in goals and outcomes
	2.0 benefited from Banner, Cognos and Peoplesoft software for education
Williams, 2014	Due to variations between four-year, two-year, community and technical and private/public with complex systems makes for a monitoring challenge in most states
Dougherty & Reddy, 2011	Inequity between institutions in ability to collect and analyze data and funding alignment of systems
Hillman, 2016	Those schools with the least resources (staffing, experience, financial capabilities) to implement new retention and completion initiatives. Need to ensure equal footing or penalize fairly.
Burke & Modarresi, 2000	Practical problems of transferring translating goals to outcomes, weights to measures and how to mark success led to instability of PBF
Millar, et al., 1981; Carter, 1983; Neves, Wolf, and Benton, 1986, Levitt and Joyce, 1987 USDOL, 1991	Scrutinizing how well organizations did on goals causes unequitable comparison and contrast with multiple organizations and current with prior results
THEC, 2015, Forrest, 2021	Tennessee now monitoring based on mission differentiation, at-risk student success; retention, persistence, and job placement.
PAR, 2008	Monitoring timelines set in Louisiana and based on some metrics used in other states.
Nevada System of Higher Education, 2012	Monitoring progress annually
Snyder, 2015	Nevada-96% based on students finishing classes and 4% on advancing and completing degrees
WTCS, 2021	Dashboards for faster monitoring implemented by WTCS. Example of Big Data
<b>Improving Student Outcomes</b>	
Dougherty & Reddy, 2013	Discovered link between PBF and campus development/organizational policies to enhance student achievement
Offenstein & Shulock	Critical non-traditional student success metrics- intermediate credit points reached and behavior- completing college math in first two years, enrolling in summer or winter sessions, on-time registration and few dropped classes
Fingerhut and Kazis, 2012	California suggestion-reward progress and completion; protect academic and economically vulnerable; incentives big enough to enlist

	change; phase-in and provide predictability; get buy-in from key stakeholders (faculty)
Dougherty & Reddy, 2011	Washington State-Student Achievement Initiative (SAI) for two-year schools. Rewards for meeting success points, basic skills, math, developmental coursework and degrees, certificates and college credits granted
Jenkins, et al., 2012	Washington State had lack-luster results due to insignificant investment
Belfield, 2012; Hillman, Tandberg & Fryar, 2015	Washington State student progress stalled potentially due to more short-term certificates
Kelderman, 2019	Tennessee's more bachelor's degrees helped most schools get 25% more PBF. However, Tennessee State only received 8% due to open enrollments, lower student readiness and finances
Ohio Higher Education Funding Commission, 2012	2008 funding recipe based on recruitment, retention, and graduation at-risk and STEM students. Note-colleges with high at-risk student populations afforded latitude acknowledging critical nature of access and persistence
NDUS, 2021	Money granted only based on credits earned (student success)
Kelderman, 2019	Louisiana- progression and completion, degrees or certificates earned, efficiency job placements and performance of disadvantaged students. Oregon-course completions, degrees and certificates, credentials in high-demand fields. Four-year schools only!
Miao, 2012	Since 2010 limited progress on student success. Six state review showed move from enrollment to graduation, including developmental education, transfers, and STEM coursework
Wayt & LaCost, 2016; Kezar, 2012, 2014	Staff now recognizing importance of gathering and analyzing data-especially points where students seem to fail; and PBF causes recommitment to student success
Rutherford & Rabovsky, 2014	IPEDS use surfaces; negative correlation between 1.0 policies and student success; 2.0 helped improve student performance; blanketing outcomes across all institutions is ineffective
Sandford & Hunter, 2011	Reviewed Tennessee's policies. No correlation between PBF and student retention or six-year graduation rates (1997-2003).
Kelderman, 2019	Three ideas to improve success: improve instruction by eliminating courses not related to a

