ASSESSING COLLECTIVE IMPACT FOR THE EMERGENCE OF A
COMPETENCY BASED STATEWIDE ‘PUBLIC TO PUBLIC’ CIVIL SERVICE
CAREER PATHWAYS

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A Dissertation

by

Jeffrey Allen Mrizek

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SPRING 2016
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I certify that this student has met the requirements for format contained in the University format manual, and that this dissertation is suitable for shelving in the library and credit is to be awarded for the dissertation.

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DEDICATION

For he had learn some of the things that every man must find out for himself, and he had found out about them as one has to found out, through errors and through trial, through fantasy and delusion, through falsehood and his own damn foolishness, through being mistaken and wrong and an idiot and egotistical and aspiring and hopeful and believing and confused. As he lay there he had gone over his life, and bit-by-bit had extracted from it some of the hard lessons of experience. Each thing he had learned was so simple and so obvious once he had grasped it that he wondered why he has not always known it. Altogether, they wove to a kind of thread, trailing backward through his past and out into the future. And he thought now, perhaps he could begin to shape his life to mastery, for he felt a sense of new direction deep within him, but whither it would take him he could not say. (Wolf, 1991, p.80)

Thomas Wolf’s (1991) description of the deep-learning process is akin to the phenomenon of emergence, the unfolding of possibilities falling from quantum superposition into reality. Learning, the phenomenon of iterative evolution known as human development is a beautiful flowing cascade of spiraling moments, the generative essence of the eternal fractal of life. This dissertation is dedicated to the future civil servant leaders and the life-long learners. Leaders who will rise as advocates against structural violence to evolve the educational system, overcome disparate outcomes, liberate underserved populations, and abolish stigma. Now is the time for transformation, the moment for Renaissance renewed, to hear the clarion call - “To give of oneself for the benefit of others.” Together we now embark on life’s Etak, not merely focused on fixing our position, but to share in a collective journey. The unique human journey which is full of joy, love, and peace found in the labor of restorative justice. Let us each share our diverse gifts of competence and never fail to marvel in humanity with curiosity and imagination. In this way, we are sustained in anticipation for the arrival of the glorious island of Ithaca approaching from the horizon that field potential of opportunity. Arriving to the legacy for my children and yours of a world restored from terror to hope.
ACKNOWLEDGEMENTS

Life begins with nature and flourishes in nurture. As with every prodigy, I am indebted to my parent’s love and passion of which I am the fruition. To my mother, you are my stalwart advocate despite my discoherence; I now speak your words with new meaning.

For the burden of expectations, which fueled, my lifelong drive to excel, my father Dr. Sotiris Papamichael, MD, whose heart of adoption provided guidance despite the rebellion. A role model, who presented my potential, has supported my development.

To my eldest sister, Sara who journeyed with me to snow covered forest of Narnia. Who suffered dreadfully her own Edmund, the clod of a brother.

To my Grandfather Chuck Mrizek, a steadfast model of character, generosity, and warm accepting love who taught me that broken pieces are a source of art. Your pride has always been my pursuit. You are the stag.

To those who have gone before; who show the way. Every teacher, educator, mentor, coach whose life’s dedication was granted into mine. Mastery of such service was bestowed upon me through my esteemed doctoral committee.

To Dr. Loeza whose instigations prompted my reflections, showing the joys of curiosity and interest with a depth of humility paralleled perhaps only by his commitment to students.
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To Dr. Romero whose call for clarity reminds me to speak with focus and intention to reflect and say what I mean.

To Dr. Murphy whose leadership and mentorship guided this study from its nascent form to its formal presentation. I am indebted.

To Franchise Tax Board for the investment of the amazing civil servants mentors, Robin Reichert, Brenda Vote, Kathleen Nobel, Ben Holloman, Andrew Ream, Paul Ogden, and Terry Downs.

To California Human Resources Department and the Civil Service Improvement Higher Education Partnership for granting the opportunity of a field potential.

To RHP III and all who struggle with the stigma and pain of mental illness, I pray for a world of light and coherence where purpose and passion overcome the world.

Finally to the Creator, the giver of life, who has made all things and bestowed upon us the burden of Love for one another.
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FIELDS OF STUDY
Competency based approaches for defining career readiness for community college and civil service systems alignments
Abstract

of

ASSESSING COLLECTIVE IMPACT FOR THE EMERGENCE OF A
COMPETENCY BASED STATEWIDE ‘PUBLIC TO PUBLIC’ CIVIL SERVICE
CAREER PATHWAYS

by

Jeffrey Allen Mrizek, MBA

The purpose of this study is to examine, discuss, and assess the phenomenon of
Collective Impact; an emergent and holistic form of systemic organizational behavior, as
an approach to devise synergistic competency based career pathway solutions to the skills
gap in California’s civil service workforce. The intention is to provide community
college and public agency leaders, educators, policy makers, and researchers a greater
understanding of current public agency's workforce needs and challenges of aligning and
articulating career technical pathways.

The objective of the research was to open dialogue and catalyze the design of
curriculum, comprehensive policy, and innovative practice to meet the workforce needs
of the 21st Century Government Worker while directly supporting community college
student learning outcomes. This exploratory study deployed mixed methods approach to
“facilitate exploration of phenomenon within its context using a variety of data sources
(Baxter & Jack, 2008, p. 544).” As action research, the exploratory approach will
provide grounding for further explanatory research to develop the literature around system alignments, career pathways, competency based talent management and competency-based education.

In summary, it was found that Collective Impact was not mature, the interlocutors held shared multiple meanings of competencies, community college students have interest in civil service careers, and “competency as data” was an emergent intersubjective meaning of the interlocutors. Achieving a shared meaning of “career readiness” through policy and curriculum alignment is still needed to form competency-based career pathways as a strategy to overcome the growing skills gap due to the rising tide of the “silver tsunami”
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Chapter 1

INTRODUCTION

Educational and policy leaders across the nation are sensing a rising tide of change, a troublesome shift in retirement trends in American workforce demographics. This rapidly cresting tidal wave of pent-up retirements delayed from the Great Recession of 2008-2009 is the massive disruptive exodus of the nation’s largest and most educated workforce. This “silver tsunami” is an unprecedented demographic disruption threatening the American workforce. The Governing California Leadership Forum (2013) elucidates the disruption reporting, “…roughly 10,000 baby boomers turn 65 every day, the “silver tsunami” places real exigency for succession planning in the government workforce (p.2).” This study will assess an emergent and holistic form of systemic organizational behavior known as Collective Impact as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce.

According to a recent article by the Lumina Foundation, *Help Wanted: Projections of job and education requirements through 2018* (2010) the U.S economy is projected to have 46.8 million openings. In its wake, this crashing wave threatens sustainability of organizations as their devaluing portfolio of human capital leaves behind an emerging skills gap. The “silver tsunami” directly threatens California’s civil service workforce and the sustainability of operations in the state government agencies and departments.
California Department of Human Resources (CalHR) reported in a recent workforce analysis of State employee demographics revealed that of the 227,000 state employees, up to 43% (approximately 100,000) will be eligible for retirement by 2018, with 26% of the workforce eligible to retire this year. This means 1 out of every 4 permanent State employees could retire today (CalHR, 2013). As state employees retire they are being replaced with a more junior and less experienced workforce, who may not have “the career readiness” [required skill sets or skill level] to ensure effective continuity of government operations and a skills gap is formed.

To understand the scope of this statewide workforce issue imagine if you will, walking into any one of the 371 California state agency where over 227,000 civil servants are employed (State Agencies, 2015). Simply look around, take notice of the civil servant on your left and on your right; one of those civil servants will likely be retired within the next three years. Now ask yourself, how will the loss of over 100,000 of the most seasoned, experienced, and highly trained civil servants impact the delivery of the state’s essential public goods?

This is the reality of the silver tsunami’s impact on the California’s civil service workforce and a prime example of how the phenomenon is applying “demand-response” pressure on community colleges missions. As these veteran civil servants leave the workforce, they are being replaced with a younger cohort who has less experience, formal training, and education. This significant workforce and economic problem created by the “silver tsunami” is referred to as the “skills gap” (Johnson & Sengupta, 2009). “The colleges and universities in California would need to increase production of
baccalaureate degrees by almost 60,000 per year (about 40% above current levels) to meet projected economic demand by 2025 (Johnson & Sengupta, 2009, p.5).” Without a scalable succession planning strategy specifically focused on development and recruitment of “career ready” or competent civil servants, the negative impacts extend beyond customer service to the sustainable operations of the state government needed to deliver public goods.

More globally, the skills gap trend in demand for workforce is driven by the expected creation of 13.8 million brand new jobs and 33 million “replacement jobs,” positions vacated by workers who have retired or permanently left their occupations. Of these new and replacement jobs; 36 percent (17 million) will require an educational attainment of high school or less, 30 percent (13.8 million) require an educational attainment of some college or associate’s degree, and 33 percent (16 million) require an educational attainment of Bachelor’s degree or better. The disaggregation of this data suggested that, “by 2018, 63 percent of [these] job openings will require workers with at least some college education (Carnevale, Smith & Strohl, 2010, p.13).”

**Higher Education’s Role in Career Readiness.** The skills gap trend in the labor market persists in the State of California where the Public Policy Institute of California (PPIC) reports, “if the current [labor demand] trends persist, 41 percent of jobs will require at least a Bachelor’s degree (Johnson, 2010, p.1).” Furthermore, the PPIC has found “the vast majority (76 percent) of college students attend public institutions” specifically; 49 percent attend community college (CCC), 17 percent attend a California State University (CSU), 10 percent University of California (UC), 15 percent private for-profit, and 9
percent private not-for-profit (Johnson, 2010). With community colleges enrolling nearly half of the state’s student population, they play a major role in providing a “career ready” workforce.

Community colleges have historically served lower income, first generation, and racially diverse students by providing a free liberal arts education to elevate citizen’s economic and social status. The high degree of access to free higher education provided through the inception of the Master Plan (1960) has slowly eroded. Specifically, stakeholders are politically pressuring community college’s missions demanding greater accountability and measurable learning outcomes in stewardship of the tax revenue (Taylor, 2013). The Student Success Taskforce Final Report (2012) is a prime example of a positivist policy brief shifting community college’s mission from access to outcomes.

The implication of this positivist paradigm shift implies a deeper question: “Is access still the mission of community colleges in California?” The global economic impacts of the Great Recession of 2008-2009 generated a period of deep budget cuts and growing state debt for California (Verick & Islam, 2010). Stakeholders are indicating community colleges missions of “access” are becoming viewed as fiscally imprudent. This trend impacting community college’s missions is referred to as “demand-response” (Gumport, 2003). To a greater extent, the State’s publically funded education system is being reframed as a driver and supplier of economic and workforce development.

The vast system of 113 publically funded California community colleges, which enrolls nearly half of the student population in the state, provides the stakeholders with a
supply of “career ready” and competent civil service workforce needed to maintain state operations (Johnson, 2010). Consider this extensive list of public goods and services deliver by the state; transportation, highways, highway patrol, emergency response, hospitals, fire suppression, general and mental health care, open spaces, parks, general and child welfare, courts, juvenile and adult corrections, business and workforce development, museums, libraries, education, legislative, regulatory, information technology, and revenue agencies (State Agencies, 2015). These public goods are delivered through an interdependent system of 371 state departments and agencies employing over 227,000 civil servants costing Californian taxpayers over $111Billion in the FY15/16 General Fund (LAO, 2015).

Undeniably the California civil workforce is an invaluable public good that supports an economy of $2.31 Trillion (GDP) in 2014 (LAO, 2015). The state’s publically funded secondary and higher educational systems are pivotal in the provision and development of the breadth of the knowledge and skills needed for these civil servant positions. The talent needed to operate the state government ranges from a secondary to post-doctoral levels of education.

Building Pathways to Sustain California. According to the Legislative Analyst Office (LAO) (2014), California’s economy is the eighth largest in the world; the ramifications an inept civil service workforce would have dire impacts to the global economic health not merely the nation, state, and citizens. According to an environmental scan conducted by the Los Rios Community College District’s Center of Excellence (CoE), Northern California notes the Sacramento Region represents 25 percent or 232,000 workers of the
statewide workforce in the public administration industry (Milan, 2007). The CoE report defines the public administration industry as a category of the public sector that excludes publicly owned schools and hospitals. This study will refer to the public administration industry as “civil service” to be more inclusive than the scope of public administration roles of a supervisor, manager, or administrator. The demand for civil service occupations in the Sacramento region is high, employing nearly 125,000 people (Milan, 2007).

In worst-case scenarios of the skills gap, the public education system might face defunding as revenue generating state agencies such as Franchise Tax Board, Board of Equalization, and State Controller’s Office face rising operating inefficiencies due to an underprepared workforce. LAO (2014) reports funding for school districts, community colleges, and universities makes up $58 billion of the state’s $108 billion General Fund budget in 2014-15 (p. 23). In scenarios where state revenue collection is impacted the ripple effect could lead to a faltering underfunded educational system. The furthest extent of this scenario’s disruption could be the system of political democracy itself, as citizens become less informed participants in democracy without access to quality education.

Clearly, good stewardship through creating synergistic alignments between the State’s publically funded education systems and civil service workforce is a best case-scenario for provisioning the “career ready” or competent civil servants at scale. Kania and Kramer (2011a) posit, “Substantially greater progress could be made in alleviating many of our most serious and complex social problems if nonprofits, governments, businesses
in the public were brought together around the common agenda to create Collective Impact.” Through Collective Impact, community college and public agency leadership, educators, policy makers, and researchers can come to greater understandings of current civil workforce needs and challenges in aligning and articulating career pathways through the K-14 educational pipeline as a “demand-response” approach. In order to meet the workforce needs of the 21st Century government worker at scale, Collective Impact in an approach for the design and development of public-to-public career pathways, competency-based curriculum, comprehensive policies, and innovative practices while directly supporting community college student learning outcomes.

The purpose of this study is to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce. As action research, the researcher will participate in a field study while leading a statewide team of higher education partners. The team was tasked with developing a competency-based statewide ‘Public to Public’ civil service recruitment career pathway(s) to mitigate California’s civil service workforce skills gap (Kania & Kramer, 2011b; Bohm, 1980). This study’s focus is to assess Collective Impact; a systems approach, to explicate potential solution(s) through the conceptualization of competency based “Public-to Public” Civil Service Recruitment Pathways.

The remaining sections of this study’s introduction will provide greater context and focus the research by developing the Problem Statement, the Nature of the Study, the
Theoretical Framework, Limitations, and Significance. These sections will provide the necessary grounding for framing the Literature Review (Chapter 2), designing the Method (Chapter 3) providing the basis for the Findings (Chapter 4) and the development of Future Research (Chapter 5).

**Problem Statement**

Each and everyday at civil service departments across the State of California, are colorful streamers and balloons which surround a small group of colleagues listening intently to humorous farewell speeches or the excited flourish of exotic travel plans highlighted by dreams of renewed hobbies. The buzz of congratulations and appreciation stir this scene fondly known as a retirement party. At these events one can hear of bye-gone days of forgotten workloads, business procedures, and antiquated technology. Humorous quips about a world with ditto machines, microfiche, dummy terminals, and seemingly inane work practices prior to their automation. This form of institutional knowledge is an example of the types of skills and competency, which leave these organizations with these most experienced workers departing in retirement in greater numbers each passing day. So, who will and how can civil service agencies replace these skills? Will they be “career ready” for civil service work in the 21st Century?

This section provides a detailed analysis of the context of California’s civil service workforce and implications of the skills gap through a multi-frame analysis (Bolman and Deal, 2011). Through the examination of the fiscal, budgetary, policy, economic and political environments the problem of the skills gap will be further exculpated. Exploring these socio-political lenses will lead to the founding of the problem statement, forming of
a theoretical framework, and scope the nature and significance of the study. In an effort to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce.

**Fiscal Environment.** Now more than ever the meaning of “career readiness” is being driven by a fiscal system of meritocracy attempting to reduce the subjectivity in learning outcomes; leading to an underlying assumption that all learning can be quantified. The fiscal frame provides ample support of the influence of higher education revenues on the stakeholders and educational policies of the State of California. What’s at stake? The sustainability of California’s economy, eighth largest in the world with a GDP of $2.31 Trillion in 2014 (LAO, 2015). The General Fund revenues are predominately funded by the “Big Three” taxes: personal income tax, sales and use tax, and corporation tax.

These revenue streams represent the diverse stakeholder interests of the State of California’s budget, which in FY15-16 was $108 Billion. How these revenues are distributed represent the values, interests, and tensions of the socio-political context of the state. The K-14 Education system is clearly of significant socio-political value allocated $58 Billion (53.7 percent) of FY15-16 General Fund budget; with $13 Billion allocated to higher education in the prior fiscal year (LAO, 2014a). Due to the passage of Proposition 13 in 1978 that limited real property taxation to a one percent ad valorem tax, the revenue base of the state is predominately funded by personal income taxes (LAO, 2014b). This impacts the state’s revenue stream, which is to a greater extent
subject to variability of market conditions, employment rates, and incomes (LAO, 2014b).

This variability and uncertainty in the state’s revenue creates funding “booms and busts” in educational budgets. Three landmark propositions 98, 30, and 2 have greatly impacted the budgets of the community college systems in California. To provide stability, Proposition 98 was passed in 1988 as a minimum-funding guarantee for the K-14 educational system out of the General Fund and property taxes. The law ensures students are funded in respect to the per capita personal income growth in the economy and the student population. The minimum-funding guarantee is set by three tests; which are complex, but include: Share of General Fund (39 percent), Growth in Per Capita Personal Income, or Growth in General Fund Revenues. Also, in periods of fiscal distress the guarantee can be suspended by the legislature through a two-thirds majority allowing greater discretion in K-14 funding (LAO, 2005).

According to the Legislative Analysts Office (LAO) (2015b), in the FY15-16 Proposed Budget reports the Proposition 98 funding minimum guarantee at $2.6 billion. The reported $2.2 billion (13.3 percent) growth in local property tax will meet the majority Proposition 98 funding minimum guarantee. The budget reports community college funding will grow by 11 percent to increase in total funding by $728 million through the combined sources of $421 million (General Funds) and $307 million (Property Taxes) (LAO, 2015b).

Governor Brown has used Proposition 98 to increase current year funding by 8 percent, funded the CCCs for 3 percent enrollment growth, and provided an additional
$200 million for the Student Success and Support Program (SSSP). The State budget included a 0.86 percent COLA and the pay down of $592 Million in cash deferrals, part of the “wall of debt” of budget deferrals and borrowing to cover deficits since 2000.

Another voter approved initiative referenda is Proposition 30, which passed on the 2012 November ballot. In response to a fiscal emergency of revenue shortfalls from economic impacts of the Great Recession, voters elected to temporarily raise tax dollars. The additional $6 billion of annual revenue through FY18-19 is generated from higher personal income tax rates to the individuals of wages higher than $250,000 and an increase in sales tax by ¼ percent to be deposited into the General Fund. Through the passages of Proposition 30, the voters shored up the unexpected $5.4 billion shortfall to K-14 education in FY12-13.

The most recent initiative referenda; Proposition 2, was passed in November 2015; the new law established a rainy day fund by transferring 1.5% of general funds to a state budget stabilization account. This proposition impacts community college revenues as it defines a specific “budget stabilization fund called the Public School System Stabilization Account (PSSSA). These accounts are “funded by a transfer of capital gains-related tax revenues in excess of 8 percent of general fund revenues (SOS, 2014, p.1).” PSSSA funds can be accessed “when state support for K-14 education exceeds the allocation of general fund revenues, allocated property taxes and other available resources (SOS, 2014, p.1).” Together these various propositions provide the revenue streams funding the budget allocations community colleges use to operate.
Education funding policy changes through propositions 98, 30, and 2 sought to stabilize revenue through California’s initiative referenda and have set a precedent for changing the fiscal policy environment. Due to the use of initiative referenda, California’s policy environment is more responsive to the changes in opinions and values of voting citizens. Which presents an opportunity for the proponents of the “demand-response” trend to use this form of direct democracy established through Senate Constitutional Amendment No. 22 in 1911 to seek policies defining outcome based funding. In seeking greater accountability and stewardship of the higher education’s provision of “career readiness” in state government operations, this positivist trend is requiring greater clarity of the statewide civil service workforce needs to bridge the emerging skills gap.

**Budgetary Environment and California Community Colleges (CCCs)**

**Appropriations.** On the third Monday of every semester professors across the state’s 113 community colleges are counting “butts in seats.” As required for budget appropriations the “census date” determines funding, a simple formula; “How many enrolled students are in the room?” Currently, CCCs budgets are allocated on the enrollment model measured by full-time equivalent students (FTES). CSU Sacramento's Institute for Higher Education Leadership & Policy noted, "current finance policy places disproportionate emphasis on the front end of a student’s college pathway: we are buying college enrollments but not college completion (Shulock & Moore, 2007, p.10)." Governor Brown echoed this in his FY11-12 budget summary where he stated, “colleges are being funded for a higher level of students than actually attend courses (LAO, 2011"
p.154).” The implication is higher education should become “outcome based” under a positivist paradigm of accountability.

The current budgets are driven by the rules of the 1960 Master Plan defining community college mission’s to provide access to higher education for students who are not serviced by the UC or CSU educational systems. CCCs do not deny admission and make no guarantee of access for any specific course and the funding model is not based on tuition ($46 per credit unit) and/or fees. Historically CCCs were tuition-free, although the LOA reports in FY14-15 student and family share of educational costs was 6 percent at CCCs.

CCC’s are budgets allocations are composed of: general apportionment, local property taxes, student enrollment fees, and the Proposition 30 educational protection account (EPA). There has been a significant shift in this funding model to increased reliance on property taxes, enrollment fees, and EPA revenues. Only 40% of the FY14-15 CCCs budget were funded by the General Fund compared to 66% in FY08-09. Refer to Table 1 for a detailed description of how CA funds community colleges.
Table 1

Model of CA Community College Budget

+ District revenue entitlement (basic allocation + funding for FTES)

- Property tax revenues

- Enrollment fees

- EPA revenues

= Remaining Balance funded by State General Apportionment

(LRCCD Adopted Budget, 2014, p. 6)

The status quo of California Community Colleges’ (CCCs) budgets are facing significant “demand response” pressure to disrupt budget policies and alter the funding model from attendance to completion. Policymakers are considering utilizing competency based education rather than attendance to devising “outcome-based” funding formulas. This paradigm shift will reallocate community college budgets to those programs, which are more “successful.” The meritocratic budgets of competency-based education are based on methods of behaviorally assessed learning outcomes based on an assumption of “objective measures of learning.” Based on the shifting budget policy context and opportunity exists to define “career readiness” as a common set of behaviorally indicated competencies between system interlocutors. This form of intersubjective meaning can be used to devise synergistic competency based career
pathway solutions to mitigate the emerging skills gap in California’s civil service workforce.

**Policy Environment.** Evidence of the “demand response” trend exists in the review of recent higher education policy environment. Senate Bill 70 (SB70) is focused on the improvement and strengthening of Career Technical Education (CTE) through aligning the California Department of Education (CDE) and the California Community Colleges Chancellor’s Office (CCCCO). Assembly Bill 86 (AB86) is a recent policy that focuses on the adult education, career education, and basic skills development through the Adult Education Block Grant (AEBG). AB86 defines adult education as services which meet the need of: “native English speakers with low levels of literacy and numeracy, high school dropouts who want to earn a diploma or GED, high school graduates who lack the skills they need to succeed in postsecondary education or training, immigrants who want to learn English or obtain citizenship, and workers who seek short-term vocational training to improve their career opportunities, inclusive of programs for incarcerated individuals and parolees (AB86, 2014).”

AEBG also seeks to enact an adult education planning process through a joint effort of the CDE and the CCCCO. The legislation supports the educational needs of adult learners through regional consortia by creating “shared approaches” that alludes to the presence of Collective Impact. This policy is an example of a “Public-to-Public” or systemic alignment as suggested in the current study. Furthermore, CDE cites the need to further research “methods to standardize articulation between community college and high school and ROCP programs statewide (CDE, 2015).”
In the Adult Education Regional Planning (2015) report presented by CCCC0 and CDE identify best practices for “program innovation.” The Regional Consortia recommended: “mapping career pathways and career lattices, curriculum alignment, contextualized instruction, bridge or transition courses, accelerated basic skills curriculum, review classes for adult learners, and [career] readiness (p.16).” These best practices for “program innovation” suggest the presence of the phenomenon of Collective Impact. These “program innovations” presented by the Regional Consortia align directly to the five conditions of Collective Impact in the following way; joint planning (common agenda), joint data collection (shared measurement), integrated instruction (reinforcing activities), support for student transitions (backbone organizations), community engagement and partnerships (constant communication). This suggests evidence that Collective Impact may already be occurring in the adult education dimension of the higher education system. The CDE Career and Workforce Innovations (CWI) Unit is the “backbone organization” aligning CTE agenda and funding priorities (CDE, 2015). This suggests that Collective Impact may also be present in the CTE domain.

The current study posits these “program innovations” can integrate public systems through a common set of competencies to create program innovation to bridge academic to workplace settings on a common meaning of “career readiness.” An effective competency based civil service career pathway may require multiple entry points (academic, adult education, career technical, contract) at various skills levels to meet the civil service skill gap of over 100,000 employees. This study seeks to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of
systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce.

**Economic and Workforce Environment.** California’s massive economy is comparable to a nation state. California’s economy “is 13.2 percent of the United States gross domestic product (GDP) and would be the 8th largest in the world, if the states of the U.S. were compared directly with other countries (EconPost, 2009).” California’s economic health in the long term is dependent on the success of higher education outputs. It has been reported that by 2025 California will face an estimated shortage of one million college degree and certificate holders needed to fuel its workforce (CCCCO, 2015).

The demand for skilled labor in CA is projected at two million inclusive of community college and higher education outcomes. The policy brief, *Career Opportunities: Career Technical Education and the College Completion Agenda* developed by the Institute for Higher Education and Leadership and Policy (IHELP) posits the importance of goal oriented state policies and advocates for closing the projected shortfall of Californians with a postsecondary credential needed to sustain the state's economic competitiveness (Moore & Shulock, 2013). During the Great Recession, California Community Colleges (CCC) budgets were greatly constrained with the suspension of the Proposition 98 minimum guarantee. California’s skilled labor shortage was only exacerbated by the cut to community college budgets reducing the system’s output of “career ready” labor.

The perceived economic benefit of an educated society supports the positivist “demand-response” trend toward completion based funding. The California Community
College Chancellor’s Office (CCCCO) reports earning a degree or certificate from a California community college nearly doubles earnings within three years (CCCCO, 2015). “In addition to higher work participation rates, adults with some college averaged about $340,000 more in lifetime earnings than those with only a high school education, and adults with an associate degree averaged about $523,000 more in lifetime earnings (TWA, 2009, p.27).” Most of California’s tax revenue comes from the personal income tax, nearly half (47.8 percent) in 2011-12 (Chen, 2015). As the workforce becomes more skilled and begins to earn higher incomes, those higher incomes will be taxed according to California’s regressive revenue and tax codes.

Higher incomes will produce additional tax revenues for the state, as many lower income earners may not pay tax at all. At higher wages, the taxpayers are not eligible for income tax relief through such credits as the Earned Income Tax Credit (EITC) and the Child and Dependent Care Expenses credit (Chen, 2015). In this way, the future economic value of California’s “up-skilled” labor force can be measured on the basis of their increasing income tax revenues over their lifetime of employment.

Economic growth is driven by the global competence within the available workforce. Global workforce trends are emerging from dynamic and turbulent social, economic, and technology environments. Current workforce trends include: “increasingly diverse customer base, increase in contingent and freelance employment, increased complexity of business structures and organizations, expanding mobile customers and increased electronic communication, increasing economic importance of digital commerce and digital content, greater reliance on IT in the workplace (Gantz & Anderson, 2013, p.3).”
In response to these trends Gantz and Anderson (2013) suggest it is best to forecast the demand for skills based on organizational requirements using a set of common, core skills across the employment spectrum. This recommendation supports the current study’s competency approach of “Public to Public” civil service career pathways.

In the 2013 IDC white paper, “Skills requirements For Tomorrows Best Job’s: Helping Educators Provide Students with Skills and Tools They Need,” over 14.6 million job postings were analyzed identifying the top skills demanded for highest growth and wage positions projected through 2020 (Gantz & Anderson, 2013). Using U.S. Bureau of Labor Statistics (BLS), Gantz and Anderson (2013) forecasted the demand for High-Growth/High Wage Positions in 2020 (see Figure 1). The operations of the state government require the competencies represented within these High-Growth/High Wage Positions and must compete directly with the private sector these skills.

![Pie chart](image1.png)

**Total = 33.6 million**

Figure 1. High-Growth/High Wage Positions in the United State, 2020 (Gantz & Anderson, 2013)
By viewing the State of California as a single enterprise rather than a vast collection of separate and disparate state agencies creates greater clarity of the statewide civil service workforce needs. This paradigm lends itself to data driven approaches allowing for the aggregation of skills or competencies essential to effective state government operations. With greater data driven decision-making, stakeholders will be provided better stewardship and accountability in the provision of statewide human resource and talent management services in state government operations. An enterprise approach to talent management can identify the breadth of the skills gap in the civil service workforce.

A potential response to the current economic trends includes targeted recruitment strategies when competing with private sector for competencies needed in these High-Growth/High Wage Positions. Through assessing aggregated competencies, the state can identify, develop, and partner with state’s educational systems to provide the requisite skills for the State to deliver public goods. The enterprise approach allows state operations to be responsive to changes in economy and the workforce.

A recent CalHR (2014) workforce demographic report found 9,640 positions in 16 high demand classifications were impacted by “retirement eligibility.” In this report, a position was considered “retirement eligible” if the employee encumbering the position could elect to retire within 3 years. A job analysis of these positions found 54 percent required at least a post-secondary degree at the entry level while 46 percent did not require a degree. This finding highlights the need for career technical skills and middle skills in the civil service workforce.
The limitation of this workforce demographic report is the data is based on attrition of positions; a trailing indicator. Using competency-based HR approaches allows state agencies to be responsive to economic trends and forecast based on business requirements rather than attrition data. Without a competency approach the state will be less able to articulate the requisite knowledge, skills, and abilities needed enterprise-wide. These workforce trends require the state to strategize methods to recruit, develop and retain the civil service workforce. These strategies include: multiple entry points, promotion of lifelong learning, and various career pathways to match opportunities.

By focusing on competency development, the state agencies can improve the state employees skills to deliver of public goods and further support the state’s economic growth and improve the quality of health, safety, and social services. The aforementioned IDC (2013) report found “the most required skills across all occupations are the so called ‘soft skills’ which include oral and written communication skills, attention to detail, customer service focus, organizational skills, and problem-solving skills (Gantz & Anderson, 2013, p.6).” The state is currently adopting a foundational ‘soft skill’ competency model in the process of transition to competency based human resource and talent management services to attract and develop a competitive workforce which could lead to the enactment of a competency based “Public to Public” career pathway. This study seeks to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce.
**Political Environment.** The “demand-response” trend for greater accountability in student learning outcomes suggests that the values of “access” and the “right to fail” from the 1960 Master Plan are shifting. The policy goals of the Student Success Act of 2012 calls for California Community College reform aimed at improving educational outcomes for students and better preparing the workforce needed for California’s changing economy. The findings of the subsequent Student Success Taskforce are evidence of the shifting values and perspective missions for community colleges. This communicates that community colleges are being seen as drivers and inputs to the labor markets to greater extent than for enrichment and recreation.

With the political pressures of accountability and outcome-based governance community colleges will need to retool and restructure to meet the projected shortfall of over 100,000 'career ready' state civil servants. According to the LAO (2013), only 30 percent of CCC students “seek transfer or graduate with an associates degree or certificate (p.41).” With the support of the California Community College’s Chancellor’s Office (CCCCO) and faculty through the Academic Senate, community colleges could develop a “for-credit” Civil Service degree/certificates. Alternatively, a contract education approach through the Los Rios Government Training Academy (GTA), College of Continuing Education at Sac State (CCE), California Corporate College, and private higher education partners should be considered to design “Public to Public” internship and apprenticeship pathways.

At the Federal level, political and systems alignments can be seen in the enactment of Workforce Innovation and Opportunity Act (WIOA) on July 22, 2014. WIOA aligns
four laws: the Workforce Investment Act of 1988, the Adult Education and Family Literacy Act, the Wagner-Peyser Act, and Rehabilitation Act of 1973, to “ensure that employment and training services provided by the core programs are coordinated and complementary (AACC, 2014, p.1).” WIOA’s vision suggests an opportunity for Collective Impact, “State and local workforce system leaders should take immediate action to achieve the vision of modernizing the workforce system and ensuring it operates as a comprehensive integrated and streamlined system that expand opportunities from all workers and businesses (TEGL 19-14, p. 3).” This vision confirms the political will for the conceptualization of career pathways into the civil service workforce as presented in this study.

The state’s civil service workforce leadership should seek alignments with WIOA for career pathways. The law is explicit in supporting individuals with disabilities and those receiving Temporary Assistance for Needy Families (TANF). The law marked a significant legislative reform to benefit and support disadvantaged students at community colleges and aligns with the diversity and equity goals of the state civil service labor unions.

WIOA as the reauthorization of the Workforce Investment Act (WIA) is intended be a more holistic approach to align the workforce system and programs, “especially the Title I occupational education programs and the Title II adult basic education program (AACC, 2014, p. 2).” WIOA is enacted through a constellation of systems and administered through six distinct federal agencies: the U.S. Department of Health and Human Services, the U.S. Department of Education, the U.S. Department of Housing and
Urban Development, the U.S. Department of Agriculture, the U.S. Department of Labor, and the U.S. Department of Commerce (See Figure 2). The complexity of the system reform required by WIOA is substantial political arena of Federal, State, and Local agencies.

Figure 2. System of Federal Agencies administering WIOA

The degree of collaboration required amongst leaders between employers, workforce boards, government agencies, and community colleges is a staggering task. The political context of WIOA further complicates requiring a unified State Plan to align “the core and key programs, such as Registered Apprenticeships, Job Corps, Temporary Assistance for Needy Families (TANF), Perkins Career and Technical Education programs, Unemployment Insurance, and required partners (TEGL 19-14, P.5).” This requires Community Colleges, Workforce Investment Boards, One-Stop Career Centers, Job Corps, Youth Build, Native Americans Programs, Migrant and Seasonal Farmworkers programs, the National Association of Workforce Boards (NAWB) to convene to design
a State Plan. This represents an explicit opportunity for the state civil service workforce to align “Public to Public” career pathways.

WIOA intends to provide career pathways by “improving job and career options for our nation’s worker and jobseekers through an integrated, job-driven public workforce system that links talent to businesses (TEGL 12-14, p.2).” The National Skills Coalition (2015) expounds WIOA’s definition of career pathways as:

“A combination of rigorous and high-quality education, training, and other service that: (A) aligns with the skill needs of industries in the economy of the State and regional economy involved; (B) prepares an individual to be successful in any of a full range of secondary or post secondary education options, including registered apprenticeships; (C) includes counseling to support an individual in achieving the individual’s education and career goals; (D) includes, as appropriate, education offered concurrently with and in the same context as workforce preparation activities and training for a specific occupation or occupational cluster; (E) organizes education, training, and other service to meet particular needs of an individual in a manner that accelerated the educational and career advancement of the individuals to the extent practicable; (F) enables an individual to attain a secondary school diploma or its recognized equivalent, and at least one recognized postsecondary credential; and (G) helps an individual enter or advance within a specific occupation or occupational cluster.”
WIOA’s influence directs resources toward regional collaboration and programming for job placement of economically displaced worker, individuals with disabilities, youth, Indian and Native Americans, Migrant and Seasonal Farmworkers, and offenders. Although from a critical lens, the unintended consequence of WIOA’s implementation is the erosion the community college’s mission of access. In effect, stratifying learning outcomes for these groups toward job placement and away from academic attainment.

The political paradox within WIOA is by supporting economic growth and regional collaboration underrepresented groups may be further disadvantaged, as the unintended consequence is further stratification away from higher academic attainment. The transformative remedy may be found through conceptualizing “Public to Public” pathways which encourage life-long learning and development through alternative competency based assessments and credentialing such as: stackable credentials, civil service degrees, micro credentials, or digital badges. This study seeks to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce.

In recent landmark legislation, SB 850 permitted community colleges to offer bachelor degrees. This new paradigm for California’s higher education system and workforce preparedness begins to dismantle The Master Plan. According to Senator Marty Block, D-San Diego, who authored the bill, the new law further directs “the focus of our community colleges on job training and increasing the accessibility and affordability of our state’s higher education system (Koseff, 2014).
CCCs implementation of an outcome based funding models could be bolstered by developing new civil services BA/BS degrees with “guaranteed placement” through workplace learning internships in a state agency. This apprenticeship approach could provide the necessary incentives and funding, any successful “Public-to-Public” pathway programs will be rewarded with greater funding. This “outcome based” approach provides an accounting method to produce a fiscal reinvestment cycle and provides reward power for states agencies to compete for labor. Forming a meritocracy using tax dollars to fund public higher education as producers of a public good; a quality “career ready” workforce for state agency, defined to be politically viable as good stewardship.

Through this analysis of the fiscal, budgetary, policy, economic and political environments; the scale of the skills gap, the impacts to civil service workforce, and the importance of the community college system to the issue were explicated. This greater understanding of the important role the community college system plays in mitigating the skills gap for civil service agencies provides context for the scope of the current study. The following section will focus the study’s purpose to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce. The following analysis of multiple paradigms conceptually anchors the effects and benefits of Collective Impact for the emergence of “Public to Public” career pathways.
Scope of Study

In an effort to more finely scope the problem examined in this study, the following sections will begin to focus the field of interest around the bounds of the Sacramento Region and the Civil Service Improvement Project Go, the need for middle skills, the benefit of competency based approaches, Collective Impact, transformative scenario planning in enacting “Public to Public” higher education partnerships. Each section presents a rationale for the relevance and significance of this study’s exploration of the phenomenon of Collective Impact as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce.

Scale of Civil Service in the Sacramento Region. According to a California Community College Chancellor’s Office (CCCCO) report, “Doing What Matters for Jobs & the Economy,” the Greater Sacramento region’s government industry is expected to grow over 3% by 8,636 jobs in 2014. California Employment Development Department reported that the Sacramento government employment rates only grew 2.1 percent (EDD, 2015). Furthermore, the Environmental Scan for Sacramento Area Community Colleges Public Administration Industry Profile projects retirements in the greater Sacramento area at approximately 141,000 workers between 2006 and 2016, with the number increasing to 335,000 between 2006 and 2026. It is estimated that in the next 12 years, it is anticipated that there will be a shortage of over 200,000 'career ready' civil servants in the Greater Sacramento Region (See Figure 3) (Milan, 2007).
The Greater Sacramento Region civil service workforce reflects the greater portion of the administration and governance of California's state government with a gross state product (GSP) of $2.05 trillion (EconPost, 2009). Based on current capacity of the largest community college district in the region; Los Rios Community College District (LRCCD), a reasonable expectation is these four colleges could produce 10% of these 200,000 needed workers over the next ten years. The expectation is the remaining shortfall will come from outside of the area or need to be developed from within the ranks of state agencies.

Another impact to attracting talent into California State Civil Service is that jobs are grouped by class specifications, documents that describe essentially similar jobs and
include the qualifications for the job. There are currently about 4,500 different job
classifications in the State Civil Service grouped into about 2,500 Class Specifications
(CalHR, 2013). The drawbacks of this bureaucratic system, is the limited flexibility
leaders have to place employees in positions and assignments that best fit their
competencies according to operational needs. The restrictive nature of classification and
pay structure of the California’s government agencies creates challenges in attracting and
retaining the “best and brightest” candidates especially from the most experienced group

**Middle Skills Needed.** The CoE report found graduation from high school is the
minimum qualification for these public administration employment opportunities
positing, “over 65 percent of [civil service] employers expected at least some college,
including a certificate or associate’s degree (Milan, 2007, p.6).” These positions
requiring “some education” are often referred to as “middle-skill” occupations. The
Workforce Alliance (2009) reports this segment of the workforce are those jobs that
require more than a high school diploma but less than a bachelor’s degree.

Without sufficient provision of middle skill workers, there could be significant
impacts to the operations of the region’s government agencies. These adverse impacts
warrant public intervention, as they are not limited to the region alone, but the operations
of the state as Sacramento is the Capitol of California. According to the Governing
California Leadership Forum (2013), the Workforce Management and Leadership
Development: A New Generation of Public Sector Leaders session describes the issue as
follows:
An average of 1,200 government employees retires every month in California. At the same time, furloughs, pay freezes, cutbacks and the controversies over public pension plans have taken a toll over the attractiveness of public service. The pressure to optimize government performance makes the need to hire, develop and maintain strong talent particularly acute. (p.2)

The demands for “career-ready” labor is not limited to civil service as the private sector is also impacted by these demographic shifts. Private sector has an advantage in recruiting the best and brightest by paying 20 percent or more than the public sector. This discrepancy in salaries ranges makes recruitment a competitive arena and limits the reward power of state agencies to attract labor. Many individuals are hired at entry-level salaries within job levels and better candidates are consequently not hirable or not retainable if they do decide to take on those jobs.

In contrast entry-level jobs, those requiring only high school proficiency, fall into the classifications of: office clerk, office assistant, office technician, accounting clerks, and auditing clerks. Public administration agencies are facing the same workforce and demographic pressures in finding qualified labor with limited incentives to attract recruits and are competing against “higher-wage” private employers. According The Workforce Alliance (2009) “Middle-skill jobs represent the largest share of jobs in California—some 49 percent—and the largest share of future job openings (p.4).”

The underlying policy problem based on these demographic shifts is "too few community college graduates are 'career ready' to meet the middle skill workforce
demands of the public sector in the Sacramento region.” Between publically funded schools representing 76 percent of college student population and the regional demand for civil service employees, there exists a nexus of opportunity for public higher education to supply the future workforce of taxpayer-supported civil service agencies. The K-14 public education system has an opportunity to align the Common Core State Standards (CCSS) goal of “career-readiness” and the Student Success Taskforce accountability measures to articulate a pathway for college graduates to fulfill the civil service workforce needs.

More specifically, “the community college [system] has an opportunity to provide customized training and education programs to meet the workforce needs of the [civil service] industry. A critical need exists to develop training programs to prepare current workers to move-up the career ladder as well as develop customized degree programs to prepare the next generation of workers (Milan, 2007, p.6).”

**Competency Based Human Resource Management.** Current educational policy around competency based career technical education (CTE) is limited in regards to provisioning for civil service sector workforce demands at scale. The U.S. Office of Personnel Management proffers the positivist definition of competency [as] a measurable pattern of knowledge, skills, abilities, behaviors, and other characteristics that an individual needs to perform work roles or occupational functions successfully (Shippmann et al., 2000). These so called, workability or employability skills (terms used interchangeably) have often been cited by employers as the skills most critical to workplace success in the 21st-century economy. The Association for Career and
Technical Education (ACTE) states employability skills “include (but are not limited to) critical thinking, adaptability, problem solving, oral and written communications, collaboration and teamwork, creativity, responsibility, professionalism, ethics, and technology use (ACTE, 2010, p.1).”

From a Human Resource Management (HRM) perspective core competency models integrate talent management services around a needs based (data driven) approach rather than a demand-response (reactive) approach. The intent of an aligned and integrated competency-based HRM model is to allow state agencies a strategic approach to satisfy constituents’ needs through public goods. The Interrelationship of Customer Needs, Departmental Missions and Core Human Resources Functions Framework (See Figure 4), illustrates how competency based HRM models are based on customer or constituents needs.