	degree and career pathways without electives; improve support by starting counseling prior to enrollment, improve advising, and career mentoring; improve communications with faculty and staff about PBF (formulas, criteria, results)
Hillman, 2016	PBF is only effective in limited circumstances. States should rather build capacity and equity-based funding schemes
<b>Impacts of 2.0 Policy</b>	
Dougherty & Reddy, 2011	Florida, Ohio, Tennessee, Washington-Positive impacts-Greater Awareness of missions, goals, outcomes-alignment with state expectations. Additional transparency, accountability, improved performance, healthy competition between colleges, increased use of data for planning/decisions, remediation improved. Improved registration, financial aid, first-year retention, advising, graduation rates, job placements.
Johnson & Yanagiura, 2016	Tennessee went to 91% PBF appropriation. Ohio moved to 50% PBF funding based on graduation rates. Shortened time to graduation
Bell, 2005	Three community colleges in Florida. Mandated, yet underfunded outcome. Found collaboration by instructors on student retention/improved instruction
Aaron, Crellin, Mabe, & Wilk, 2011	Indiana, Ohio, Tennessee improved persistence and completion of at-risk students critical to realizing productivity goals-provided monetary incentives to schools that met that goal
Hillman, 2016	Pennsylvania did not produce more degrees after a decade. Overall, comparing states to have and not have improved outcomes, a need-based funding model would target institutions serving more underrepresented student populations
Douglas-Gabriel, 2016	Indiana colleges did not increase degrees and became more selective and less diverse
Kelchen, 2017	Studied ten states and how PBF impacted at-risk students. Found only two (Tennessee & Indiana) had incentives for this group as of 2005. By 2011 more state plans addressed issue and by 2016 there were 16 states. Found modest increases in graduation rates for black and first time Hispanic students-if there was a reward in place.
Hearn & McClendon, 2013	Policy abandonment caused by fiscal, political, and implementation issues. If worked with college leadership, then gained long-term

	support of stakeholders. Working outside caused reluctant compliance and degradation over time
Burke & Modaressi, 2001	Found failure also results from overwhelming institutions. Poor and inconsistent efforts ensued. South Carolina's effort collapsed due to 1 <sup>st</sup> year implementation
Hillman, Fryar & Crespín-Trujillo, 2018	No positive impact on bachelor's degree attainment in Tennessee and Ohio,
Hillman, Tandberg & Fryar, 2015	Increase in short-term certificates in Washington
Kelderman, 2019	No strong link between PBF and student success. California placing emphasis on equity, not efficiency
Rosinger, Ortagus, Kelchen, Cassell, Voorhees, 2000	PBF policies have little or no effect on degree completion
	Suggest a longitudinal study be made
<b>Unintended Consequences</b>	
Harnisch, 2011	Numerous negative affects-only partial representation of institutional performance-due to just a couple outcomes; gaming system, mission distortion when trying to maximize funding; creaming students; compromise quality, autonomy lost and dwindling support internally; volatility in colleges that need support, leading to no progress and plan defiance; lack of awareness by college staff-due to money seamlessly flowing to general operating funds
Dougherty & Reddy, 2011	Coined phrase "unintended impacts." Lack of success caused by diminished faculty voice in governance and no information shared. Communications with faculty gained support and thwarted erosion of PBF initiatives
Jones, 2013	All institutions in system should be included in creating plan components and account for mission differentiation
Alshehri, 2016	Unplanned consequences-deceptive compliance, i.e., timing of reporting to look best. (Gaming) when competing with rival institutions. Excessive costs to gather data and report production; lowering standards; limit student entry and moving students along, just to meet metrics
Bethke, 2015	Disadvantaged students (GED, Blacks, older, part-time students, and academically challenged-gained less PBF for college attended vs. peers
Ortagus, Kelchen, & Rosinger, 2020	Constrained entry to same students through policy adoption by colleges (gaming) creating additional "racial and economic disparities."

Kelderman, 2019	Plan designers should incentivize colleges to enroll, support and graduate disadvantaged students. Oregon's new plan did just that.
Wholey & Hatry, 1992	Questioned if institutions had accurate indicators of program quality, which could lead to misleading reporting on results. Need time for organizations to understand criteria, monitoring, and reporting
Zeidenberg, Jenkins & Scott, 2012	Incoming students' deficits in math and English continue to hamper progress
Paulson, 2013	Issue with math and English lies due to lack of alignment between secondary schools and colleges
Colby, 1987	Primary remediation lies with two-year community and technical colleges
Long, 2015	Challenges with remediation-cost prohibitive for colleges to perform task; disparity in what constitutes remedial course. PBF systems that do not provide incentives for admitting, supporting, and graduating these students cause institutions to devise methods to shun them (gaming).
Hagedorn & McKinney, 2015	Restricting access tactic to improve persistence and completion rates (gaming) by minimizing recruitment at certain high schools and offering no developmental/remedial coursework
Dougherty, Jones, Hahr, Natow, Pheatt, & Reddy, 2016	Reducing academic standards and restricting enrollments help retain and graduate more students, at the expense of disadvantaged. Restricting admissions
Fain, 2014	Indiana, Ohio, Tennessee wanted higher graduation rates and efficiencies with new plans. However, created weakened academic standards and tightened admissions, compliance costs, lower morale, and less faculty governance assistance, and collaboration among institutions. Weakening of academic standards (reduce requirements of inflate grades)
Dougherty & Reddy, 2013	Those institutions lacking resources had difficulty with gather and reporting data, making compliance tough, demoralizing, and unaffordable
Li, 2018	Creaming done to restrict access. Take only students shown to be ready (via GPA for example)
Dougherty & Reddy, 2011	Sunsetting programs helps improve results

Kelderman, 2019	Offer more academic support. Communicate more so everyone knows formulas and impacts of PBF
Hillman, Tandberg & Fryar, 2015	Considering popularity of Washington model, surprised there are not more associate degrees. There are more short-term certificates-leading to lower overall wages and increases
Hillman, 2016	Colleges with more financial capacity are in best position to serve students well and funding per student is one of the strongest predictors of graduation.
<b>OBF and Wisconsin Technical Colleges</b>	
District Boards Association-April 2015	Walker proposed change to tech college funding to partial OBF
WTCS, 2021	Act 20 began OBF in Wisconsin at technical colleges with 2013-15 budget, passed in 2013 Set development criteria for WTCS. Funding started at 10%, graduating to 30% in year three
Herzog & Schmid, 2015	Manufacturing automation caused 2-year degree minimum for jobs
Lockwood, 2014	Toughest jobs to fill, manufacturing, engineers, and technicians
WTCS, 2015	Nine criteria developed. Colleges select seven to report on. 10 <sup>th</sup> added in 2015
District Boards Association, 2015	30% okay as it incentivizes without risking loss of significant funding. Each percent creates more volatility
Herzog & Schmid, 2015	Conor Smith states policy will help demonstrate high performing technical colleges should earn more investment
XXX	Impacts on colleges from COVID-19 challenge
<b>Research Gaps</b>	
	Does uniqueness of each state plan make it difficult to generalize study impacts and consequences? Have declining enrollment trends affected results? (Robust economy creates so many jobs, students opt out of college). What strategies are happening to improve results (i.e., reporting systems, implementation timing. Have colleges increased use of Institutional Research?

## Appendix D

### Human Research Consent Form



### University of Wisconsin - Madison Research Participant Information and Consent Form

**Study Title:** Strategic Leadership -Decisions at Wisconsin Technical Colleges Under an Outcomes-Based Funding Model

**Principal Investigator:** Professor Elton Crim (Email: [Ecrim@wisc.edu](mailto:Ecrim@wisc.edu))

#### **Description of the research**

You are invited to participate in a research study about strategic leadership under an Outcomes-Based Funding Model for Wisconsin Technical Colleges.

You have been asked to participate because you provide a unique executive leadership perspective on how performance-based funding has impacted decisions.

The purpose of the research is to assess and comprehend the impacts of a performance-based funding model on planning, policies, programs, and structures over a five-year period.

This study will include interviews of Presidents at all Technical Colleges in Wisconsin. In the event the president is unavailable, the Provost or Vice President of Academic Affairs will substitute.

This research will be conducted in a location chosen by the interviewee on each specific college campus.

#### **Recording information**

Interviews will be captured in digital audio. These recordings will be used by the researcher to gather data for inclusion in a dissertation that is part of the requirements to satisfy a PhD in Educational Leadership and Policy Analysis at the University of Wisconsin-Madison.