This conceptual model presents the employee lifecycle as a process related to meeting customer needs, in the public sector this includes the taxpayer’s as a constituency. Beginning with identification of customer needs, an organization (state departments in this context) must identify their mission and strategic plan to deliver services and products to meet these needs. These plans drive the employee life cycle (workforce planning, competency development, classification, compensation, recruitment, selection, performance management) that provides the talent or human capital needed to deliver customer services. The model also shows the interrelationships that provide feedback to customer needs identification from equal employment opportunity and employer/employee relations (labor union) perspectives.
State agencies are required by the Department of Finance to develop missions and strategic plans with goals, objectives and action plans that describe how they will accomplish their missions and meet customer expectations. For successful execution of the strategic plan, state agencies must be able to identify the requisite talent or skills sets needed to accomplish the goals. In a competency based HRM model, competencies act as behavioral indicators and represent an employee’s “career readiness.” To implement a strategic plan an agency will require workforce-planning data to identify, attract, deploy, retain, and replenish human capital. Without a competency model, understanding what skills agencies need is difficult to surmise. A competency based HRM model allows for data driven workforce forecasting and skills gap analyses on a system-wide basis (Strasso, 2007).
Having identified the competencies needed by the agencies, classification and selection experts can conduct analysis to align tasks and work around competency based occupational and job-specific occupational families. Based on these sets of competencies, occupational groups can be formed allowing for the design of multi-leveled classification plans and total compensation packages lead. These lead to competency based recruitment strategies designed to pinpoint how, when and where to find people who possess desired competencies. Competency based agencies know which skills are required and can devise targeted plans to attract, retain, motivate, and reward employees or candidates with the requisite competencies (Strasso, 2007).

Using competency based selection processes and testing instruments can improve assessment of job performance during the probationary period. Finally, competency-based employee performance management systems; training plans, appraisals, recognition, and discipline, are more responsive to each employee’s skills and performance needs. These functions are influenced by the need for effective employer/employee relations and equal employment opportunity programs that support constitutionally authorized adherence to the merit principle – entry into, and advancement within the civil service is earned through successful performance in competitive exams. Ultimately, the civil service workforce produces the public goods that constituents expected when they advocated the need for the formation of a particular state agency. This is a continuously evolving process is data driven and can be fine-tuned and refreshed as organizational priorities and constituents needs change (Strasso, 2007).
In review of the competency based HRM framework, the conditions of Collective Impact are reflected: common agenda, shared measurement, backbone organizations, reinforcing activities, and constant communication (Kani and Kramer, 2011a). Common agenda is set by the agencies strategic plan, the competency models provides a means of shared measurement, the HRM unit of the agency provides the backbone organization, the integrated services are reinforcing activities, and the workforce data drive approach keeps constant communication around the talent needed and/or developed.

**Collective Impact a Democratic Approach.** “Political democracy is a necessary condition [of a free society], but it does not guarantee anything. The only assurance of a good result is the encouragement of the culture for incremental thrusts by large numbers of strong free able people as they serve and lead (Greenleaf, 1977, p.116).” This highlights the importance of an educated workforce in contributing to a free democratic society. Fraser (1998) echoes with “long-term resolution will require more transformative remedies, remedies aimed at correcting inequitable social outcomes “precisely by restructuring the underlying generative framework” responsible for them (p. 74).” Collective Impact is a generative framework and as a phenomenon is a democratic process based on “the commitment of a group of the important actors in different sectors to a common agenda for solving a specific social problem. (Kania and Kramer, 2011a, p. 37).”

Common agenda within a culture or socio-political system unifies the essence of a shared reality and acts as the conduit for the transformation of an emergent often
reiterated reality. The common agenda helps achieve shared meanings between interlocutors. “When [shared meaning] is understood as a public act of participation [then] political activity may be regarded either as an instrumental process in the pursuit of public ends or as a transformative process that fosters citizen development (Scott, 2000, p. 253).” Thus Collective Impact is merited as both a democratic and transformative developmental process by which state leaders can use to grapple with tensions of the skills gap, meanings of competency, and devising an inter-organizational succession strategy. Kania and Kramer (2011a) ascribe five conditions to the phenomena of Collective Impact: common agenda, shared measurement, backbone organizations, reinforcing activities, and constant communication. By exploring the current political action around the state’s civil service workforce reform, This study seeks to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce.

Civil Service Improvements (CSI) Project GO. In response to the alarming demographic trends in labor demand, Governor Brown issued a new bill with the intent of reforming the state workforce into a “strong and nimble civil service system.” A “trailer bill” was posted on the Department of Finance’s website during the preparation for the 2015-16 state budget and reads;

Civil Service Improvements (CSI) - It is the intent of the Legislature to ensure the state has a strong and nimble civil service system. To that end, it is the intent of the Legislature that the administration continues with
ongoing and identifies new efforts to improve the state’s civil service system. This could be done through modernizing recruitment, examination, and hiring practices; developing more robust employee and management training programs; reforming probation policies; and improving employee and management evaluation processes, among other initiatives (DOF, 2015).

CSI’s governance framework is based on six workstreams: Compensation, Policies, Strategic Planning, Recruitment, Retention/Development, and Performance Management. Within the Retention/Development CSI Workstream, known as Project 5.7, CSI seeks to solve the following business problem:

The state currently lacks a unified definition and identification of core competencies that transcend all state service. Adoption of a “core competency” model will help aligns with higher education curriculum program and also State Training Center course offerings. In addition to identifying state workforce core competencies, the state also lacks a clear understanding of the competency needs for high-demand state worker classifications/occupations (CSI Project GO, 2015, p.1).

Project GO sets a clear statement for the strong demand of a statewide competency model. The following excerpt from a CSI Project 5.7 white paper suggests “the state’s lack of a foundational set of competencies to ensure a strong and nimble civil service system.” The report identified the following impacts:

- Reactive employee development solutions that is not data driven.
• Lack of employee performance accountability in the workplace

• An inability to clearly identify the talent needed to fill vacancies

• Enterprise wide challenges in inter department transition.

• Employee difficulty in transitioning careers between departments.

• The state lacks the ability to develop future workforce based on specific workplace needs.

Successful adoption of a statewide core competency model and the operationalizing of competency development must be facilitated through system alignment at the juncture between higher education and the public service workforce. Employability skills are a multisystem interdependent issue as the public higher educational system; community colleges, Universities of California, California State Universities, require greater cohesion and coherence to be more responsive to the needs of the public sector in meeting the employability needs of civil service employers.

Higher Education Partnerships. CSI defines this outcome as a “Partnership with higher education to provide career advancement courses for state employees, including tuition, fee subsidies, and release time from work to attend courses (CSI Project GO, 2015, p.2).” The holistic approach is focused on developing workability skills through the adoption of a statewide core competency model (CCM). Within Project 5.7 is a sub-team known as 5.7(C), which will:
Focus specifically on identifying the “core competencies” of our entire state workforce, as well as the specific competencies needed for those classifications of the state workforce that are in greatest demand. This project will further describe how the state will recruit for and develop the desirable competencies identified. Finally, this project will outline the ongoing process for how we will understand and respond to the development needs of the work of the state workforce (CSI Project GO, 2015, p.2).

A key political concern in developing the statewide competency model is the Service Employees International Union (SEIU), the rank and file employee union, who protects their interests of notification and bargaining rights. The labor union has the right to negotiate any changes that may impact the employment contract. In light of this sensitivity, the inclusion of the statewide Labor Relations Officer as subject matter expert has been adopted additional context to the multi-paradigmatic approach of the CSI project.

**Scenario Based Approach.** Before developing statewide policies, curriculum and evaluations of a competency based ‘Public to Public’ Civil Service Recruitment Pathway; it is essential to validate the interests and motivations of current community college students themselves. If students have little interest or motivation to enter civil service careers, the policy would have little effect or value. This study seeks to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based
career pathway solutions to the skills gap in California’s civil service workforce. To this end, students’ interest and motivations in civil service careers by comparing their perceptions of education-job relevance and interest in civil service careers will be explored.

Education-job relevance in this study is being defined as the degree to which a person’s education and occupation match. Yakusheva (2010) found that “People who match their schooling to an occupation earn a higher return to their post-secondary educational investment (p. 1).” If students are aware and agree with this finding, then they would be more likely to seek alignments between learning and their career choices. The breadth of civil service careers in the state of California utilized every degrees and education from essentially every discipline not limited to liberal arts, science, engineering, and education. The degree to which students understand which civil service careers match their education would likely impact their interest in such careers.

By considering the intersections of these two constructs; interest in civil service careers and perceptions of education-job relevance, potential pathways can be theorized. In Figure 5, these intersections are illustrated as four possible “Public to Public” pathway scenarios: Path Seekers, Private Internships, Work Experience Pathway, and Civil Service Degree.
From this diagram, policy approaches might be extrapolated in the following ways. Students who identify with the highest degree of both “interest in civil service” and “perceptions of education-job relevance” would likely benefit from being encouraged to pursue civil service degree. Although, students who identify with the highest degree of “interest in civil service” and low perceptions of “education-job relevance” would likely benefit from exploring civil service employment through work experience. Meanwhile, students who identify with the lowest degree of “interest in civil service” and high perceptions of “education-job relevance” would most likely benefit from being referred to a private industry internship. Finally, students who identify with the lowest degree of both “interest in civil service” and perceptions of “education-job relevance” would most likely benefit from being informed about civil service opportunities; careers, work experience, and degrees.
This scenario based approach shows the value of each method for conceptualizing approaches to develop “Public to Public” pathways policies. It can be seen how this approach would be invaluable to community college counselors in guiding students interested in civil service careers. To fully develop the systemic concept of “Public to Public” Pathways is a promising approach utilizing an adaptive scenario planning methodology.

**Competency based student internship based pathway concept.** This study will contribute to filling a void in the existing research on career technical education pathways for civil service employment and add to the current body of literature of competency-based development. As action research, the study is exploring opportunities of applied competency based pathways. The WIOA Act outlined the need for career pathways, “whereby individuals are often co-enrolled developmental education and training programs.” One such concept is a competency based “Public-to-Public” student internship pathway. As the CSI 5.7C project is currently recommending the adoption of the New World of Work (NWOW) - 21st Century Skills as the statewide model, an early “Public-to-Public” pathway is being conceptualized.

Currently through an Industry-Driven Regional Collaboratives (IDRC) grant, the 21st Century skills are being piloted across the state in ten community college’s Work Experience programs (Columbia College, Feather River College, Hartnell College, Lassen Community College, Santa Barbara City College, Santa Rosa Junior, Shasta College, Southern California Biotechnology Center at Miramar, West Hills College Coalinga, and Folsom Lake College). The NWOW model is a set of “employability”
competencies (Adaptability, Analysis/Solution Mindset, Collaboration, Communication, Digital Fluency, Entrepreneurial Mindset, Empathy, Resilience, Self-Awareness, Social/Diversity Awareness) and has already been piloted with over 200 students at Feather River College (FDCC, 2015). As the state is moving to adopting NWOW as a statewide model, this begins to align the system of community colleges to the state agencies and departments. Currently, Franchise Tax Board (FTB) has developed a student internship program within the Organizational and Employee Development unit and is partnering with Folsom Lake College (FLC) who is participating in the IDRC pilot. Since both organizations will be using the same competency model a prototype “Public-to-Public” recruitment pathway opportunity may exist.

Through a concurrent enrollment strategy, work experience students at FLC could also be placed as FTB student interns. The students would receive aligned competency based curriculum and evaluation across the systems. As the student explores their career option with FTB they will also be trained and developed on the core competency model that prepares the student for hiring, selection, and performance. In a sense, the student is receiving on-the-job training to secure a position, which directly aligns to the needs of the FTB as the civil service employer.

The opportunity for the community college is the up scaling of work experience programs as civil service agencies demand recruits. Placement rates are likely to be strong as students learn to navigate the civil service system and hiring process. This “Public-to-Public” program could lead to improved student success outcomes measures potentially reportable for funding if community college’s budget allocation becomes
outcome-based. This is only one scenario of potential forms of competency based “Public-to-Public” recruitment pathways; other potential system integrations include adult education and the Workforce Investment Boards (WIBS).

**Transformative Scenario Planning.** Joseph Jaworski, founder of the American Leadership Forum, pioneered the scenario planning methodology to help Royal Dutch Shell, a global organization to go beyond studying and adapting to the future but allow leadership an approach to help shape the future (Kahane, 2012). Transformative scenario planning is an adaptive scenario planning methodology that devised over 30 scenarios leading to the “Mont Fleur Scenarios” (1992) that lead the South African government to bring an end to apartheid.

Other notable transformative scenarios include: Destino Columbia (1997), Visión Guatemala (1997), Scenarios for the Future, Canada (1998), The Jewish-Israeli Scenarios (2008), Dinokeng Scenarios, South Africa (2009), The Great Zimbabwe Scenarios (2012). Each of these stories of significant system-wide transformative emergence are powerful examples of collaborations between interdependent social systems. When these interlocutors stepped away from unilateralism and choose to transform together their scenarios became the enacted future (Kahane, 2012).

According to Kahane (2012), transformative scenario planning session moves through “five steps: convening a team from across the whole system, observing what is happening, constructing stories about what could happen, discovering what can happen, and enacting by acting to transform the system (p.21).” Success requires three inputs: a whole-system team, a strong container, and a rigorous process which produced four
outputs: transformed understandings, relationships, intentions, and actions (p.92). While this may seem prescriptive as true transformative change requires “dealing with a mystery wrapped in a dilemma inside a paradox (Kahane, 2012, 93).”

What Kahane (2012) means is the transformative process begins with a paradox, “move forward by stepping back,” a requirement for the interlocutors to suspend their assumptions, expectations, and knowledge of the phenomenon. The dilemma is facing the tension between love; “the drive to open up and connect to other ideas, actors, and possibilities” and power; “the drive to actualize the potential we create (Kahane, 2012, p.94).” The mystery is the tension of accepting that the future can never really be known (Kahane, 2012, p.98). The process known as “presencing” is the grounding necessary to achieve Collective Impact (Scharmer, 2009).

**Nature of the Study**

In setting this study’s scope around the Greater Sacramento Region, and the Civil Service Improvement Project Go, with a focus on the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce. This study seeks to conceptualize competency based career pathways through a large group intervention (LGI) called a transformative scenario planning session. “LGIs are essentially collaborative inquiries into organizational systems, practices, and processes that are designed to create alignment around strategic direction and system-wide issues. While there are many differences and varieties of LGI methods, they all share in common the values that have informed
Organizational Development theory and practice, particularly the imperative for inclusiveness and widespread participation in the change process (Griffin & Purser, 2008, p.261).” Collective Impact is the focal phenomenon of this study. The researcher’s role as the CSI5.7 C facilitator is provided a context in which to identify the interlocutors needed to engage in dialogue to catalyze the emergence and enactment of "Public to Public" civil service career pathways through Collective Impact.

The current study intends to use the transformative scenario planning as part of the methodology to insight Collective Impact in the devising of the Competency Based Statewide ‘Public to Public’ Civil Service Career Pathway construct. Transformative scenario planning is grounded in work of Scharmer’s Theory U (2009), which explicates the phenomenon of “presencing” described as “a social technology merging phenomenology, dialogue and collaborative action research (p.19).”

Scharmer (2009) posits each of these constructs can be considered as a different perspective: phenomenology as first person, dialogue as second person, and action research as third person. The design of the current study seeks to explore Collective Impact; the phenomenon of interest, from three perspectives (students, CSI project members, and executive system leaders) in a Concurrent Transformative mixed method (See Figure 6). This approach seeks to investigate this study’s framework “The Interrelated Meanings of Competency” as constructed in the literature review (Chapter 2).
Figure 6. Proposed Perspectives of Collective Impact

As action research, the current study seeks to provoke the phenomenon of Collective Impact as an immediate “transformative remedy” in the development of a coherent framework of competency based “Public to Public” Civil Service Recruitment Pathways. The purpose is to evaluate Collective Impact in the development of civil service human capital through aligning California’s community colleges and state agencies systems around a unified competency approach to talent development. According to Wicks, Reason, and Bradbury (2008), “action-oriented mixed method research encompasses…policy oriented research practices aimed at making large-scale social change (Tashakkori & Teddlie, 2010, p.645).”

The development of recruitment pathways for the provision of “career ready” and sustainable statewide civil service workforce is the situation of interest. This study seeks to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce. The study’s findings will inform the policy development of “Public-to-
Public” pathways aligning publically funded systems around competency, performance and performative acts, standards, evaluation and assessment around a common model to meet public workforce needs. This unique opportunity to create public value by laying the foundational work toward a “Public-to Public” career pathway is emerging in California in the adoption of a statewide core competency model.

Success will require fostering a statewide development culture “found in organizations that promote human growth and professional development [where] the primary valued outcome of organizational behavior is ongoing learning…for staff and administrators as well (Bess and Dee, 2012, p.377).” This opportunity is clearly defined by the CSI 5.7 Project Objective:

By identifying state workforce core competencies needs, as well as specific competency needs for high-demand classifications as identified through workforce planning data, the state will be able to develop strategies to recruit new and develop the existing workforce to perform the duties required to successfully perform agency and department missions (CSI Project GO, 2015, p.1).

From this juncture, this study seeks to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce. The research goal is to achieve praxis through action research and inform California’s core competency adoption. Through the
insight of a diverse cohort of public system leader’s perspectives policy alignments can be informed as related to competency-based curricular pathways, assessments, certificates and credentials.

Again, “Collective Impact is the commitment of a group of the important actors in different sectors to a common agenda for solving a specific social problem (Kania and Kramer, 2011, p.39).” Thus, the study will include the following policy leaders of the following publicly funded institutions: Legislature and Senate Higher Education Committees, California Community College Chancellor’s Office (CCCCO), Government Operations Agency (GovOps), the California Department of Human Resources (CalHR), and Los Rios Community College District (LRCCD).

Furthermore, participants from the CSI 5.7C project team include administrators from higher education institutions and state departments and higher education faculty and staff. Organizations represented include: California Department of Human Resources, Franchise Tax Board, California State Teacher Retirement System, Public Employees Retirement System, California Department of Social Services, California State Parks, Feather River College, American River College, Sierra College, Woodland Community College, Folsom Lake College Los Rios Community College’s Government Training Academy, Foundation for California Community Colleges, William Jessup University, University of Southern California, National University, American Society of Public Administration, California Community College Chancellor’s Office, and CSU Sacramento-College of Continuing Education.
This broad array of participants represents the actors from different sectors as needed for collective action. Their participation can provide guidance on approaches: to develop competency models, to adopt digital badges, and to design civil service degrees. Together these approaches and credentials can provide shared measures of “career readiness” and allow for statewide civil service training and higher education to be articulated across systems.

Currently enrolled community college students play an essential role in the successful implementation of “Public to Public” pathways; in that, their interest and motivations should align to civil service employment outcomes. Yakusheva (2010) reports “people who match their schooling to an occupation earn a higher return to their post-secondary educational investment (p.1).” The application of this concept of “Education-Job Relevance” is a direct benefit from a well-designed “Public to Public” pathway. This study also seeks to explore the relationship of currently enrolled community college student’s attitudes on “Education-Job Relevance” and their interests in pursuing civil service employment and degrees in support of examining, discussing, and assessing the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce.
The research questions for this study are:

Question 1. “What are the perceptions of policy leaders regarding the five core conditions (common agenda, shared measurement system, mutually reinforcing activities, continuous communication and backbone function) of Collective Impact occurring between state agencies and community colleges in developing a competency based civil service industry recruitment pathway(s)?”

Question 2. “What is the relationship between career readiness, competency (cies) and the development of 21st century civil service skills and how is this relationship mitigated or displayed through transformative scenario planning?”

Question 3. “What relationships exist between currently enrolled community college students, Education-Job Relevance (EJR), and civil service degrees (BA, BA, AA, AS, Certificate, Digital badges) as measured by: attitude, career match, interests and demand?

Question 4. “What were the lived experiences of the Civil Service Improvement 5.7C project lead in engaging the system stakeholders to assess Collective Impact for the emergence of competency based public-to-public career pathways?”

**Research Method.** The current study will insight the definition of an immediate “transformative remedy” for civil service succession as a large-scale social change being enacted through the CSI Project 5.7C. This study’s design is a Concurrent Transformative
mixed method and will move through cycles of qualitative and quantitative data collection, analysis, and reflection. The findings prepare for later research designs to become explanatory and/or analytical in determining if the actions (adoption of the competency model) have the intended effect. Thus it is appropriate to use a participatory action research method. As in research question one, an exploratory approach asks a ‘how’ question with a focus on improving a situation (Christ, 2009).

In this mixed methods approach, the researcher will collect and analyze both quantitative and qualitative data to derive the findings through the use quantitative and qualitative questionnaires and a facilitated transformative scenario planning session. The rationale for this research design is “this approach will facilitate exploration of phenomenon within its context using a variety of data sources. (Baxter & Jack, 2008, p. 544).”

The first phase of the study will deploy quantitative questionnaires via SurveyMonkey to currently enrolled community college students to determine if there is a relationship between their attitudes about “Education-Job Relevance” and their interest in pursuing a civil service employment and/or degrees (See Appendix A). The second phase, utilizes a large group intervention that will be bound to an event specifically, the facilitation of a transformative scenario planning session (Kahane, 2012) (See Appendix B) and qualitative questionnaires (Scharmer, 2009) (See Appendix C).

Through this mixed method design diverse data collection and subsequent analysis will provide a more general understanding of the research problem. The qualitative approach contextualizes the phenomenological perspective and the quantitative approach
determines the student’s motivations and interests in civil services career pathways as a proxy to measure applicability or viability of the pathway approach.

While such intra-governmental collaborations are not a new concept, an innovative systems approach called Collective Impact has shown success in improving student achievement and education throughout greater Cincinnati and northern Kentucky. Collective Impact is the commitment of a group of important actors from different sectors to a common agenda for solving a specific social problem (Kania & Kramer, 2011). “Collective Impact initiatives involve a centralized infrastructure, a dedicated staff, and a structured process that leads to a common agenda, shared measurement, continuous communication, and mutually reinforcing activities among all participants Collective Impact (Kania & Kramer, 2011, p.1).” Success was achieved through a core group of community leaders who decided to abandon their individual agendas in favor of a collective approach to improving student achievement. “These leaders realized that fixing one point on the educational continuum—such as better after-school programs—wouldn’t make much difference unless all parts of the continuum improved at the same time (Kania & Kramer, 2011, p.1).”