The tapes/recordings will be kept until study completion and awarding of PhD designation, or one year, whichever comes first. before being destroyed.

#### **What will my participation involve?**

If you decide to participate in this research, you will be asked to participate in an interview with the researcher. Your participation will last approximately 30 to 60 minutes and will require one

(1) session (30 to 60 minutes in total). Any follow-up for clarification will be done via a brief phone call.

**Are there any risks to me?**

Although all colleges and responses will be coded to maintain anonymity, and every effort will be made to maintain confidentiality during coding, analysis, and study completion, it is not fully guaranteed.

**Are there any benefits to me?**

Benefits of this study will include the potential to receive a copy of the study findings.

**How will my confidentiality be protected?**

This study is confidential. Neither your name nor any other identifiable information will be published. The researcher is the only person that will have access to data collected. Aggregated and/or anonymous, data may be reviewed by assigned PhD candidate advisor in preparation of PhD defense. Data will be stored electronically at the researcher's residence in a locked file and room. The subject's identifiable private information or specimens collected as part of the research, even if identifiers are removed, will not be distributed for future research studies.

If you participate in this study, we would like to be able to quote you directly without using your name. If you agree to allow us to quote you in publication, please initial the statement at the bottom of this form.

**Whom should I contact if I have questions?**

You may ask any questions about the research at any time. If you have questions about the research after you leave today, you should contact the Principal Investigator Gary W. Kilgas at 920 (540) 1742 or GKilgas@wisc.edu.

If you are not satisfied with response of research team, have more questions, or want to talk with someone about your rights as a research participant, you should contact the Education and Social/Behavioral Science IRB Office at 608-265-4312.

If you decide not to participate or to withdraw from the study, you may do so without penalty.

Your signature indicates that you have read this consent form, had an opportunity to ask any questions about your participation in this research and voluntarily consent to participate. You will receive a copy of this form for your records.

**Name of the Participant** (please print): \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

\_\_\_\_\_ I give my permission to be quoted directly in publications without my name.

## Appendix E

### Outcomes-Based Funding Interview Questions

#### Purpose Statement

The purpose of this study is to explore both the positive and negative impact of Performance-Based Funding on planning, policies, programs, and structures and, in turn, identify those factors that contribute to the positive or negative impact of PBF.

1. How has Outcomes-Based Funding results and impacts been included in your strategic planning process each year?
2. In what ways were organizational and physical structures impacted by the Outcomes-Based Funding process?
3. Of the total budget for the Technical College System, the portion appropriated to Outcomes-Based Funding went from 10% year one, to 20% year two, to 30% in the third reporting year. As each year closed and percentages changed, what was the process to choose original outcomes to be measured on, and how were adjustments addressed so funding would be maximized?
4. What specific Outcomes-Based Funding decisions led to positive results and which ones did not, and why?
5. What intended or unintended consequences were observed and what were the impacts?
6. Thinking back over the multiple years under this funding structure, what surprised you?
7. Is there anything about Outcomes-Based Funding at your college you would like to add?

## Appendix F

### Six-Stage Data Collection and Analysis Process

(Braun & Clarke, 2006; Creswell, 2013; Merriam, 2009; Miles et al., 2014)

<b>Six-Stage data collection and analysis</b>	<b>Braun and Clarke (2006) Recursive phases</b>	<b>Creswell (2013) Procedural spirals</b>	<b>Merriam (2009) Levels of Analysis</b>	<b>Miles et al. (2014) Concurrent Nodes</b>
<i>Collect the data</i>	Refer to all the data collected as the data corpus.			Shift among nodes iteratively during data collection.
<i>Engage with the data</i>	Become familiar with the data by reading and re-reading transcripts, listening to audio-recordings and noting any initial observations.	Manage the files by transcribing the data, organizing the text files, and reflecting in relation to the research questions for a sense of the issue.	Scan transcripts and jot down notes, comments, observations, and queries as memos.	
<i>Code the extracts from the data</i>	Generate initial codes and labels to represent important features of the data relevant to the research questions	Form a list of tentative codes that expand as the data are reviewed and re-reviewed.	Identify units of data that are potentially meaningful segments to reveal information relevant to the research questions.	Do the data extracts and write analytical memos.
<i>Generate the code categories from the codes</i>	Identify ideas and concepts that inform the semantic content of the data.	Reduce codes to categories in the process of categorical aggregation.	Name categories that are abstractions derived from the data.	Generate categories to condense the data.
<i>Conceptualize the themes from the categorized coded extracts</i>	Search for themes as coherent and meaningful patterns in the data and define the nature of each theme in relation to existing literature.	Interpret the data to abstract beyond the categories to the larger meaning of the data by linking the raw data with the research literature.	Consolidate and reduce data to make meaning by linking interrelated elements in the data.	Develop themes.
<i>Contextualize and represent the findings</i>	Weave together the analytic narrative and vivid data extracts to inform the findings.	Present a detailed picture of the analyzed data.	Interpret to make meaning and develop a model of interrelationships to build a framework.	Compress meanings that emerge from the data and assemble the information using tables and networks.