The approach attempts to insight life-long learning and allows for work-based learning and academic learning to be commonly validated through the shared meaning enacted from a common set of core competencies. The boundary between the public higher education system and public agency training units become more permeable as a holistic concept of learning is understood as a public good occurring in school, at work, online, on demand, and as needed in real time rather than limited to traditional disciplinary and
institutionally bound curriculum. Through recognition of the interdependence between the public higher education system and public agency workforce leaders may shift their paradigm to see a grand vision of educational attainment.

**Theoretical Framework**

From the perspective of resource dependency theory, state agencies can derive operational excellence from the optimizing of internal resources (Pfeffer and Salancik, 1978). As state agencies are under greater pressure to optimize their human capital resources due to the tensions of a trend of labor shortages due to demographics shifts increasing retirement eligibilities of staff. Optimization of human capital can be accomplished in developing the competence of the civil service workforce. The concept of competence or competency dominated the management strategy literature of the 1990s (Campbell and Luchs, 1997; Mitrani et al., 1992; Nadler and Tushman, 1999.).

The competency approach “recognizes the complex interaction of people, skills and technologies that drives firm performance and addresses the importance of learning and path dependency in its evolution (Scarborough, 1998, p. 229).” Management strategy adopts a rationalist paradigm emphasizing competences are unique and firm specific. This study aligns to the Human Resource Development’s (HRD) interpretive paradigm concerned with developing highly transferable generic competences; specifically, those required in civil service occupations or job roles (Levy-Leboyer, 1996; Stasz, 1997). Systems theory provides an understanding of instructional [and training] programs are a product of the social, political, and cultural forces at work in individual settings (Erickson, 1982; Smith & Shepard, 1988; Richardson, Cassanova, Placier, & Guilfoyle,
1989). One intended outcome of the educational system is the development of human capital for the economic and workforce sustainability of the nation, state, and region. “Human capital is created by changes in persons that bring about skills and capabilities that make them able to act in new ways (Coleman, 1988, p. S100).”

Competency based approaches challenge traditional institutional training and development generally managed through bureaucratic schools and universities who place the individual as a passive “consumer” of data and content. “Competence as a measure of employability needs to have the same set of competencies recognized and accepted and somehow the relationship network should have a form of “social validation” among the “actors” (Smith, 2008). This suggests the need for shared meanings of competency to identify the civil service workforce skills sets needed. According to Kaufman and English (1979) by utilizing needs assessments the state can identify its gaps in skills and allow for targeted recruitment and hiring. Competency based approaches produce efficiencies in developing skills reducing cost and effort in acquisition and development of human capital.

Understanding competency as development the suggested enfolded meaning is “career readiness” or “substantial development” to act in a given capacity or mode. Vygotsky’s (1978) Theory of the Zone of Proximal Development (ZPD) alludes to competency as those behaviors within one’s Zone of Actual Development (ZAD). Competency; in contrast to behavior in the most general sense; is a more specific form of behavior expressed in contexts of development and/or attainment of a specific skill or capability. Fundamental to the nature of competency is the embedded concept of ability. Ability
suggests the aspirations of improving a mental, social, or physical enactment and simultaneously alludes to the inherent “limit situations” or enacted “incompetency.”

Social Constructivism suggests individuals enact meaning into a system and in the same moment through dialectic have meaning enacted upon them. Often “incompetence” is solely assigned to the individual’s attributes such as intellect, physique, or temperament as they expressed and understood through their persona. This tendency to assign competency as merely an expression of intrinsic characteristics potential for fundamental attribution errors persist creating a heuristic leading toward a stereotyping of “able-ism.” Through dialectic both “competence” and “incompetence” are socially enacted phenomenon.

From a capitalistic economic lens, competency is inscribed as those behaviors, which enable creation of value. From this worldview, “incompetence” is suggested or implied to the remaining set of behaviors that either do not create value or create more costs than returns. When looking at competency from a vocational lens and as a measure of the quality of a workforce, those competencies that create value are rewarded and reinforced, such as through behaviorism. In this context, competencies are understood as a form of currency and thus denote worth or worthiness to an employer.

This paradigm of competency in exchange can be seen as a form of merit development. Where having the “right” competencies in greater than adequate distributions is a means to higher status and thus the reward of the inscribed privilege. Merit as a dialectic is the conformity of behavior to the prevailing set of competency embraced by the benefactors in powered by the action(s) of the systems. Having the
“right” set of competency is based on the symbiosis of meanings which are transmuted on the both actors and the system.

The purpose of defining an agent’s behavior as competent implies there exists conditions other than “being” competent. The implication is competency can be contextualized into discrete states of relative observable differences. The next assumption is that competency can be examined beyond the limits of mere presence or lack of presence in observable behavior and understood as measurable in a continuum or spectrum. This element of measurability invites a positivist perspective that competencies can and should be assessed to both evidence the presence and effects in application. The quantification and measurement of the behaviors of competence considers the attribute to limited to the bounds of the observable interaction between cause and effect.

Senge (1990) a noted systems thinker has stated “cause and effect are not generally close in space and time.” These factors of change suggest that describing competence development from a positivist worldview limits the array of possible forms of competency to those that are quantifiable. Further confounded in the measurement aspect of competency is the concern of validity and reliability. The chaotic influences from the complexities of multidimensional interdependencies may not be measurable in the immediate temporality.

Although succeeding this vein of thought to persist in a more practical and comprehensible reality, measures of competency are enacted between interlocutors. Essentially a measurable competency is a phenomenon that is persistent, discrete, observable, and replicable. For the successful transmission of learned behavior; in this
case competence, the interlocutors engage in enacting shared meaning through phases of modeling, practicing, correcting, and mastery. To determine and/or achieve the progression, behaviorism suggests the process requires interactions of feedback and re-enforcement.

Thus, competence is developed in dialogue (the transmission of shared meanings) and conferred in interrelations of the actors (Bruner, 1990). A self-assessment enacted through demonstration of fluency and praxis maybe the highest standard of measure of achievement. Validation of competency development thus is mutually determined through agreed terms of evidence and support. The expansion of the concept emerges as a degree or certificate by which a socio-political system devises accreditation to learning as a course of behavior and activity.

This reasserts establishing shared meanings enact reality; Collective Impact is centered on such shifts of consciousness. From this place, unseen and unknown “competencies” can emerge from the suspended will and action of the interlocutors. In the moment of presence, competency can be seen as infinite possibility and a means for creative and integrative expression. Competence can be seen as “ex”-scribing behavior and into the means of knowledge creation.

Consider the competency to conceptualize a heliocentric planetary system, the physics of gravity, the behavior of electromagnetism, and the confounding of quantum particles as evidence of man’s need to refine meanings of reality. Paradigms shifts are the acceptance of a truth that pre-existed in our blind spot that once realized change every manner of understanding. These truths emerge from the chaos enacted in the dialectic of
the interlocutors and contextualized in systems in every moment at multiple dimensions. This is the competency of learning and its incompetency is found only in the limits of imagination.

**Limitations**

Due to the exploratory nature of this action research design the generalizability of the finding may be limited and most specifically as the statistical findings will not be inferential. The meso level utilizes a qualitative approach and explores curriculum as policy at the state level and may not be generalizable to federal, county, or other state’s legal and policy environments. Also, the scope of the study is bound within the Greater Sacramento area that covers only a portion of state civil service departments and may limit generalizability to local and national public agencies.

At the micro level, the quantitative survey measuring the interests and motivations of students in pursuing a “Public to Public” civil service recruitment pathway is limited to one community college, Sierra College in Placer County. As a convenience sample, the sample size may limit the ability to generalize findings to another very similar college, but not broadly to all community colleges. The findings as related to a statewide model may not be replicable outside of its social constructed context. The meanings of competency as measure of “career readiness” will be locally enacted in a community. This means while it may meet the needs of state agencies, it could be limited in use beyond the systems which have actors engaged in the pathway development.

It has been shown that the phenomenon of Collective Impact can be evoked through transformative scenario planning as described in the research design (Kahane, 2012).
Another assumption is the appropriate subjects have been selected to participate in the facilitation and interviews. It is assumed, the scope of the study and subjects are sufficient and inclusive enough to elicit the necessary activity to identify Collective Impact. To observe the phenomenon, assumes the behavior is readily observable and any relationships or interactions will be close enough together in time and space to be evaluated (Senge, 1990).

As with all research, there are limitations to the study that impact the findings. In this study, the primary researcher is currently the facilitator on a CSI project adopting a statewide competency model. While this is beneficial for the participatory action research design of the current study it clearly introduces bias. By taking a participatory action research design the study will enact praxis. Furthermore, the primary researcher participated on an advisory council for the development of digital badges as potential form of credentialing the NWOW 21st Century Skills. The primary researcher has prior experiences in developing competency models specifically, as the project team leader at Franchise Tax Board in their development and adoption of a core competency model. The strength of these roles is the ability to establish a nexus of subjects and have necessary access to conduct the study with the representatives from the various systems.

Bias is also introduced by the primary researcher’s role as a student centric community college professor at Los Rios Community College District and the manager of Franchise Tax Board’s Organizational and Employee Development Unit. Franchise Tax Board is directly impacted by the study’s findings. The department will be required to deploy any
adoption of a statewide competency model. In this role, the primary research has bias toward paradigms of developmental and organizational behavior.

**Significance**

Current educational literature around career technical education (CTE) is limited in regards to provisioning for civil service sector workforce demands at scale through a competency based career pathway. The current study’s exploratory approach will provide grounding for further explanatory research to develop the literature around system alignments, career pathways, competency based talent management and competency-based education. The benefactors of the current study include: state civil service departments, higher education systems, college students, displaced workers, taxpayers, and the regional, state and global economy in the form of higher quality workforce as a public good and economic engine. The higher educational system and current college students will have more clear articulated pathways and potentially greater "career readiness” and access to civil service careers. Civil service agencies will have a responsive policy approach to improved provision of human capital and “career readiness” when facing labor shortages. Furthermore, tax dollars will be spent prudently, as the education budget will fund development of labor inputs to support civil service agencies improving human capital more efficiently.

The current research advances the study of educational leadership by exploring how Collective Impact may insight the emergence of a holistic concept of “Public to Public” competency based career pathways. The research findings might set a vision for educational leaders to work through policymakers to be more responsive to the
demographic demands facing all employers. The research could provide impetus for more explanatory research to guide educational leaders and civil service agency leaders to improving curriculum policies to better define the needs of the 21st century workforce in general.

The current research has transformative implications for teaching as the application of competency based learning and digital badging as innovative assessment approaches that require pedagogical considerations. The findings may insight educational policy makers to consider establishing competency-based programs in response to the state agencies demands. This might include developing a new competency based credential such as a Public Civil Service associate or bachelors degree. The research may highlight opportunities for the public government to change policy in response to a greater understanding of the interdependence of public higher education and public civil service agencies.

The current study has the potential to enact praxis to produce access and social justice for college students as developing “Public to Public” career pathways supports learner’s outcomes and “career readiness.” According to Graue (1993), “If measures of “career readiness” and “career readiness” policies are understood as socially constructed and create unequal educational outcomes for [learners] we must consider their representation from a lens of social justice (p.255).” Thus state agencies may observe organizational changes as a statewide competency model may evoke the development of learning cultures supporting life long learners and encouraging job-outs and near completers to return to school (Murphy, 2012). The study will highlight the interdependencies between
public funded systems and cast a vision of concurrent training and educational attainment blurring the lines of “career readiness” development within the system of public institutions.

**Conclusion**

In light of the significant social impacts of the retirements of “baby boomers” to the state civil service sector, the incumbent leadership of the system must explore Collective Impact as a method for creating workforce sustainability during the demographic transition. The significance of California’s contribution to the global economy and general budget dependencies on income tax revenues requires systemic action to align publically funded systems.

Specifically, publicly funded schools and state agencies must create synergistic outcomes to ensure economic growth through a stable and competent civil workforce. This study seeks to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce. The study takes a multi-dimensional systems approach to assess the maturity of collection impact to support the definition of a statewide model of competencies to integrate workplace training and academic learning through common meanings between the interlocutors of system leaders, administrators, educators, and students.

This presentation of the literature review and development of this study’s focal theoretical framework will be presented in Chapter 2. As a phenomenology, the study is
grounded to this focal theoretical framework employing a Concurrent Transformative methodology as presenting in Chapter 3. Based on the approval of the dissertation proposal, the researcher collected quantitative and qualitative data for analysis and presents the findings in Chapter 4 and the recommendations for future research in Chapter 5.
Chapter 2

REVIEW OF RELATED LITERATURE

Introduction

Through the exploration of relevant literature from the fields of human resources management, social systems theory, and competency-based education, this chapter presents a theoretical framework for the conceptualization of career pathways. Specifically through the exploration of the nature and phenomenon of competency in an effort to unify a meaningful construct for the development of competency based “Public to Public” career pathways. As described in Chapter 1, the State of California is currently seeking to devise competency based career pathways to provision and develop civil workforce competence needs to bridge the skills gap. This construct is ensued from aligning the tensions between the complexities of a vast constellation public education and public civil service systems through integrated competency-based standards, curriculum, and assessments.

What is the nature of competency?

Frederick Winslow Taylor was one of the first to devise a model or theory of management around competency. Taylor (1911) devised the Theory of Scientific Management based on his time and motion studies and argued for leadership models based on scientific principles from the rationalistic tradition. Rationalistic researchers invoke a dualistic ontology, assuming that person and world are distinct entities, and an objectivistic epistemology, assuming the existence of an objective reality independent of

Taylor (1911) attempted to identify what constituted competence, that is, the differences between the least and most competent workers (Sandberg, 2000). While McClelland (1971) found behavior to be a function of the person and environment suggesting a limitation to the rationalistic approach. In the 1990s, the dominant management approaches began to focus on job analysis to identify a worker’s competence- a departure from these time and motion studies (Sandberg, 2000; Cascio, 1995; Ferris, Rowland, & Buckley, 1990; Gael, 1988).

The concept of competence is focused on identifying and describing essential human knowledge and skills at work and the relationships between person and work (McClelland, 1973; Boyatzis 1982; Kolb, 1984; Nordhaug, 1993). Also, competence is also defined as the “skill [or] ability to demonstrate a system and sequence of behaviors that are functionally related to attaining a performance goal (Boyatzis, 1982, p.33). The literature suggests three main positions for the term competencies: observable performance (Boam and Sparrow, 1992; Sparrow, 1992; Bowden and Masters, 1993), the standard of quality of the outcome of a person’s performance (Rutherford, 1995; Hager et al, 1994, Strebler, 1997), or the underlying attributes of a person (Boytzis, 1982; Sternberg and Kolligian, 1990).

This typology of meanings suggests of competency is contextualized based on its purpose of use. When competency’s meaning is grounded to observable behaviors or traits the construct is “within the worker” (Boyatzis, 1982). Psychologists Sternberg and
Kolligian (1990), define competency as a “standard of quality” or “a measure of ability, observable performance representing underlying trait to capacity (Hoffman, 1999, p. 275).” Also, “competency is primarily seen as constituted by attributes possessed by workers, typically represented as knowledge, skills, abilities (KSAs) and personal traits required for effective work performance (Veres et al., 1990, 87).

These definitions allude to a foundational concept of person being or having competence. In this sense, “A threshold competency [being competent] as a person’s generic knowledge, motive, trait, self-image, social role, or skill which is essential to performing a job but is not causally related to superior job performance (Boyatzis, 1982, p. 23).” Although the literature also defines competence in the “work-oriented approaches” focuses on the work as a specific set of attributes, rather than the worker (Sandberg, 2000). These models represent a rationalist approach to human competence described as a specific set of attributes that workers use to accomplish their work. Competencies can also be seen as characteristics that are causally related to effective and/or superior performance in a job.

Although the multi-method orientation considers a more comprehensive approach to competence by constituting a specific set of attributes by drawing together worker-oriented approaches and the work-oriented approaches (Veres et al., 1990). From a phenomenological lens, three main perspectives of competence can be constructed: the worker-oriented, the work-oriented, and the multi method-oriented models (Sandberg, 2000; Sandberg, 1994; Veres, Locklear, & Sims, 1990).
“A fundamental managerial problem is to develop human competence at work in a way that enables an organization to remain viable (Sandberg, 2000, p. 9).” This same fundamental organizational problem is exacerbated as the civil service workforce faces an impending skills gap. In order for human development managers to make progress in mitigating the skills gap the nature of competence should be understood. Although the literature has difficulty framing the “the fuzzy concept” of competency the multifaceted concept is evolving from several meanings and uses by practitioners. (Hoffman, 1999; van Klink & Boon, 2003).

**Competency as phenomena.** An alternative to the dualistic limitations of the rationalistic approach to competence is found in the interpretative research tradition. Sandberg (1994) adopted phenomenography as an interpretative approach to competence. Grounded in phenomenology, competency as attributes used in accomplishing work are not primarily context-free but are situational, or context-dependent (Weber, 1964/1947; Schütz, 1945; Schütz, 1953; Berger and Luckmann, 1966; Giddens, 1984). Other interpretative studies on competence also suggest that competence is context-dependent (Barley, 1996; Bennet, 1986; and Schön, 1983). Sandberg (2000) reframed competence as a “conception” as a departure from defining competence as “attributes.”

From Sandberg’s (2000) findings that “conceptions, rather than attributes, should be the point of departure both for efforts to identify and describe competence and for efforts to develop competence in various jobs and professions (p.21).” “A conception signifies the indissoluble relation between what is conceived (the conceived meaning of reality) and how it is conceived (the conceiving acts in which the conceived meaning appears).
The present study also intends to approach competence from a phenomenographic approach to further conceptualize the interrelated meanings of competence as situated within context of interrelated public institutional systems between: public higher education and state level civil service.

**Devising the hierarchy of meanings of competency.** The varied meanings of competency create confusion in the literature for researchers and practitioners. Argyris and Schön (1974) note in the search for a model there is confusion between a manager’s “espoused theory” of management versus their “theory in use.” Boyatzis (1982) a seminal author, who brought the concept to the field of management, defines competency as a capability or ability and posits there are levels of competency as well as various types of competencies.

The research literature on competency suggests the nature of skill and can be divided into three concepts representing different levels of analysis (Sparrow 1995; Sparrow and Bognanno 1993). The term competency as aforementioned “constitute attributes possessed by workers” represents the micro level or the attributes of the individual (Veres et al., 1990). Thus, competency or “career readiness” can be attained and “the rationale is to determine the syllabus for content of learning that will lead to competent performance (Hoffman, 1999, p. 277).” At this micro level, “competencies are seen as ‘soft skills’ that are associated with underlying characteristics of individuals (such as motive, traits, skills, aspects of one’s self-image, social roles or bodies of knowledge) (Raghavan, 2011, p. 98).”
At the meso level of analysis, the term “competency” refers to expressed behaviors of the worker (Strebler, 1997). Competency can be described as the enacted behavior of a person’s current or attained knowledge, skills, and abilities (Bruner, 1990). As a performative act, competency can be behaviorally observed and/or assessed (Austin, 1975; Searle, 1989). If competency means performance, then the rationale for using competency-based approaches is to improve, or in someway change in performance (Hoffman, 1999). Competencies are “evidenced through sets of intentional behavior patterns (‘behavioral repertoires’) that people ‘input’ to a broad organizational context, which may be an individual job, a role, a career stream or the organization as a whole given its structure and strategic purpose (Sparrow, 1995, p. 169).”

The macro level of analysis defines “competencies” as policy or as the standard of quality of the outcome of a person’s performance (Rutherford, 1995; Hager, Gonczi, & Athanasou, 1994; Strebler, 1997). As policy, competencies represent standards or quality of performance. From an organizational development lens, a “competence based approach” allows for human capital development through aligning training and curriculum around the goal of creating managerial and organizational efficiencies (Boyatzis (1982), McClelland (1973), Sparrow (1995), and Spencer and Spencer (1993)). Competencies as standards can be expressed as curriculum, assessments, or learning objectives within both the educational system and/or public department’s training units. The Federal policy of Common Core State Standard is an example in the K-12 educational system.
Applications of competency as a standard include: setting a minimum acceptable level of performance, setting higher levels of acceptable performance than previously existed, to manage change in new work relationships through an assessment process, and to standardize performance across parts of the company (Hoffman, 1999). These activities represent the goals of CSI 5.7(C) in adopting a statewide competency model.

Competency frameworks are templates against which workers should be assessed and resourced, serving as a basis for coaching, training and development (Sparrow, 1995; Boyatzis, 1982). In this way, “competence is something owned by national [and state] institutions and organizations that can be granted to individuals (Sparrow, 1995, p.169).

“Employability” or “career readiness” is the possibility to use or employ a series of competencies and knowledge in new or different areas of organizations by an individual or organization (Smith, 2008). Thus “competence” might represent an individual’s attainment of the standards of “career readiness” in a given defined skill set.

Extending the concept to a fourth level of analysis; the mundo level, competencies in the context of the economy relate to employability (Smith 2008). Politicians see the concept as a means of improving the efficiency of the labor market (Burgoyne, 1993). Competencies’ relationship to “employability” supposes improvements to labor market inputs may in turn produce growth and sustainability to the workforce and economic systems. The current study seeks to further explore the interrelated meaning of competency in relationship to their use within the dimensions and interrelationships of the state government, as a publicly funded social system.
Conceptualization of a Systems Theory of Competency

In developing the systems approach of competency model or theory, the current research is grounded in humanistic management that attempts to stimulate human potential and self-actualization (Boyatzis, 1982). In an effort to achieve a synthesis of competency as a system of interrelated meaning we turn to an exploration of systems theory. Systems theory stems from two theoretical traditions—general systems theory (GST) and social systems theory (SST) the focus of the current study is on the latter (Bess and Dee, 2012). “The theory maintains that observer’s recursively self-construct everything that is meaningful in the world, beginning with the difference between themselves and their environment (Lee & Brosziewski, 2009, p.4).”