## Appendix G

### Example Distribution of Outcomes-Based Funding Dollars

Annual WTCS Outcomes-Based Funding Report 4

#### Allocation of Funds among Criteria

Each year, 25% of the total outcomes-based funding is divided equally among the ten statutorily defined outcomes criteria as the base allocation for each criterion. The remaining 75% of outcomes-based funding is then distributed among all criteria proportionately, based on the number of colleges selecting each criterion.

#### 2022-23 OUTCOMES FUNDING

TABLE 1: Distribution of 2022-23 Outcomes-Based Funding, by College and Criteria (in \$)

	Criteria 1: Job Placement	Criteria 2: High Demand Fields	Criteria 3: Industry Validated Curriculum	Criteria 4: ABE Transition	Criteria 5: ABE Success	Criteria 6: Dual Enrollment	Criteria 7: Workforce Training	Criteria 8: Collaboration	Criteria 9: Special Populations	Criteria 10: Credit for Prior Learning	College Total
Blackhawk	209,522	-	142,174	178,045	207,271	193,315	-	190,215	203,231	-	1,323,773
Chippewa Valley	337,212	299,801	270,327	-	-	349,006	220,313	274,508	-	209,121	1,960,289
Fox Valley	403,857	444,545	395,618	-	-	436,988	648,230	328,120	-	399,904	3,057,261
Gateway	-	354,863	257,518	-	315,641	407,826	246,612	289,845	297,659	-	2,169,964
Lakeshore	185,805	171,815	230,592	-	245,947	-	96,437	185,815	196,414	-	1,312,825
Madison Area	443,864	390,404	-	648,074	415,492	-	-	405,935	451,224	577,671	3,332,665
Mid-State	238,136	-	188,545	186,270	136,314	-	-	190,708	223,615	147,499	1,311,087
Milwaukee Area	-	-	462,717	617,594	587,368	-	429,831	441,762	430,852	353,465	3,323,587
Moraine Park	217,002	195,325	-	153,370	294,887	-	378,352	215,251	392,946	-	1,847,134
Nicolet Area	145,745	53,650	126,171	164,982	137,611	-	-	157,067	207,487	-	992,713
Northcentral	-	235,961	292,981	252,553	275,007	327,084	242,914	-	-	182,895	1,809,395
Northeast Wisconsin	354,336	392,737	381,951	-	-	423,010	-	330,001	303,734	413,115	2,598,885
Northwood	245,574	267,329	257,765	-	160,344	118,703	-	201,880	138,631	-	1,390,226
Southwest Wisconsin	228,717	-	172,500	-	-	113,127	100,693	178,046	126,573	100,173	1,019,828
Waukesha County	254,772	273,222	252,317	-	281,166	256,347	278,684	251,614	-	-	1,848,122
Western	-	184,890	248,347	233,684	-	224,150	-	246,248	292,174	258,222	1,687,714
<b>Total</b>	<b>3,264,541</b>	<b>3,264,541</b>	<b>3,679,525</b>	<b>2,434,573</b>	<b>3,057,049</b>	<b>2,849,557</b>	<b>2,642,065</b>	<b>3,887,017</b>	<b>3,264,541</b>	<b>2,642,065</b>	<b>30,985,470</b>

August 2022