Talcott Parsons (1951) framed the contemporary social system theory merging sociology with the classical theory of general systems (von Bertalanffy, 1950, 1968); (Parsons 1951, 1963; Parsons and Shils 1951). Modern social system theory is an eclectic and interdisciplinary approach grounded in constructivism, phenomenology, and the philosophies of cognition and consciousness. This tradition defines society as a “system of interrelationships” between individuals, and the interdependence of society and culture (Lee & Brosziewski, 2009).

Social systems theory research seeks to understand, explain, and plan interactions between organizations and their environment. “System theory comprises a broad conceptual framework that permits the identification of key inputs and outputs and transformative processes in organizations at both the institutional and individual levels (Bess and Dee, 2012, p. 91).” This positivist heuristic masks the nature of the Herculean
task, as “there is no possible way to scientifically describe the observation of society as a whole because the complexity of functional differentiation removes any operational center from the social world (Lee & Brosziewski, 2009, p.7).” For purposes of this current study the focal social systems are defined as California’s public higher education; specifically community colleges, and state civil service departments.

**Applying systems thinking to the meaning of competency.** System thinking involves the use of cognitive frameworks that emphasize seeing interrelationships rather than things, for seeing patterns of change rather than static snapshots (Senge, 1990, p.68). A tenant of social systems theory is the symbolic representation OB = f(E,P) where observed behavior (OB) is a function (f) and individual’s external environment (E) and personal characteristics (P) (Bess and Dee, 2012). Hoffman’s (1999) study presented competency as a linear hierarchy of meanings defined by a different level in the typology rather than interrelationships (See Figure 7).

By overlaying the symbolic representation OB = f(E,P) to the hierarchy a system thinking model of greater depth and context might be elicited. For instance, if we consider (OB) reflects the meso level; competency as expressed behaviors or performatives, (E) reflects the macro level; competency as the policy environment of quality standards, and (P) reflects the micro level; competency as individual's attributes. Thus the function (f) represents the interrelated meanings of competency and constructs a unified social system model for the development of human capital. Conceptually speaking this is the algebraic equivalent of f=OB/(E,P).
Figure 7. Hierarchy of the Meanings of Competency (Hoffman, 1999)

This is to say the function of “competency development” is a relationship between the output of “an individual’s expressed behaviors or performatives” influenced by the interactions of the inputs from the “policy environment of quality standards” and “an individual's attributes.” Inputs being bound in the denominator suggest they hold significant influence on the outcomes of an individual’s behavior. This further confirms Hoffman’s (1999), supposition that the “typology of meanings of competence was developed to show that competence is contextualized based on its purpose of use (p.275).”
Social Systems View of Competency. By contextualizing the interrelationships of meaning of competency onto a social systems model, the current study constructs an expanded social systems model of competency development. Getzels and Guba (1957) provide the following conceptual representation of a social system depicting the inputs and processes that determine an individual’s behavior (See Figure 8).

Figure 8. Social Systems Model (Getzels & Guba, 1957)

Social systems theory explains human behavior in context the nomothetic (external) and idiographic (internal) forces influencing their behavior. Nomothetic forces represent the aspects of environment such as the organization, roles, and expectations in which the individual situated. Idiographic forces represent behavioral internal to the individual such as personality, beliefs, and need disposition (Getzels, Lipham, & Campbell, 1968).

Departing from this conceptualization, the current study’s theoretical framework is grounded in an expanded social systems model of competency development. The current model specifically expounds on the interactions within systems found in the nomolethic dimension. This study recognizes the variable of idiographic dimension persists at the
individual level of the college student as a prospective civil servant. The proposed conceptual model is focused on the nomothetic social constructs of the meanings of competency between higher education and state civil service. The current model represents a system of systems understood to be a competency-based “Public-to-Public” pathway. The following is a systems view of the interrelated meanings of competency aligns social constructs of these publically funded systems (See Figure 9).

**Figure 9.** A Systems View of the Interrelationship of the Meanings of Competency

Using this conceptual representation as a common model assists in defining civil service recruitment pathways. This conceptual representation benefits the public workforce by providing system alignment through a shared meaning of competency. Competency based “Public to Public” civil service recruitment pathways can be understood as an interrelated system of inputs (individual characteristics, standards, curriculum, policy) and outputs (performance and performative acts, [career] readiness development, evaluation and assessment). The current model is “a framework of
mutually constituted or interlocking parts; ideas, materials, personal resources, institutional structures defining [career] readiness (Graue, 1993, p. 252).”

The adoption of a statewide common competency model produces “career readiness” through the developmental feedback cycle produced between the community colleges and state departments. Graue (1993) provides strong evidence of support for this perspective asserting, “Instructional programs are the product of the social, political, and cultural forces at work in individual settings (p.277).” Possible system alignments to increase “career readiness” might include: marrying academic and state training curricula, produce targeted student internship and work experience, inciting a culture of life long learning, reducing “job-out” and “near completer” populations within civil service, and produce a more agile workforce supply chain responsive to changing economic conditions.

**Assessing Collective Impact**

Collective Impact is “a disciplined, cross-sector approach to solving social and environmental problems on a large scale (Kania, Hanleybrown, & Juster, 2014, p.2).” The idea of collaboration is not new; other types include: Funder Collaboratives, Public-Private Partnerships, Multi-stakeholder Initiatives, and Social Sector Networks. Although the five conditions of the Collective Impact framework; common agenda, shared measurement, mutually reinforcing activities, continuous communication, and backbone support, enables Collective Impact initiatives to achieve a sustained alignment of efforts (Kania and Kramer, 2011b). Collective Impact occurs when a group of actors from different sectors commit to a common agenda for solving a complex social or environmental problem (Preskill, Parkhurst, & Juster, 2014, p.4).
Using Collective Impact to adopt a statewide core competency model. Collective Impact is a focal interest of this study as the development of a competency based ‘Public to Public’ Civil Service Recruitment pathway will require a cross-sector approach to develop a sustainable and “career ready” civil service workforce. The current study attempts to determine to what extent Collective Impact is forming around the adoption of a statewide core competency model. One condition of Collective Impact is shared measurement; the current study will explore how the adoption of a statewide core competency model and related assessments might aligning the systems of higher education and state civil service workforce around a common measure of skills development.

Parkhurst and Preskill (2014) suggest Collective Impact should be evaluated holistically (not as effects and impact of a single intervention) and use the information to make decisions about adapting and improving their initiative (not performance measurement and evaluation to determine success or failure). “At its core, Collective Impact evaluation is about learning: learning how to “do” Collective Impact—how to communicate and collaborate across sectors, forge new relationships, set shared goals, assess progress together, and use data to make decisions—and learning how to generate momentum, shift systems, change behavior, and, ultimately, solve a problem more effectively. (Preskill, Parkhurst, & Juster, 2014, p.20).”

Pre-conditions of Collective Impact. Prior to embarking on a Collective Impact effort three conditions must be in place: an influential champion, adequate financial resources, and a sense of urgency for change (Preskill, Parkhurst, & Juster, 2014). In the
CSI project these preconditions are in place; Governor Brown is acting as the influential champion leading the changes by enacting CSI through Department of Finance and the trailer language in the 2015 budget, adequate financial resources are also in place in forms of trailer bills and budget change proposals, and finally the sense of urgency is salient as presented in the 43% retirement eligibility in the state’s civil service workforce by 2018. These preconditions set the context for a Collective Impact approach to devise competency based civil service career pathways. Collective Impact initiatives move through the following stages: Collective Impact Design and Implementation, Intermediate Outcomes, Impact (See Figure 10). Based on these stages evaluation processes move from developmental (early-middle years), formative (middle years), and summative (late years) (Hanleybrown, Kania, & Kramer, 2012).

**Focus on Developmental Evaluation.** This study seeks to evaluate the forming stage of a Collective Impact initiative for competency based civil service career pathways. The research is focused on exploring the development of Collective Impact partners assembling the key elements of their initiative, developing action plans, and exploring different strategies and activities. In this developmental stage, there is a degree of uncertainty about what will work and how and there are new questions, challenges, and opportunities are emerging. “The leading strategic question for the phase is: What needs to happen? (Preskill, Parkhurst, & Juster, 2014a, p.11)”
Using Preskill, Parkhurst, and Juster (2014a) models for the evaluation of Collective Impact, this study seeks “to embrace the importance of measuring progress toward process-oriented outcomes and to celebrate even seemingly small victories, such as improved communication among key stakeholders or the willingness to share data across institutional lines (p.20).” These understated achievements are the building blocks of sustainable change. Specifically, the effectiveness of a Collective Impact initiative’s design and implementation can be measured through evaluation of key elements including:

- To what extent and in what ways is the CI initiative designed to incorporate all five of the core conditions?
• Which of the conditions are gaining the most momentum, and where is the initiative experiencing significant challenges?

• To what extent and in what ways does the CI initiative evolve in response to progress or challenges in achieving outcomes?

• Why does it respond and adapt in specific ways?

(Preskill, Parkhurst, & Juster, 2014a, p. 13)

Preskill, Parkhurst, and Juster (2014a) offer further guidance for evaluating Collective Impact partners in the developmental phase. The following questions are appropriate in evaluation of Collective Impact partners when exploring the developmental phase:

1. What is developing or emerging as the CI initiative takes shape?

2. What about the CI process merits more attention or changes?

3. How should the CI initiative adapt in response to changing circumstances?

4. What seems to be working well and where is there early progress?

5. How are relationships developing among CI partners?

6. How are various parts of the system (different partners) or the larger environment responding to the Collective Impact initiative?

7. What have emerged as some unintended effects or con- sequences of the CI initiative?

(Preskill, Parkhurst, & Juster, 2014a, p. 16)
This study’s concurrent transformative design is appropriate for exploring and evaluating Collective Impact. Using these evaluative methods to assess Collective Impact, the study seeks to determine if an initiative is developing and/or occurring within the activities and multiple dimensions of the systems involved in developing a statewide competency model and career pathways. The current study guided by the devised Systems View of the Interrelationship of the Meanings of Competency framework will be examined by collecting and analyzing qualitative data at the macro-/meso- levels and quantitative data at the micro- level. The multi-paradigmatic approach will be synthesized in the presentation of the findings.

**Assessment of Competence**

Recent research in quantum physics examines behavior of subatomic particles, which are proving to confound classical physics. Researchers in this arena are just beginning to understand this dimension, which illuminates these unique conditions and behaviors of the universe. Quantum behaviors suggest that the world is not simply based on probability rather the suspension of possibilities that collapse once an observer collapses from a phenomenon referred to as superposition. In a sense, all possible realities exist simultaneously until attention or consciousness collapses the universe into its classical reality. This adds great depth to the psychological concept of observer effect, not only a bias as in psychology but also the single discriminate feature of our enacted reality. From this frame, the observer effect becomes both the determining feature and discriminate limitation of acquiring competency.
Quantum Theory suggests what a conscious human “attends to” becomes their reality; this may be the impetus of competency. Recognizing that humans are multidimensional integrated beings; our reality is not merely founded in the classical domains of social organisms contextualized in systems. As a carbon based organic physiology of organs, cellular respiration, and neural electro-chemical impulses we are dynamic systems with ourselves. The human brain a networked system of a trillion neurons, of which we believe to drive behavior, also has a quantum dimension. At the quantum level every cell of our body can be described as fields of sub-atomic particle interactions with effects that collapse to creating our common “Newtonian” reality. The idea of competence being driven from this quantum dimension may seem foreign, yet often genetics enter the “nature/nurture paradox” when discussing behavior.

As quantum physics research is stretching the limits of classical science, social science researchers might consider infusing the quantum paradigm into thinking about human behavior. In seeking to understand human behavior through a quantum lens, the phenomenon of reality becomes ever more confounding and we must accept some things are simply immeasurable (van Klink & Boon, 2003). For instance, in the quantum conditions of superposition and nonlocality two sub atomic particles smaller than electrons can become entangled. Entanglement is when the spins of the electrons become correlated in such a way that these particles behavior is linked no matter how far apart they are in space.

Also, quantum physics has asserted only the location or the speed of a subatomic particle can be measured at any given moment, thus the countermeasure is forever
immeasurable in that moment (Al-Khalili, 2004). This raises curiosity of how these subatomic effects construct the physical world of which our brain’s neural nets and thus behavior are subject. From this paradigm it becomes easier to postulate that some forms of competency cannot be measured.

While we keep in mind the philosophical considerations of quantum mechanics, observable behaviors constitute “competencies” which occur on a macro scale of individuals and organizations (Boam and Sparrow, 1992). Competencies are seen as inputs to organization. “Teece (1996) described how Knowledge Management is grounded by individual experience and expertise, while the organization provides the physical, social and resource allocation structure (Alainati, 2009, p. 5).”

From a positivist perspective, human resource managers highly emphasize the measurement and assessment of the individual competency development because they are the source of organizational competencies. Competencies are psychometrically measured for the applications of talent management and human resource management purposes with the intent to measure effectiveness of training and development treatments. These measures seek to assess both tacit and explicit knowledge development (Nonaka and Takeuchi, 1995).

**Learning Theories.** Competency development as human development, specifically the observed behavior can be considered learning in context of workplace skills. Hulsebosch (2015) notes the three major prominent learning theories are known as behaviorist, cognitivist and constructivist and provides a detailed iconographic showing the connections, breadth, and diversity of learning theories (See Appendix D).
Depending on the theoretical framework competency can be seen as: a "continuum" ranging from incompetent to competent performance, a binary relationship of either competence or incompetence, or a hierarchy of levels of competence.

The context and breadth of learning theories ranging from organizational, education, philosophy, cybernetics, linguistics, psychology, and social anthropology could effect implementation and assessment of competency development. As stakeholders, leaders, managers, and staff hold varied perspectives and paradigms around the concept of learning and competence. Furthermore, consider the challenge a first line supervisor who is not versed in learning theory faces in assessing and developing others. There exists a risk that underprepared supervisors may inadvertently perpetuate negative outcomes inclusive of enacting structural violence. Educators are often trained to teach to diverse learning needs including culturally relevant techniques. In support of forming ‘learning cultures,’ supervisory staff should be developed professionally on the theories of learning beyond “coaching and mentoring.”

Based on the model of learning theories presented by Hulsebosch (2015), the study of competency mostly falls within the disciplines of psychology and linguistics. This may seem obvious as competencies can be defined as “observable behavior” and psychology is understood to be the study of behavior. The study of competency is grounded in the seminal research of Lev Vygotsky (1896-1934) and Jean Piaget (1896-1980) in developmental psychology and Jerome Bruner (1915-) in cognitive psychology. Their studies present the learning paradigm of constructivism and discovery learning and the associated learning concepts of scaffolding, zone of proximal development, and genetic
epistemology, which frame competency acquisition as a process of human development and cognition.

Hulsebosch’s model of learning theory (2015) highlights the contributions of Benjamin Bloom (1913-1999) and B. F. Skinner (1904-1990) to the construct of competency through their perspectives on mastery learning and radical behaviorism respectively. Competency as behavior can be assessed and measured using Bloom’s theoretical paradigm of Mastery Learning (1968). Bloom also provides guidance through his work, *Taxonomy of educational objectives: the classification of educational goals* (1956) on curricular approaches to developing competency models. These theoretical approaches to competency development are reinforced by the work of B.F. Skinner (1953) who presented the models of radical behaviorism and operant conditioning to the educational field. These paradigms are relevant to the current study, as the meaning of competency is understood as behavior assessed through the taxonomy of behavioral indicators.

Furthermore Kazdin (1978) expanded on Skinner’s behavioral learning theory by positing behavior and thereby competency development can be reinforced through a token economy. A token economy is “a type of behavior modification which relies heavily upon the principals of operant conditioning (Kazdin, 1978, p.1).” Token reinforcement systems are a method of applied behavior analysis requiring three elements; tokens, back-up reinforcers, and specified target behaviors, is a strong model for the development and assessment of behaviorally indicated competencies (Ayllon & Azrin, 1968).
**Digital Badges.** Despite the inherent subjectivity of assessing learning, by using a token economy behavioral approach in conjunction with the emerging concept of digital badging, a token reinforcement system for competencies could be devised. Digital badges have been described as micro credentials that certify a person’s competence or mastery of a skill. Badges are seen as compliments to the traditional certificates and degrees and can be earned in the workplace and in academic settings (Fain, 2014, Bowen and Thomas, 2014, Jovanovic & Devedzic, 2015). Although, digital badging is only recently emerging in the literature and one potential area of their application is in the form of assessment and certification of competency-based learning.

In this way, digital badges could be seen as tokens. If digital badges were widely adopted and are effective in civil service job acquisition, badges could provide the needed back-up reinforcement by providing access to the civil service job market. With a strong taxonomy (competencies as standards/curriculum) of “behavioral-indicated badged competencies” the specified target behaviors will be explicit. These three conditions could allow badges to be the basis of a statewide token reinforcement system for the civil service workforce.

**Conclusion**

Research on the literature of the phenomenon of competency has shown the concept to be a system of meanings. Due the murky nature of the concept, competency is broadly defined in the literature. The current study applied the concepts of systems thinking and social systems to devise a framework of interrelated meanings of competency as policy, behavior, and personal traits or attributes. The current study’s methodology seeks to
explore these varied dimensions of competency as related to the phenomenon of Collective Impact. The study intends to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce.
Chapter 3

METHODOLOGY: A MIXED METHODS APPROACH

Introduction

This chapter describes the research design and data collection strategies used to conduct research around the development of the conceptual framework described herein as the Systems View of the Interrelationship of the Meanings of Competency. The research will explore the concept of competency through four dimensions (micro, meso, macro, and intrapersonal) based on the theoretical framework presented in Chapter 2. Data collection will occur at each level of the theoretical framework to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce. This chapter will detail the study’s Concurrent Transformative mixed method design of data collection and varied instruments and approach to data analysis (Hanson, Creswell, Clark, Petska, & Creswell, 2005). The chapter also covers the varied roles of the researcher in the study as well as the ethical considerations protecting the participants in the study.

Research Design

This research study used a Concurrent Transformative methodology. The data analysis will be integrated during the data interpretation and synthesized in the discussion. This concurrent design will collect and analyze the qualitative data and quantitative data at the same time without providing priority to either. The concurrent transformative design is appropriate as the goal of the current study is to advocate for
social and organizational impact through policy alignment of publicly funded systems that develop the competencies of the civil service workforce and potentially improve the economic health of the state (Tashakkori & Teddlie, 2010).

Greene and Caracelli (1997) suggest transformative designs “offer opportunities for reconfiguring the dialogue across ideological differences and, thus, have the potential to restructure the evaluation context. (p. 24).” This study’s design seeks to evaluate a specific form of dialogue known as Collective Impact. The current study’s analysis will be contextualized using the Systems View of the Interrelationship of the Meanings of Competency framework. The study seeks to explore an intervention strategy for civil service agencies workforce risks by the development of competency based “Public to Public” Civil Service Recruitment Pathways. Adoption of a common competency model between the higher education and civil service agencies could establish a policy context allowing for more collaborative curriculum development and evaluation.

**Rationale for a Concurrent Transformative Design**

The study used a Concurrent Transformation design, as both quantitative and qualitative data were collected at the same time but in no particular order because neither the qualitative or quantitative data were dependent on each other. The researcher used the mixed methods design and collected and analyzed both qualitative and quantitative data. Concurrent designs are “are useful for gaining a broader perspective on the topic at hand and for studying different groups, or levels, within a single study (Hanson, Creswell, Clark, Petska, & Creswell, 2005, p.229).”
This design is appropriate as it is based on the study’s theoretical framework of the Systems View of the Interrelationship of the Meanings of Competency. Furthermore, Concurrent Transformative designs are useful for “providing a better understanding a phenomenon that may be changing as a result of being studied (Hanson, Creswell, Clark, Petska, & Creswell, 2005, p. 229).” In the current study the phenomenon of interest is Collective Impact. As action research, the current study’s findings may illuminate and influence the phenomenon.

Specifically, this study seeks to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce. The higher education partnership seeks to mitigate the emerging skill gap in the civil service workforce by linking public higher education through system alignments around a common competency model (NWoW) and exploring potential “public to public” career pathways (See Figure 11).
Figure 11. Research Paradigm

**Research Questions**

Question 1. “What are the perceptions of policy leaders regarding the five core conditions (common agenda, shared measurement system, mutually reinforcing activities, continuous communication and backbone function) of Collective Impact occurring between state agencies and community colleges in developing a competency based civil service industry recruitment pathway(s)?”

Question 2. “What is the relationship between career readiness, competency (cies) and the development of 21st century civil service skills and how is this relationship mitigated or displayed through transformative scenario planning?”
Question 3. “What relationships exist between currently enrolled community college students, Education-Job Relevance (EJR), and civil service degrees (BA, BA, AA, AS, Certificate, Digital badges) as measured by: attitude, career match, interests and demand?

Question 4. “What were the lived experiences of the Civil Service Improvement 5.7C project lead in engaging the system stakeholders to assess Collective Impact for the emergence of competency based public-to-public career pathways?”

Setting, Population, and Sample

California Community College Chancellor’s Office (CCCCO), Government Operation Agency (GovOps), and the Department of Human Resources (CalHR) are located in Downtown Sacramento, California. These state control agencies represent a system of California’s state education and workforce organizations respectively; they include: 113 community colleges, state operations of nine offices, departments, and boards (Department of General Service, Department of Human Resources, Department of Technology, Office of Administrative Law, Franchise Tax Board, State Personnel Board, California Public Employees' Retirement System, California State Teachers' Retirement System, and Victim Compensation and Government Claims Board), and over 225,000 state employees (CCCCO, 2015, GovOps, 2015; CalHR, 2015).

Furthermore, Los Rios Community College District is the second-largest community college district in California and serving about 77,000 enrolled students in the greater Sacramento region which encompasses all of Sacramento County, most of El Dorado
County and parts of Yolo, Placer and Solano counties. “Los Rios includes: American River, Cosumnes River, Folsom Lake and Sacramento City colleges; major education and outreach centers in Davis, Elk Grove, Natomas, Placerville, Rancho Cordova and West Sacramento; and specialized workforce and economic development programs for business, government and organizations throughout the region. (Los Rios, 2015). Due to the significant influence of Los Rios on this study’s setting of the Sacramento region, the LRCCD Chancellor, and Vice Chancellor, Resource and Economic Development will be included as potential participants in the macro level qualitative survey data collection. The data collection will be conducted through qualitative survey collected through e-mail.

Civil Service Improvements (CSI) is a project the State Legislature enacted to ensure the state has a strong and nimble civil service system. The state administration was called to continue with ongoing and identifies new efforts to improve the state’s civil service system. Recommendations included: modernizing recruitment, examination, and hiring practices; developing more robust employee and management training programs; reforming probation policies; and improving employee and management evaluation processes, among other initiatives (DOF, 2015).

The CSI Project 5.7- Higher Education Partnerships is a sub team the Retention and Development work stream and is governed by GovOps and coordinated through CalHR in partnership with the Department of Finance (DOF). The purpose of CSI Project 5.7 – Higher Education Partnerships is “to partner with higher education to provide career advancement courses for state employees, including tuition, few subsidies, and release
time from work to attend courses (CSI, 2015). CSI Project 5.7 – Higher Education Partnerships is further split into three sub-teams (A, B, and C). CSI Project 5.7C – Statewide Competencies is the setting for the meso-level analysis of the conceptual framework.

CSI Project 5.7C – Statewide Competencies will focus specifically on identifying the “core competencies” of our entire state workforce, as well as the specific competencies needed for those classifications of the state workforce that are in greatest demand. This project will further describe how the state will recruit for and develop the desirable competencies identified. Finally, this project will outline the ongoing process for how we will understand and respond to the development needs of the work of the state workforce.

The data collection will be conducted through participant observation of a facilitated transformative scenario planning session. The participants at this level of analysis include administrators from higher education institutions and state departments and higher education faculty and staff. Organizations represented include:

- CalHR, Franchise Tax Board, California State Teacher Retirement System, Public Employees Retirement System, California Department of Social Services, California State Parks, Feather River College, American River College, Sierra College, Woodland Community College, Folsom Lake College Los Rios Community College’s Government Training Academy, Foundation for California Community Colleges, William Jessup University, University of Southern California, National University, American Society of Public Administration, California Community
Sierra Community College District serves the Northern California foothill counties of Placer, Nevada as well as parts of El Dorado and Sacramento and is made up of 4 campuses: Rocklin, Roseville, Truckee, and Grass Valley. According to the Sierra College Factbook (2013-2014), enrollment was 54,628 with a headcount of 18,809 students with 63% of the student body under the age of 25 (p.3.). Sierra College’s student population is made up of African Americans (4.1%), Asian Americans/Pacific Islanders (11.4%), Hispanic/Latino (12.1%), White students (69.7%), and decline to state (2.7%) (Sierra College Factbook, 2013).

For the micro level analysis of the conceptual framework will examine community college students through an online survey. Sierra College was selected for convenience. The sample was randomly selected and the data were made available through the Dean of Planning, Research, and Resource Development at Sierra College, as they do not have a formal institutional research board. The quantitative data will be a random sample of community college students currently enrolled at Sierra College. The sample is purposeful and based on criteria within the scope of the study and is limited to the Greater Sacramento Region.
Qualitative Data Collection and Instrumentation

Qualitative data will be collected to explicate:

Question 1. “What are the perceptions of policy leaders regarding the five core conditions (common agenda, shared measurement system, mutually reinforcing activities, continuous communication and backbone function) of Collective Impact occurring between state agencies and community colleges in developing a competency based civil service industry recruitment pathway(s)?”

A transformative scenario planning sessions; a facilitated large group intervention, will be conducted with the members of CSI 5.7C team. This use of this adaptive approach is appropriate due to the presence of Kahane’s (2012) conditions for transformative scenario planning:

a.) the situation is unacceptable, unstable, or unsustainable,

b.) the situation cannot be transformed working alone or only with friends and colleagues, and

c.) people cannot transform the situation directly

In light of the context of the research problem as described in Chapter 1 further supports this approach is appropriate. Prior applications of the approach have instigated the phenomenon of Collective Impact at a national level in South Africa, Canada, Zimbabwe, Colombia, Sudan, and Guatemala. The current study is focused on observing the phenomenon of Collective Impact and the goal of this study is to refine the study’s theoretical framework. The transformative scenario planning session will be held face-
to-face for 90 minutes during the 5.7C CSI team meeting held at CalHR Offices in Sacramento and audio recorded using the Livescribe™ SmartPen3™ and Apple iPhone 6 Livescribe™ web applications. For more details of the facilitation see the protocol in Appendix A.

Qualitative data will also be collected to explicate:

Question 2. “What is the relationship between career readiness, competency (cies) and the development of 21st century civil service skills and how is this relationship mitigated or displayed through transformative scenario planning?”

Electronic qualitative surveys collected through email will be from various executive level system leaders including: California Assembly of the Higher Education Committee, Senate Standing Committee on Education, the California Community College Chancellor’s Office (CCCCO), Government Operations Agency (GovOps) and California Department of Human Resources (CalHR). For more details of the question path see the protocol in Appendix B.

Qualitative data will also be collected to explicate:

Question 4. “What were the lived experiences of the Civil Service Improvement 5.7C project lead in engaging the system stakeholders to assess Collective Impact for the emergence of competency based public-to-public career pathways?”

Journal entries, participant observations, and CSI meeting agendas, notes, and artifacts recorded in the CSI5.7 C Retention and Development Google Drive will be used to
contextualize the study’s findings. A phenomenological analysis of Collective Impact will be presented based on the perspectives and reflections of the primary researcher of this study.

**Quantitative Data Collection and Instrumentation**

Quantitative surveys of current Sierra College students captured data through SurveyMonkey™ and consisted of ten questions. Five demographic questions and four Likert-type scale questions with four levels (Strongly Agree, Agree, Disagree, Strongly Disagree). The last question in the survey measures student interest in various civil service degrees and/or certifications such as Bachelors of Arts (BA), Bachelors of Science (BS), Associates of Arts (AA), Associates of Science (AS) Certificates, or Digital Badges. This quantitative data will be collected to explicate:

Question 3. “What relationships exist between currently enrolled community college students, Education-Job Relevance (EJR), and civil service degrees (BA, BA, AA, AS, Certificate, Digital badges) as measured by: attitude, career match, interests and demand?

The quantitative survey data seeks to meet the research goal of generalizing the qualitative findings to community college students. For more details of the question path see the protocol in Appendix C.

**Data Analysis Overview**

Using the Systems View of the Interrelationship of the Meanings of Competency theoretical framework the study is designed to collect data from each of the four dimensions (micro, meso, macro, and intrapersonal). The macro level will be examined
through qualitative surveys of the policy leaders of the publicly funded institutions: Legislature and Senate Higher Education Committees, California Community College Chancellor’s Office (CCCCO), Government Operations Agency (GovOps), the California Department of Human Resources (CalHR), and Los Rios Community College District (LRCCD).

Then, the meso level will be examined through a qualitative transformative scenario planning session, specifically a transformative scenario planning facilitation with the members of the CSI 5.7C project (Kahane, 2012). This team’s project deliverable is to make a recommendation of a statewide core competency model for adoption in the state department’s human resources units. Also, the micro level will be examined through quantitative survey of current community college students (Sierra College) by assessing career interests in civil service and/or degrees. The intrapersonal dimension presents the unique insights from the first hand lived experience of the action researcher’s field study. The presentation of a chronological narrative from the researcher’s field notes intend to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce.

**Qualitative Data Analysis**

The qualitative data analysis method for this study is a thematic analysis through use of open coding. “Thematic analysis focuses on identifiable themes and patterns of living and/or behavior (Aronson, 1995, p.2).” The data collection occurs through transcription
of the transformative planning session audio recording and field notes and from the responses to the qualitative surveys. From the transcribed conversations, patterns of experiences or themes will be listed as direct quotes or paraphrasing common ideas (Spradley, 1979). The next step is to “identify all data that relates to the already classified patterns. All of the talk that fits under the specific pattern is identified and placed with the corresponding pattern (Aronson, 1992, p. 2).”

After the patterns are identified the next step in the thematic analysis is to combine and catalogue related patterns into sub-themes. Themes are defined as units derived from patterns such as "conversation topics, vocabulary, recurring activities, meanings, feelings, or folk sayings and proverbs" (Taylor & Bogdan, 1989, p.131).

Themes are identified by "bringing together components or fragments of ideas or experiences, which often are meaningless when viewed alone (Leininger, 1985, p. 60).” Themes that emerge are pieced together to form a comprehensive picture of the participant’s collective experience. The development of sub-themes will provide a comprehensive view of the information as an emerging pattern. The final step is to build a valid argument to formulate theme statements into conceptual constructs that either support or refute the theoretical framework.

**Quantitative Data Analysis**

This study asserts the quantitative findings from the community college student data provide additional context to the qualitative findings (Merriam, 2009). Descriptive and associational statistics will be used to analyze the data and a Pearson correlation will be used to determine significance. Findings will be presented using correlation tables to
determine if significant relationships exist between student’s interest, attitudes, and
demand for careers with Education-Job Relevance (EJR) and competency based civil
service degrees (AA, AS, Certificate). The findings will determine if student interests
support the development of curriculum and assessment around competencies. The
findings may support the policy efforts to further develop new psychological tests or
assessment instruments based on competency as understood in the initial qualitative
analysis.

Role of the Researcher

The researcher holds multiple roles dependent on the varied research treatments. In
the transformative scenario planning sessions the researcher has direct contact with the
subjects as a facilitator of a participant observation respectively. While in the
quantitative and qualitative surveys data collection, the researcher did not have direct
contact with subjects. The researcher has had indirect contact (meetings and
presentations) with some of the subjects, specifically the system leaders and
administrators of various higher education organizations and state agencies. The
researcher has also met the subjects of the transformative scenario planning sessions.
This includes participating administrators prior to the study and is directly involved in the
CSI 5.7C projects with the subjects of the qualitative treatments. The current research is
an action research design, as such it would be expected that subjects to some extent
known to the researcher. The researcher is not related to the Sierra Community College
District of the subjects in the quantitative treatment.
The researcher will conduct a qualitative analysis through transcription and thematic analysis for the transformative scenario planning session and qualitative survey protocols. The researcher will conduct the quantitative analysis of the raw data through SPSS. A Pearson correlation test was used to determine if there is significant relationships in research questions three. An expert checked the analysis to confirm it was valid and reliable. Once this check was completed, the researcher moved forward with the findings. All raw data will be destroyed, and no personal identifiable information was collected from subjects and participants. Data were kept on a password-protected computer only the researcher can access.

**Protection of Participants**

To protect participants, there was anonymity during the administration and analysis of the quantitative survey. Gathering the quantitative data via Sierra College’s Office of Planning, Research, and Resources Development ensured no information was given that can identify an individual student. Raw data and original open-ended survey answers will be destroyed after a full analysis of the data has been completed. Also, observation notes and transformative scenario planning session transcriptions will be destroyed after a full analysis of the data has been completed.

To further ensure the anonymity of data is protected the data were never handled by anyone except the researcher. At no point in time were participants asked for personal identifiable information. Also, participants were informed of their right to withdraw at any time with no consequences and their participation was completely voluntary. Subjects were provided consent forms and the study has been review and approved by
California State University, Sacramento’s Institutional Review Board. The research also completed ethics training on human subjects protocol.

**Conclusion**

In summary, the conceptual framework described as the Systems View of the Interrelationship of the Meanings of Competency (presented in Chapter 2) grounds this study’s mixed method design and data collection strategies in an exploratory research approach to examine, discuss, and assess the phenomenon of Collective Impact. Collective Impact is an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce.

The research design conceptualized the multiple meanings of competency through four dimensions (micro, meso, macro, and intrapersonal) based on the study’s theoretical framework. Data collection with varied instruments will occur, be interpreted, and triangulated through the multiple lenses of each level of the theoretical framework by utilizing a Concurrent Transformative mixed method (Hanson, Creswell, Clark, Petska, & Creswell, 2005). The methodological approach of this study is best understood as action research with a phenomenological approach, as the researcher will be engaged in field study conducting participant observation.
Chapter 4

FINDINGS

The findings of this study are presented through the analysis of the research questions presented in the prior chapter. The purpose of this study is to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce. The findings of the current study assess the maturity of Collective Impact in supporting career pathway development between state agencies and community colleges, elucidates the nature of competency based civil service industry career pathway(s), and of currently enrolled community college student’s attitudes on job-career matches relate to their interests and demand in civil service degrees. This study’s mixed methodology presents the findings through concurrent exploratory analysis of the multiple dimensions (micro-, meso-, macro-) as described in the theoretical frame presented in Chapter 2; The Systems View of the Interrelationship of the Meanings of Competency.

Figure 12 presents the structure of how this chapter displays the findings of each of these three dimensions according to their aligned research questions. This approach provides multiple lenses into an inter-segmental analysis of the interrelated meanings of competency. This study’s theoretical framework focused on the construct of competency at the nomothetic dimension and described competency as policy or standards of quality (macro level), as expressed behaviors or performatives (meso level), and at the at the idiographic dimension considering competency to be an individual’s traits or attributes.
Based on the following inter-segmental analyses, supportive evidence for the following assertions will be presented: (a) Collective Impact has not yet been bilaterally and intentionally engaged with mutual understanding, (b) support exists for multiple interrelated meanings of competency framework, (c) data is an emergent reciprocal intersubjective meaning of competency, (d) a shared meaning of “career readiness” exists through system alignment of competency assessments, and (e) significant relationships reflect community college student’s interest in both civil service careers and job-relevant educational programs. Each of these five assertions will be explicated against the data as collected at theoretical framework dimensions of analysis.

**Macro Level Analysis**

At the macro-level analysis of the Systems View of the Interrelationship of the Meanings of Competency, the collected qualitative survey data responded to the first research question for this study:
Question 1. “What are the perceptions of policy leaders regarding the five core conditions (common agenda, shared measurement system, mutually reinforcing activities, continuous communication and backbone function) of Collective Impact occurring between state agencies and community colleges in developing a competency based civil service industry recruitment pathway(s)?”

This first section displays a summary of the two qualitative survey responses collected (N=2); six surveys were issued. While limited by data collected, Collective Impact assessed at the macro-level suggests there is a striking difference between the system interlocutors who responded. One respondent provided substantive evidence of their existing awareness of Collective Impact. Again, Collective Impact is the commitment of a group of important actors from different sectors to a common agenda for solving a specific social problem (Kania & Kramer, 2011). “Collective Impact initiatives involve a centralized infrastructure, a dedicated staff, and a structured process that leads to a common agenda, shared measurement, continuous communication, and mutually reinforcing activities among all participants Collective Impact (Kania & Kramer, 2011, p.1).”

Meanwhile, the other system interlocutor reported a starkly different perspective on the degree of awareness and readiness for Collective Impact. The following comparative presentation of the macro level respondent’s feedback reflects the significant mismatch in the limited degree of system readiness to engage on the elements of Collective Impact.

1. Awareness of Collective Impact
Organization A “is aware of and implementing Collective Impact initiatives. Civil Service Improvement efforts outlined in the Governor’s Budget Act is an example of Collective Impact initiatives. This is a major focus of our organization in the coming two to three years. [We are] aware of other partnerships that exist in individual departments across the state and community partnerships between different sectors of government and nonprofits.”

Organization B “is somewhat aware.”

2. Common Agenda

Organization A “probably has more of a shared vision for change than most organizations due to our role in civil service. There has been significant work done on identifying the challenges facing employers and their workforces, and we are nearly a year into in depth analysis in a number of different workstreams to propose, "fixes" to these challenges. We still have much work to be done, but we believe there will be significant risk mitigation activities as a result for State of California as an employer.”

Organization B “No shared vision for change, and a minimal understanding of the problem.”
3. Backbone Infrastructure

Organization A “has established a strategic plan and a project repository to help track the numerous strategic objectives currently underway and planned in the years ahead. We have developed an IT governance committee and are in the process of developing a structured workload analysis and tracking governance structure for [our] executive staff. “

Organization B “Almost none.”

4. Mutually Reinforcing Activities

Organization A “provides consultation and advice to other state agencies on putting together workforce plans. We are currently scheduling a meeting with top executives throughout the state to reinforce the importance of having a workforce plan and help them understand the value of having one. This is in an effort to increase the number of state departments that have action plans to address workforce needs. Currently only 16 of 150 departments currently have a workforce plan in place.”

Organization B “None.”

5. Shared Measurement

Organization A “is unaware of shared measurement systems amongst partners at this time.”

Organization B. “is are beginning to monitor upcoming retirements and planning for those events.”
6. Continuous Communication

Organization A “has extensive communication plans in motion around a number of [our] initiatives. We communicate at various forums targeting certain stakeholders, and we communicate online and via social media as well as through various list-servs. There is also extensive project management responsibilities around CSI initiatives and project managers and their leadership makes an effort to ensure cross-functional communication occurs.

Organization B “Not at all.”

According to the limited data, Collective Impact at the macro-level is still limited and has not yet been bilaterally and intentionally engaged with mutual understanding. There appears little evidence that Collective Impact has achieved any significant maturity between the interlocutors. The disconnected quality of responses between the interlocutors suggests there still remains a need for greater mutual engagement and communication. Beginning at establishing a formal “Shared Agenda” could be the needed impetus to create bilateral readiness for Collective Impact.

While Organization A provided significant evidence their perceived presence of four of the five elements for Collective Impact, “shared measurement” was the exception. Based on the limited data from the responding executive level leaders qualitative surveys “shared measurement” was a significant mutual gap in forming Collective Impact. As shown comparatively below, the respondents confirm the lack of shared measurement directly impacts the development of a shared meaning of “career readiness.” This shared
meaning of “career readiness” is a crucial element of system alignment in competency-based approaches. The lack of evidence for mutual assessments suggests the need for further alignments beyond “shared measurement” alone.

5. Shared Measurement

Organization A “is unaware of shared measurement systems amongst partners at this time.”

Organization B. “is are beginning to monitor upcoming retirements and planning for those events.”

The data presented at this macro level provides no evidence, which supports multiple interrelated meanings of competency framework, data is an emergent reciprocal intersubjective meaning of competency, or significant relationships reflect community college student’s interest in both civil service careers and job-relevant educational program. There is an opportunity for further exploring this study’s emergent concept of “competency as data” as potential aligning concept for the Collective Impact element of “shared measurement.” Through the development of aligned competency assessments the maturation of Collective Impact might be promoted for the future development of competency based civil service career pathways.

**Meso Level Analysis**

At the meso-level analysis of the Systems View of the Interrelationship of the Meanings of Competency, the collected qualitative transformative scenario planning session data responded to the second research question for this study:

**Question 2.** “What is the relationship between career readiness,
competency (cies) and the development of 21st century civil service skills and how is this relationship mitigated or displayed through transformative scenario planning?"

This second section displays a summary of five salient assertions: (a) Collective Impact has not yet been bilaterally and intentionally engaged with mutual understanding, (b) support exists for multiple interrelated meanings of competency framework, (c) data is an emergent reciprocal intersubjective meaning of competency, (d) a shared meaning of “career readiness” exists through system alignment of competency assessments, (e) significant relationships reflect community college student’s interest in both civil service careers and job-relevant educational programs. The current study seeks to qualitatively explore potential “public to public” career pathways to mitigate the emerging skill gap in the civil service workforce by linking public higher education through system alignments around a common competency model, specifically the New World of Work (NWoW).

On December 7th, 2015, a Transformative Scenario Planning (Kahane, 2012) session was held face-to-face for 90 minutes during the CSI team meeting held at CalHR Offices in Sacramento and audio recorded using the Voice Recorder™ Apple iPhone 6 and Apple iPad web applications and an analog audiotape cassette recorder. The room was set up chairs in a large circle with participants seated facing each other; at one end of the room was an overhead projector, which presented the transformative scenario planning session question path (See Appendix C).

On each seat was a green two-pocket folder containing: an agenda, a double sided black and white copy of the overhead presentation (Appendix C), an overview of the
transformative scenario planning session’s planning format, a copy to the informed consent form, a copy of the New World of Work 21st Century Skills Primary Attributes (See Appendix F), and a color handout providing an brief overview of New World of Work. Inside each two pocket folder was loosely nested and numbered three-hole manila file folder with metal tabs. These nested packets provided the participants their respondent number and contained the research instruments: a cover letter, an informed consent form with a “sign here” tag, a pencil, and a quantitative survey (Appendix F). Permission to audio record and informed consent was collected prior the start of transformative scenario planning session.

Also, a confederate was employed to act as the timekeeper and provided three warnings (5 minute, 2 minute, and end) to the participants by use of sheets of paper denoting the same. According to the meeting agenda, twenty minutes was allotted to each of the three primary research questions. Also, three flip boards where positioned around the room with headings; Skills Gap, NWoW, and Higher Education Partnerships, to capture responses. Another confederate was assigned to capture respondent’s comments on the flip board paper.

The transformative scenario planning session included twenty (20) participants with representation from various educational, state governmental, and non-profits representing: Apollo Education Group, MDRC, California Corporate College, Department of Transportation, Cosumnes River College, Folsom Lake College, California Department of Human Resources, National University, UC Davis Extension, California Community College Foundation, Woodland Community College, the
Governor’s Office, Los Rios Community College District Government Training Academy. This group of participant represents the Civil Service Improvement (CSI) Higher Education Partnership providing guidance to the State of California’s effort to reform the civil service workforce for the 21st Century.

Due to the limited number of participants completing the quantitative survey with a high degree of incomplete survey responses the data could not be analyzed for statistical significance. The categorical data will be presented later in this chapter under the heading of lesser findings. The following descriptive statistics were collected and reflect the composition of the transformative scenario planning session’s demographics (See Figures 13-16). The transformative scenario planning session was predominately White/Caucasian women who were not of retirement eligible age (55+). While a majority of participants had less than five years experience in their current role.

Figure 13. Demographic Distribution of Sample by Gender
Figure 14. Demographic Distribution of Sample by Age

Figure 15. Demographic Distribution of Sample by Ethnicity
At the end of the transformative scenario planning session, over seventy minutes of audio recording was captured. The audio recording and flip chart notions were transcribed into Microsoft Excel workbooks, a tab for each of the three primary research questions: Skills Gap, NWoW, and Higher Education Partnerships. As expressed in the Transformational Scenario Planning session the findings can be understood, as two synergistic scenarios required for the enactment competency based “Public to Public” career pathways. The “In” scenario reflects approaches to construct career pathways into state service and provide a targeted supply of “career ready” workforce. While the “Up” scenario reflects approaches to adapt the inter/intra-organizational structures to provide for up-skilling of the “career readiness” of the current workforce.

Together the “In and Up” strategy has five distinct focal areas (themes) as described in the recorded and transcribed Transformative Scenario Planning session. The transcription was thematic coded using color codes (red, orange, green, blue and yellow) to represent
five major emergent themes: Institutionalization/System alignment, Big Data, Culture Shift/Change Management, Long Term Planning/Leadership, and Statewide Information Technology (IT) solutions. Based on this thematic analysis, five major assertions can be supported:

(a) Collective Impact has not yet been bilaterally and intentionally engaged with mutual understanding, (b) Support exists for multiple interrelated meanings of competency framework,
(c) Data is an emergent reciprocal inter-subjective meaning of competency,
(d) A shared meaning of “career readiness” exists through system alignment of competency assessments,
(e) Significant relationships reflect community college student’s interest in both civil service careers and job-relevant educational programs.

As stated by Kania and Kramer (2011), Collective Impact has five specific core conditions (common agenda, shared measurement system, mutually reinforcing activities, continuous communication and backbone function) required to instigate the emergence of transformative systems level change. The transformative scenario planning session sought to explore the nature and maturity of Collective Impact in the emergence and development of a competency based civil service industry recruitment pathway(s). Based on the following respondent’s statements it is clear that the formal, intentional, and bilateral engagement has not occurred. The concept or term Collective Impact was never
directly referenced, although the content of the responses infer the awareness of a need for a unifying method to guide the enactment competency based “Public to Public” career pathways.

“There is huge challenge…we have to address; we don’t operate as one organization. And so in some areas it is less of a challenge than others in terms of department and agencies. There is a wide divide and people in some cases already using their own “home grown” competencies and how do we switch theirs to our new language. It is a massive organization that’s largely decentralized on how it is attacking these issues and so coming together it will be a large challenge. Respondent #41

This comment identifies the lack of “shared agenda” required of Collective Impact within the state’s structure of diverse and separate entities. The concept of “shared agenda” is also limited from the education system’s perspective.

“It sounds like it goes back to looking at the whole internal structure as well and some of the other comments its do we continue business as usual or really evaluating every area and what do we need to do. And the colleges can help you, we do have classes and modules that can be adapted and work with and help train supervisors and or your current employees on the different attributes and have them exposed to it.” Respondent #28

Between these interlocutors, their respective systems are being describing as separate systems, and not as part of one whole or systemic ecosystem. There is no explicit reference to any the conditions of Collective Impact within the transcript. The closest
evidence is the sense of need for a Collective Impact approach as Respondent #36 stated, “I think it would have to include transparency and fluidity and cross-organizational, and by cross-organizational I mean within the state and also external to the state, including the educational participants.”

Without awareness and the intentional engagement of Collective Impact, the most significant finding related to the phenomena of Collective Impact would be respondents’ statements reflecting a generalized awareness of the opportunity or necessity of such an approach, if not Collective Impact specifically.

For instance Respondent #41 notes the need to “come together ….as one large organization”:

More than ever before we have to come together to come up with at statewide solution and operate as one large organization. I know there is the specifics that happen on the department level and everyone is fighting those individual battles, but this topic is going to require in my opinion that we come together with at statewide solution more of a comprehensive again as a one large organization and leveraging that strength to move this direction. Respondent #41

Together these vignettes provide strong evidence that due to the lack of awareness of or reference to Collective Impact, it is defensible to state is has not yet been bilaterally and intentionally engaged with mutual understanding.

The Systems View of the Interrelationship of the Meanings of Competency, this study’s theoretical framework, focused on the construct of competency at the nomothetic
dimension and described competency as policy or standards of quality (macro level), as expressed behaviors or performatives (meso level), and as attributes or traits (micro level). This claim was supported by the thematic analysis of the Transformative Scenario Planning session. The findings supported the theoretical grounding of the multiple meanings of competency as presented in the Hierarchy of the Meanings of Competency (Hoffman, 1999) presented in Chapter 2. The multiple meanings of competencies in this theory included: labor market inputs, policy or standards of quality, expressed behaviors or performatives, and individual's traits and attributes. This study provides further support for these theories and presented the following forms of the competency construct expressed in the transcript.

The macro-level of competency as policy or standards of quality was presented by Respondent 14 stating,

“all sources of competencies should have a source of standard statement of the competency… that shows up in our contracting, for internal department trainers, and for centralize training resources.”

The respondent also alluded to the concept of competency as considered curriculum in this response as a “centralized training resource.”

At the meso-level analysis of the Systems View of the Interrelationship of the Meanings of Competency framework, competency is understood as expressed behavior or performatives. The supportive evidence of this was presented by Respondent #28:

“… much of the developmental process happens on the job and not in the classroom. You can send someone to analytical training and
communication training for two days and when they go back [to the job] someone needs to be evaluating that behavior, looking for it, coaching and mentoring… the real big wins are from the outside classroom type of experience.”

Respondent #26 further echoed the meaning of competency as “expressed behavior”:

“… to ensure roll out [of the NWoW Model] builds…leadership should be established prior to these people coming in, so they know what is expected from them on the job. Someone might say, “Well my boss doesn’t really want me to do that.” or, “I don’t really have the time to do that.” They’ve got an know what is going to be expected and seen in the change of their work.”

While this study was most interested in the nomothetic dimension, there was evidence that competencies can be understood in the idiographic dimension (micro-level). The idiographic dimension considers competency to be an individual’s traits or attributes.

Respondent #22 provided evidence of this meaning of competency stating,

“…if you put this list [NWoW Model] out in front of people or if you just asked a cross-section of Californians what are the qualities of state government. Without trying to offend anyone, I don’t think many of those qualities would be held up or thought… this is really good that these skills could help re-imagination government.”

This response also shows how fluid the construct of competency meanings can be understood in two dimensions as this speaker moves between the idiographic and
nomolethic dimensions referring to competency as both as policy or standards of quality; “this list [NWoW Model]” and a skill or observed behavior; “those qualities… these skills.”

Together these vignettes provide strong evidence that The Systems View of the Interrelationship of the Meanings of Competency, this study’s theoretical framework holds merit when seeking to understand the concept of competency. The framework can be understood as an effective approach to assist in providing clarity when discussing system alignment between competency-based human resource management approaches and for the development of competency based educational systems, programs, or curriculum.

Based on theses findings there is strong evidence that a system of multiple meanings of competency holds merit. Additional evidence suggests an additional meaning “competency as data” can be understood as part of the framework. This emergent meaning adds value when discussing system alignment between competency-based human resource management approaches and for the development of competency based educational systems, programs, or curriculum. Most specifically, competency assessment data stored in shared human resources information systems technology can act as a source of reciprocal intersubjective meanings.

The following responses support the claim that “competency as data” can have a system aligning effect based on the mutual shared meanings derived. This conceptualization was supported by Respondent #36 who stated; “We need to continue
with this [data] transparency involved in those solutions and accomplishments so they
can be shared with all organizations.”

Respondent #9 echoes this statement providing an example of “competency as data” in
use,

“The benefit of a centralized system is the big data that we start to collect
and move forward. And big data is great but it is not very useful without
very clear goals. Obviously the goal here is not to replace 100,000
positions in the sense of simply replacing 100,000 positions. If you have
goals defined then algorithms can be set up not some body looking over it
but it data to help you tell a story of weather of not we are being
successful.”

Additionally Respondent #22 provides further evidence of “competency as data”
stating, “You might think about a kind of sequencing of a roll out and a learning agenda
around that sequencing so that you get that information the data that feeds and you'll
improve it for the next stage.”

The conceptualization of competency as assessment data emerges as separate from
competency as curriculum when Respondent #38 noted, “I think it is important to
separate the idea of curriculum how to train people from the assessment how to identify
whether they have competency or not. If the assessment is strong we can engage a huge
universe of learning environments to get to that place of competency.”
Additionally, the conceptualization of competency as data is further developed by Respondent #35 statement of suggesting the value of clarification in competency needs identification.

“I think it is important to look at this pie [chart] and figure if we can disaggregate [data]. It not clear to me that we are talking about a group of folks that are leaving and new group of people coming in and what are the skills sets and competencies needed for that new workforce or are we talking also about the folks that are still here in that grey part of the circle that also require some additional skills to be more productive than it is really important to disaggregate this problem we are trying to understand and address.”

This study’s unexpected finding of another emergent meaning of competency as presented in the transcription was “competency as data,” or more specifically as human resource information system data or assessment data. From these findings, it can be asserted that a shared meaning of “career readiness” exists through system alignment of competency assessments. Since ‘competency as data” is derived through the shared assessment of employees/students through shared behavioral indication on a common model such as New World of Work (NWoW). Respondent #27 describes this as follows: “One thing that the New World of Work has done … is it defined primary attributes for each of the skills so that is a good starting place to ensure everyone has the same language around what does this skill actually mean.”
Furthermore, participants noted that through the process of designing shared assessments and establishing data transparency such improved system alignments could occur. This finding of shared data aligns to one of the essential elements supportive for the emergence of Collective Impact; shared measurement. Specifically, digital badges are a form of data, which provides for the intersubjective meaning of “career readiness.” Since these digital badges are being developed around shared assessments they can act as tokens. Respondent 27 supports by stating “Currently in the implementation at the community college level we have assessments that are developed specifically on those attributes and will be integrated into the digital badges; it becomes consistent, almost like here is the road map.”

Additional supportive evidence that the NWoW model can be seen as a shared meaning of “career readiness” exists through system alignment of competency assessments. Is presented by Respondent #25

“I think if we can integrate some of this language [NWoW Model], actually I just did of my student learning outcomes on this curriculum. I integrated some of the New World of Work language some of the competencies right into my student learning outcomes. I am putting through 20 pieces of curriculum this year I will have the same language in it. Through student learning outcomes and if we integrate that same language into performance evaluations that the employers use. It is a perfect cooperative arrangement that fuses all players onboard.”
This is presence of a shared meaning instigated through the common competency model is also presented by Respondent #41,

“I think one of the big things that is going to help… is we are all speaking the same language. If we had this [NWoW Model] in place already, we could all speak the same language. I am hearing all kinds of stuff and have to try to piece together how they relate and how they are similar. Similar challenges we can address with statewide solutions. So I think speaking the same language is going to be a huge benefit.”

This finding is of particular interest as shared meanings between system interlocutors are necessary to create alignments for devising competency based career pathways. Collective Impact notes that “shared measurement” is a crucial core conditions and is evident in these findings of the Transformative Scenario Planning. Thus through the adoption of a common competency model (competency as policy/standard) such as the NWoW model, the “shared meaning” provides an opportunity for shared measurement through shared assessments. This policy adoption leads to the emergent concept “competency as data” to provide inter/intra-system information technology system alignments.

While the focus on the meso-level of analysis is inter/intra organizational and by nature the question path never directly referred to student’s interest in either civil service careers or job-relevant educational programs. Although some evidence of student’s interests was provided by Respondent 28, who noted,
“I don’t have any problems with students wanting to work for the state. I mean everyone who comes in they want to work for the state. Part of the challenge as I said is technical... they get nervous and don’t understand the online application process.”

This finding provides additional support the evidence presented in the microanalysis section of this report.

Overall, this meso-level analysis, presented the finding of a thematic analysis providing evidence of five major assertions: (a) Collective Impact has not yet been bilaterally and intentionally engaged with mutual understanding, (b) support exists for multiple interrelated meanings of competency framework, (c) data is an emergent reciprocal inter-subjective meaning of competency, (d) a shared meaning of “career readiness” exists through system alignment of competency assessments, (e) significant relationships reflect community college student’s interest in both civil service careers and job-relevant educational programs. In the next section, these assertions will be further explicated at the micro-level of analysis, which represents the student’s voice. The awareness and maturation of Collective Impact should be further promoted for the enactment and development of competency based civil service career pathways based on these findings of the meso-analysis.

**Micro Level Analysis**

At the micro-level analysis of the Systems View of the Interrelationship of the Meanings of Competency, the collected quantitative survey data responded to the third research question for this study:
Question 3. “What relationships exist between currently enrolled community college students, Education-Job Relevance (EJR), and civil service degrees (BA, BA, AA, AS, Certificate, Digital badges) as measured by: attitude, career match, interests and demand?

This third section displays the quantitative data organized around the demographics, correlational, and categorical variables collected through Survey Monkey via email. The sample was randomized and the survey was delivered to 2,000 currently enrolled Sierra College students. The following figures reflect the gender, age, ethnicity, employment, and enrollment demographics of the respondents (See Figures 17-21).

Figure 17. Demographic Distribution of Sample by Gender
Figure 18. Demographic Distribution of Sample by Age

Figure 19. Demographic Distribution of Sample by Ethnicity
The study’s sample was predominately part-time employed white females 18-24 years of age who are either first-time freshman or returning undergraduates. It is important to note these distributions are not reflective of the demographics statewide, which is the
appropriate unit of analysis for the study’s focus on statewide civil service career pathways. This non-representative sample significantly limits the generalizability of these findings and additional study is required to make inferences of student’s interest statewide.

Nevertheless, Table 2 displays the significant correlations found between the variables General Interest and the factors of Job Match and Interest in Civil Service. Which provides support to this study’s assertion that significant relationships exist reflecting community college student’s interest in both civil service careers and job-relevant educational programs. This finding is encouraging as it signals to policy makers and educational leaders that community college students may have interested to seek out “Public to Public” career pathways.

Table 2

*Significant Correlations with General Interest*

<table>
<thead>
<tr>
<th>Significant Correlations with General Interest (GI)</th>
<th>r</th>
<th>p</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Match (JM)</td>
<td>.51</td>
<td><em>p &lt; .01</em></td>
<td>Moderate</td>
</tr>
<tr>
<td>Interest in Civil Service (ICS)</td>
<td>.41</td>
<td><em>p &lt; .05</em></td>
<td>Moderate</td>
</tr>
</tbody>
</table>

The symbol $r$ is the Pearson correlation coefficient ranging from -1 to +1. The symbol $p$ is the probability of an observed result happening by chance under the null hypothesis. Sig of $p< .05$ states there is a 95% Confidence Interval (CI). The following significant correlations were found between the variables. The correlation between the variables Job
Match and General Interest was significant, \( r(30) = .51, p < .001 \). The correlation between the variables Interest in Civil Service and General Interest was significant, \( r(27) = .45, p < .05 \). The effect size (Cohen) on both correlations is considered moderate.

While Pearson r correlations are limited in expressing the nature of the relationship beyond the strength and direction of the variables, it can be understood that significant relationships exist which support student’s interests in civil service careers. The extent and depth of these relationships would be an opportunity for further study.

Additionally, the respondents provided evidence of broad interest in their community college offering civil service degrees with the greatest reported demand for Bachelors of Science (BS) 27.6 percent and the least digital badges 3.4 percent (See Table 3).

Table 3

Categorical Evidence of Demand for Civil Service Degrees

<table>
<thead>
<tr>
<th>Demand for Civil Service Degrees (DCS)</th>
<th>f</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Badge</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td>Certificate</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td>Associates of Arts Degree (AA)</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td>Associates of Science Degree (AS)</td>
<td>3</td>
<td>10.3</td>
</tr>
<tr>
<td>Bachelors of Arts (BA)</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>Bachelors of Science (BS)</td>
<td>8</td>
<td>27.6</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>100</td>
</tr>
</tbody>
</table>
This finding suggests an opportunity to consider the development of curriculum toward a bachelor degree on government operations. Also the notable lower demand for digital badges suggests a potential complication for the development of competency based civil service career pathways as conceptualized on this form of assessment. This finding could be due to the relatively novel nature of this form of certification of learning in academia as whole. Due to the small sample size it is not possible determine the accuracy of this claim, further research could further exculpate the nature of student’s demand of digital badges as a means of certification of learning. Clearly, the quantitative data at this level lacks the power to evidence student’s awareness of digital badges as part of a multiple interrelated meanings of competency framework. The limitation of the correlative analysis cannot provide evidence to the assertions that: Collective Impact has not yet been bilaterally and intentionally engaged with mutual understanding, the degree to which a shared meaning of “career readiness” exists through system alignment of competency assessments, or as data is an emergent meaning of competency.

**Lesser Findings**

As mentioned prior, this section provides the lesser findings at the meso level as the quantitative survey data (Appendix F) was limited due to a sample size of twenty (20) participants completing the instrument with significant incomplete responses. Thus the data could not be analyzed for statistical significance. The following figures (22-25) reflect the participants of the transformative scenario planning session degree of “shared meaning” as described in the Hierarchy of the Meanings of Competency (Hoffman,
1999). The categorical data presented below provides some context and support that the assertion that multiple interrelated meanings of competency framework exists.

**Competency as Traits**

- 25% Frequently
- 75% Nearly Always

**Competency as Behavior**

- 25% Frequently
- 75% Nearly Always

Figure 22. Categorical Distribution of Respondent’s Perceptions of Competency as Traits

Figure 23. Categorical Distribution of Respondent’s Perceptions of Competency as Behavior
Figure 24. Categorical Distribution of Respondent’s Perceptions of Competency as Curriculum

Figure 25. Categorical Distribution of Respondent’s Perceptions of Competency as Policy
These findings provide support exists for a multiple interrelated meanings of competency framework. Competencies as “traits” and “behavior” were seen as strongly nearly always (75%) and frequently (25%). This finding suggests the participants held a fidelity toward these shared meanings competency. Competency as curriculum was also shared a significant fidelity of meaning, although to a lesser degree as 19% of respondents reported seldom. This suggests that curriculum is a lesser-understood meaning of competency. The least shared meaning of competency was policy, with respondents reporting seldom (13%) and never (13%).

This finding has significant implications when considering this study’s theoretical framework, which conceptualizes competency as policy to align around a common model such as the New World of Work. Without the shared meaning of competency as policy, the ability to instigate Collective Impact will remain confounded. Further dialogue may still be needed to establish bilateral and mutual understanding of competency as policy. Future study should further assess the extent to which data is an emergent “shared meaning” of competency. This specific “shared meaning” might be translated into a proxy of “career readiness” supporting system alignment around aligned common competency assessments. These findings provide no evidence of any significant relationships reflect community college student’s interest in both civil service careers and job-relevant educational programs.

On Becoming Native: An Action Researcher’s Lived Intrapersonal Experience

In the spirit of the exploratory nature and phenomenological method of this study’s action research design, the following section seeks to provide the unique insights from
the first hand lived experience of the action researcher’s field study. The presentation of this chronological narrative from the researcher’s field notes as findings is intended to further contextualize the emergence of competency based public-to-public career pathways construct. Holman and Duvane (1999) posit at the center of large group intervention methods such as Collective Impact is the recognition that the knowledge required for successful change resides within the stakeholders who comprise the whole system. This section seeks to explicate:

Question 4. “What were the lived experiences of the Civil Service Improvement 5.7C project lead in engaging the system stakeholders to assess Collective Impact for the emergence of competency based public-to-public career pathways?”

The story begins in the most sterile of environments, a small quiet room at the central office of the Franchise Tax Board (FTB). The square room with eggshell colored walls provides no natural light, as there are no windows. This quiet room is designed for maintaining confidence and privacy in the sensitive dealings of human resources management. The department was in the midst of replacing an end of life learning management system; ASPEN, and the upgrade was the impetus for this meeting of the minds. Under the uninspiring glow of the florescent lights, four civil servants human resource managers are meeting to discuss the latest milestones on the launch of Franchise Tax Board’s new talent management system, LEARN.

At this time, I was leading the core competency team developing the department’s competency model. The lead FTB Human Resource Internal Consultant, and myself;
Supervisor of Organizational and Employee Development Services (OEDS) Unit were hosting, the Statewide Training Manager and Training Operations Manager from California Department of Human Resources (CalHR) visiting to discuss competency modeling and FTB’s progress.

At the time, we could not foresee our journey would unfold into the culmination of the CSI 5.7C policy adoption of statewide competency based talent management and foundational competency model; New World of Work -21st Century skills, establishing solid grounding for further development of competency based public-to-public pathways. The meeting formed the bond of these acquaintances around the common vision of state civil service talent management reform. It was in this discussion, that my early concept of “connecting civil service needs to the community college supply chain” was pitched. What I did not know at the time was the extent I was merely “speaking the words of others (Dyson, 1987).”

It would turn out that Governor Brown was also speaking these words; shortly after our seemingly innocuous meeting; the 2015 budget trailer bill forming the Civil Service Innovation (CSI) project provided the spark to ignite the conversation. It is not by mistake the term emergence is pivotal in the title of the study. Beginning with the initial meeting and my involvement with subsequent CSI projects, my journey of prescencing has been a series of serendipitous and fortunate meetings of interested players. Introductions and dialogue have occurred in a Csikszentmihalyian flow without ceasing since I embarked on the study.
Before I was the CSI 5.7C lead, my doctoral journey began with an informal interview with a prior Sacramento State Educational Doctorate program graduate, who was an undersecretary of the California State and Consumer Services Agency. Walking under the inscription “Bring Me Men to Match My Mountains” of the Jesse Unruh State Office Building, at the foot of the West Steps of the Capitol Building for the first time was imposing. Yet the formality of the Grecian columns and marble was a stark contrast to the warmth and engaging presence of Secretary’s leadership. His guidance “Follow the money” alluding to the shift in community college funding toward outcome measures proved a significant nudge of attention toward competency based education. As the story unfolds, the Unruh building was a pivotal space as the CSI operational and executive committees convened on the statewide policy decisions focal to this study; making for a full circle experience.

While the hallowed halls of the Capitol and official state buildings may be the place of formal approval of policy, the formation often begins in much more informal places. One such place is the Fox and Goose Pub in the R Street district in Midtown Sacramento where in passing the bronze sculpture street art of these Brother’s Grimm characters I sought to meet with the Associate Dean of the College of Continuing Education at Sacramento State, and an Educational Administrator of the California Department of Education, both educational doctors. This casual conversation about potential dissertation topics proves to be the turn, the forming moment of a nascent concept, “public to public pathways would be a valuable, timely, and needed topic for a dissertation.”
My path to pathways had begun, the next pivotal mentor and guide to embolden me was a Past President of American River College, who opened her home for a personal interview. Her beautifully emerald manicured lawn was inviting and peaceful, as I crossed the small wooden bridge over a bubbling stream sourced by a Japanese fountain; I noticed her unique rain downspouts were taut bright chrome chains. When I left her gracious warmth and sincere presence, I crossed the same simple bridge transformed.

The conversation had released my courage teaching me to declare my leadership, “Act as you are and you will be” and “Make your behavior match your values.”

Emboldened I began inviting myself to the dance, learning to exercise my leadership influence despite the lack of formal authority. My mother had long instilled the value of perceptions regarding professional dress often stating, “Remember, dress for the job you want not the job you have.” Dressed in a well-pressed blue suit, a half Windsor knot, and French cuffs with links, I arrived to the North/Far North Regional Consortia meeting, “Conversations to inform the Board of Governors’ Task Force on Workforce, Job Creation and a Strong Economy.” The ploy worked, I found myself at the table and was able to participate in the formal facilitation. Showing up gave me a voice and I began making my advocate’s plea for civil service pathways quoting the dire “47% retirement eligibility” statistic provided by CalHR’s workforce planner.

Arriving to the Sutter County Center of Yuba College a stranger, I was fortunate to find a familiar face the Vice Chancellor of Instruction at Los Rios Community College District, who had been my prior dean at Cosumnes River College Business Department. The bold move afforded me the opportunity to hear California Community College
Chancellor and Vice Chancellor of Workforce share their vision for Career Technical Education and the Doing What Matters for the Workforce and Economy framework. This was my first observation of praxis in the wild as community college presidents and leaders engaged in formal policy discussions and review recent research briefings. For the first time, I could see the ecosystem of community college presidents and leaders discussed the three-phase role out which would culminate into the Taskforce for the Workforce Recommendations.

In leaving, I had made two key connections with Doing What Matters Small Business Deputy Sector Navigators (DSN). These introductions would bring the DSNs participate in the CSi5.7C team. Once my dissertation field study began and I transitioned into the lead role of the CSi5.7C. The ensuing months was a blinding volley of scheduled meetings higher education players as I became immersed into the ecosystem of actors. The relationships established during this period would begin to coalesce the team members of the CSI Higher Education Partnership.

One of the earliest meetings was held at Los Rios Community College District’s Government Training Academy. The tides of the changes were already in motion as one of the administrators was already in the midst of transitioning to his new assignment as visiting Dean of Workforce at California’s Community College Chancellor’s Office (CCCCO). This meeting proved to be a magical moment when my research suddenly became alive with a brief introduction to a principal researcher of the Northern California Region’s Center of Excellence. Whose work was already cited in my growing literature
review providing evidencing of the problematic demand trends for the civil service workforce.

Following leads I returned to the American River college campus where ten years prior I had begun my career as an interning adjunct professor. As I entered the portable village locating the temporary office building, I had a brief but powerful meeting with the SB1070 CTE Transitions Project Director, who brought the phenomenon of Collective Impact to my awareness leading to my literature review of Scharmer, Senge, and Bohm’s work. This conversation directed my exploration the Linked Learning Alliance.

The feeling of the small town effect was taking hold as my counterparts in government training and development at California Department of Social Services and California State Teachers’ Retirement System, and Department of General Services entered into the dialogue of CSI5.7C. The network continued to grow as the Foundation for California Community Colleges, began to inform the team on the trends of competency-based education and their digital badging project. Folsom Lake College’s Work Experience Coordinator provided guidance and insights on internships and work-based learning.

Although long before the current story began, two leads at Feather River College had been researching and working on the formation and development of the New World of Work - 21st Century Skills; a project awarded from the AB86 Adult Education Grant. As is serendipity’s talent, the timing was impeccable. During the process of competency model identification, a training and presentation of the New World of Work model was hosted in Sacramento. Based on the funding momentum, favorable policy environment, quality of the model’s curriculum, and deployment as a work experience internship pilot
in ten California community colleges; their competency model would come to be formally adopted by CSI57.C in December 2015.

As the statewide foundational model, the New World of Work is setting into motion the state’s transition to competency based talent management; a precursor for the design of public to public competency based career pathways. While the maturity of Collective Impact may need further formal and intentional development, the ecosystem of educators and policy makers of whom I became acquainted continue to lead change.

As has been evidence by this lived experience, the constructs present in this study have always existed in the minds of the interlocutors; my role as a researcher was merely to synthesize the words of others; they are not my own. The power of dialogue - the heart of Collective Impact - is found in listening to the voices and experiences of others to co-create. Shared knowledge is learning to making others voices our own. Becoming a native is to love and serve in community by giving of one’s self for the benefit of another. This was my journey and now it’s also yours, as my doctoral chair; Dr. Loeza, instigates, “Go forth.”
Chapter 5

FUTURE RESEARCH

Introduction

This study, as with all research, might best be understood as an Etak. In the Micronesian tradition of naval navigation, men row in open seas for days in small vessels without the assistance modern technology. These “sailors" for lack of a better word, have no concept of a fixed position and take the paradigm of a journey; an Etak, to describe their navigational approach (Hutchins, 1995). This worldview is most aligned to social constructivism and is transmitted through the storytelling of past Etaks. These shared meanings as Ann Dyson (1983) suggests emerge by “speaking the words of others.”

Etaks teach the “sailors” how to be present in the moment to observe the color of the water, the actions of waves, the types of birds, and the expectation of passing time rather than- distance, speed, or position. In the mind of the Micronesian sailor, there is not a single horizon, but two. These sailors conceptualize the horizon as parallels on either side of their “ship.” They also do not conceive of their boat moving but rather their destination as coming “to them.” They place themselves in a path of opportunity and go to work “rowing” until the island emerges to them (Hutchins, 1995).

Etak is a beautiful poetic representation of the phenomenological research approach. While we arrive to end of this study, it is only the “Etak of the Dissertation.” The research story is not yet over and arriving to the shores of commencement only marks the conclusion of this leg. Commencement is a duality- both an ending and beginning. The arrival is merely the beginning of another Etak- a further unfolding yet to emerge.
Yet before we part ways, let us share in reflections of our shared meanings “in the words of others” as an indication of the impeding Etaks ahead. In this spirit, this chapter presents a multi-paradigmatic synthesis of the findings presented in Chapter 4. Based on the multi-dimensional analysis of this study’s theoretical framework; the Systems View of the Interrelationship of the Meanings of Competency, an interpretive lens will be applied to the inter-subjectivity of the findings: (a) Collective Impact has not yet been bilaterally and intentionally engaged with mutual understanding, (b) support exists for multiple interrelated meanings of competency framework, (c) data is an emergent reciprocal inter-subjective meaning of competency, (d) a shared meaning of “career readiness” exists through system alignment of competency assessments, and (e) significant relationships reflect community college student’s interest in both civil service careers and job-relevant educational programs.

The evidence presented allows for a reconceptualization of the Systems View of the Interrelationship of the Meanings of Competency grounding multiple conceptual models providing a foundation for further research; General Competency Based Career Pathway: An Intersubjective Construct (Mrizek, 2015), Competency-based Talent Management Model (Mrizek, 2015), and Competency based Public to Public Career Pathways: A Structural Coupling Model (Mrizek, 2015). Together these conceptual models present emergent theories, the basis for future research with direct benefit to the field of higher education leadership in terms of competency based curriculum, policy, and workforce development. Further research will be needed in response to the transformative effects of the “Silver Tsunami” - a significant demographic transition in the U.S. labor markets.
The optimism remaining in this study seeks to inform a theory for intentional alignment of systems through Collective Impact. Further study grounded in this study’s finding; the emergent meaning of competency as “shared human resource information data” provides for the Collective Impact condition of shared measurement. The primary intent of this study was to examine, discuss, and assess the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career pathway solutions to the skills gap in California’s civil service workforce. The findings provided limited evidence to support the maturity of this emergent and holistic form of systemic organizational behavior as an approach to devise synergistic workforce demand solutions. Although, the findings of this study do provide additional insight to the nature of the competency based “Public to Public” Civil Service Pathways construct and in so doing provides a greater degree of “shared meaning” of competency as “career readiness” for the interlocutors.

The current study took a systems thinking approach and presented four primary research questions to test the multiple dimensions of this study’s theoretical framework. Specifically, the four research questions for this study were:

**Macro Level**: “What are the perceptions of policy leaders regarding the five core conditions (common agenda, shared measurement system, mutually reinforcing activities, continuous communication and backbone function) of Collective Impact occurring between state agencies and community colleges in developing a competency based civil service industry recruitment pathway(s)?”
**Meso Level:** “What is the relationship between career readiness, competency (cies) and the development of 21st century civil service skills and how is this relationship mitigated or displayed through transformative scenario planning?”

**Micro Level:** “What relationships exist between currently enrolled community college students, Education-Job Relevance (EJR), and civil service degrees (BA, BA, AA, AS, Certificate, Digital badges) as measured by: attitude, career match, interests and demand? “

**Intrapersonal-Level:** “What were the lived experiences of the Civil Service Improvement 5.7C project lead in engaging the system stakeholders to assess Collective Impact for the emergence of competency based public-to-public career pathways?”

An analysis of these research questions as presented the Chapter 4 sought to synthesize multidimensional paradigms to present conceptual models and theoretical frames. The aim was to inform the further development and enactment of Competency Based “Public to Public” Civil Service Career Pathways to meet the needs of the 21st century civil service workforce.

**Key Finding: An Emergent Meaning of Competency**

The finding of particular interest was the presence of shared meanings between system interlocutors essential to create system alignments for devising competency based career pathways. Most specifically the emergent meaning of competency (competency as human resource information data) proves a critical component to providing inter/intra-
system information technology system alignments. Specifically, the assessment of “competency as observed behavior” and “competency as trait.attribute” based on a commonly adopted competency model can establish a shared meaning of “career readiness” between the system interlocutors. The following Figure 26 expresses the how this study’s intersubjective theoretical framing between Collective Impact and The Meaning of Competencies is related to the emergent meaning of “competency as human resource information data” as presented in this study’s findings (Kania and Kramer, 2011), (Hoffman, 1999).

Competency as human resource information data is derived through shared assessment (shared measurement) of behavioral indicators (observed behavior) attributed to common competency definitions through policy alignment, as in the statewide adoption of the New World of Work (competency as policy). Comparatively, Collective Impact defines “shared measurement” as a crucial core condition and was evident in the findings from the macro-level analysis (transformative scenario planning) conducted in this study (Kania & Kramer, 2011). Although, there was limited evidence in this study that Collective Impact was being intentionally enacted between the interlocutors. Nevertheless, this framework suggests the need for further study on the theoretical construct of Competency Based “Public to Public” Civil Service Career Pathways.
While there was limited evidence of the maturity of Collective Impact in the enactment of competency based “Public to Public” Civil Service in this study’s data; the researcher observed the adoption of the New World of Work 21st Century Skills as the Statewide Foundational Competency Model. The recommendations of a white paper written for the State of California: Higher Education Partnership - CSI 5.7(c) Retention and Development Task Force titled “Enterprise-wide Talent Management Approach and Statewide Foundational Competency Model” were adopted as policy by the Government Operations Agency (GovOps) on December 17, 2015. This adoption of the New World
of Work- 21st Century Skills as the Statewide Foundational Competency Model established an alignment on the meaning of “competency as curriculum.” This policy decision could reinforce the Collective Impact Conditions of “Shared Measurement” and “Mutually Reinforcing Activities” as shown in Figure 27.

*Figure 27. Common Competency Model as Curriculum Supports Collective Impact*

Shared Measurement was found to be the most immature condition by this study’s data, although the New World of Work’s emerging certification assessments through digital badging shows promise for the Collective Impact condition of “shared measurement.” The New World of Work adoption also supported the Collective Impact “mutually reinforcing activities” condition through the potential interlocutor
collaborations on; digital badge assessments, common measures of behavioral indicators, and aligned competency based curricular content.

In the adoption of a statewide foundational competency model, the meaning of “competency as policy” improves shared meanings between the system interlocutors. This action is significant as “competency as policy” is a focal meaning of competency that can enact Collective Impact conditions of: common agenda, mutually reinforcing activities, continuous communication, and backbone organization (See Figure 28). The effect of this policy decision was further clarification of the state’s civil service definition of “career readiness.”

Figure 28. Competency as Policy could intentionally enact Collective Impact
Despite the limited evidence of the maturity of Collective Impact, the intentional adoption of the New World of Work- 21st Century Skills as the Statewide Foundational Competency Model has created a crucial definition of “career readiness” for the interlocutors by defining both the meaning of “competency as policy” and “competency as curriculum.” The significance of defining “competency as curriculum” as the New World of Work- 21st Century Skills is the Collective Impact condition of “shared measurement” is also established for interlocutors. Furthermore, the New World of Work- 21st Century Skills provides assessment standards as the Industry Drive Regional Consortium (IDRC) grant funding the model is developing digital badges associated with each of the ten competencies (See Appendix G).

By defining “career readiness” through these shared meanings of competency, interlocutors can now align around all five conditions evoking the emergence of Collective Impact based on these intersubjective alignments. From these potential alignments between the Meanings of Competency (Hoffman, 1999) with the intentional instigation of Collective Impact (Kania and Kramer, 2011), future research might provide additional supportive evidence for the enactment of a general model of Competency Based Career Pathway.

This intersubjective model suggests that by leveraging the meanings of “competency as policy” and “competency as curriculum” would produce “shared measurement” leading to “competency as data.” Using the following conceptual representation as a common model can assists in defining competency based career pathways. This conceptual representation benefits the workforce by providing system alignment s for
interlocutors through the shared meanings of competency to define a data driven approach to “career readiness.” (See Figure 29).

Figure 29. General Competency Based Career Pathway: An Intersubjective Construct

Competency based career pathways can be understood as an interrelated system of inputs (individual characteristics, standards, curriculum, policy) and outputs (performance and performative acts, readiness development, evaluation and assessment). The current model is “a framework of mutually constituted or interlocking parts; ideas, materials, personal resources, institutional structures defining [career] readiness (Graue, 1993, p. 252).” A general model can inform other educational systems and workforce development actors to align competency based career pathways. For instance, the adult education, special needs, re-entry/offenders, displaced workers, and school districts could contextualize competency-based curriculum in alignment with workforce labor demands using the General Competency Based Career Pathway: An Intersubjective Construct.
Theoretical Reframing: Competency as Human Resource Information Data

The following section further iterates the finding of the meaning of “competency as data” and reframes the current study’s theoretical grounding Systems View of the Interrelationship of the Meanings of Competency. Since the development of Hoffman’s (1999) hierarchy the proliferation of information technology globally is significant. A prime example is the ubiquitous nature of cellular smartphone technology in the first, second, and third world. In revisiting Hoffman (1999), the emergent typology of “competency as data” would best align between the meso level; competency as expressed behaviors or performatives and the macro level; competency as the policy environment of quality standards.

Extending this integration of the typology, we might consider “competency as data” to be represented by the variable D. Allowing us to reformulate the symbolic representation \( OB = f(E,P) \) presented by Bess and Dee (2012) as \( f(E,P) = OB \Rightarrow D \). Which represents competency data (D) as a residual output of the relationship where observed behavior (OB) is a function (f) and individual’s external environment (E) and personal characteristics (P). This finding is suggestive of the growing importance of information technology in the 21st Century; the massive storage capacity of data on sophisticated server farms has lead to the common vernacular of “big data.” Continuing, the emergent meaning of competency as human resources information data presents the need to revise this study’s theoretical framework, the Systems View of the Interrelationship of the Meanings of Competency. The following Figure 30 reflects the concept of data as an intersubjective meaning of competency.
“Competency as data” as an intersubjective output translates shared meaning between the interlocutors. Once competency assessments are quantified and the data aggregated their meaning as competency can be interpreted by use: trait, curriculum, policy, and certification. This emergence of “Competency as data” concept as an intersubjective output extends research opportunities into devising a Competency-based Talent Management Model (See Figure 31).

This model was developed from the synthesis of the Hierarchy of the Meanings of Competency (Hoffman, 1999) and Interrelationship of Customer Needs, Departmental Missions and Core Human Resources Functions (Strasso, 2007) frameworks as presented in this study. What is being ideographically represented are the relative alignments of the
varied meanings of competency as related to the core human resource functions commonly understood as talent management. Talent management activity can be seen as both providing and developing the requisite “career readiness” needed to accomplish an organization’s mission and strategic goals.

*Figure 31. Competency-based Talent Management Model (Mrizek, 2015)*

Furthermore, the Competency-based Talent Management Model is grounded in the current study’s emerging fourth meaning of “competency as data.” Data can be aggregated through assessment and evaluation and maintained within a Human Resource Information System (HRIS) or other data warehouse. The “competency as data” construct is powerful as means to devise aligned strategic approaches in the provision and development of “career readiness” in the workforce within systems.
The fundamental assumption of “competency as data” is the ability to act as system integration through the mechanism of structural coupling. The concept of structural coupling as presented by Humberto Maturana and Francisco Varela's book, The Tree of Knowledge (1987), is defined as "a history of recurrent interactions leading to the structural congruence between two (or more) systems (p.75)." While their focus was to describe the biological nature of cellular unity (the balance between internal dynamics and boundaries of cellular structures), the model presented in this simple diagram (See Figure 32) presents a strong framework for the field of organizational behavior. Specifically, when considering system alignments (inputs and outputs) between discrete but interrelated systems, as in competency based career pathways.

![Figure 32. Structural Coupling (Maturana & Varela, 1987)](image)

In the field of organizational behavior, organizations can be understood as living entities (a dialectical culture of work). From a biological paradigm, an organization might be considered an organism with a cellular structure having both internal process (functions) and permeable boundaries (inputs and outputs). While this conceptualization
is a departure from the traditional concepts of bureaucratic organization charts (pyramids). The power of a cellular model of organizations is the ability to describe system alignments based on the shared and mutual exchanges of inputs and outputs. The extent to which these dialectical exchanges have a heightened degree of "shared meaning" is in direct relationship to each "cell's" ability to meet its "unity." This is to say, the organization(s) become more mutually sustainable and tolerant of environmental shifts, such as the impacts of the “silver tsunami.”

Theoretically, intersubjective meanings (mutual understanding which exists between conscious minds or is shared by more than one conscious mind) allow for higher education and workforce systems to form a process of structural coupling based on shared human resource information system data mutually defining the “skills gap” (Habermas, 1970).

This study successfully informed how Collective Impact, if intentionally matured, remains a potential approach to devising a model for Competency-based Public-to-Public Career Pathways (See Figure 33). Further research on the intersubjective meanings of competency (especially “competency as data”), competency based curriculum, and competency based talent management shows promise for the development of a structural coupling model of competency based “Public to Public” Career Pathways.
Figure 33. Competency-based Public-to-Public Career Pathway: A Structural Coupling Model (Mrizek, 2015)

Conclusion

Departure is the recursive nature of research; our inquiry brings greater curiosity in exchange of unfolding knowledge. The Etak of this study consumed six months and has brought us ever closer to the breaking of a cresting wave of civil service retirements. Now only eighteen short months from the California Department of Human Resources (CalHR)’s projections that up to 43% (approximately 100,000) of the State civil service employees will be eligible for retirement by 2018 the urgency and significance of the research problem continues to swell. This study examined, discussed, and assessed the phenomenon of Collective Impact; an emergent and holistic form of systemic organizational behavior, as an approach to devise synergistic competency based career
pathway solutions to the skills gap in California’s civil service workforce.

In summary, it was found that Collective Impact was not mature, the interlocutors held shared multiple meanings of competencies, community college students have interest in civil service careers, and “competency as data” was an emergent intersubjective meaning of the interlocutors. What was learned? Competency-based Public-to-Public Career Pathway may be enacted through forming dialectical meanings of “career readiness” amongst the interlocutors using common competency curriculum and assessments for “in-skilling of community college students” and “up-skilling of current civil service employees.” Ironically, success depends on the system interlocutors first developing their intersubjective communicative competence to enact Collective Impact. Achieving a shared meaning of “career readiness” through policy and curriculum alignment is still needed to form competency-based career pathways as a strategy to overcome the growing skills gap due to the rising tide of the “silver tsunami”
APPENDICES

Appendix A

Qualitative Survey Protocol (Preskill, Parkhurst, & Juster, 2014)

**Method:** The participants were purposefully selected as part of a criteria sample. The criteria to be a participant included either by their executive system level leadership role in their organization or by their membership in the 5.7C CSI project team. Invitations were extended to the participants through an email with a cover letter and informed consent from sent by principal investigator. Participants should benefit from and contribute to the research objective: to open dialogue and catalyze the design of curriculum, comprehensive policy, and innovative practice to meet the workforce needs of the 21st Century Government Worker while directly supporting community college student learning outcomes.

**Participants:** Executive level policy leaders of the following publicly funded institutions: Legislature and Senate Higher Education Committees, California Community College Chancellor’s Office (CCCCO), Government Operations Agency (GovOps), the California Department of Human Resources (CalHR), and Los Rios Community College District (LRCCD).

**Question Path for Qualitative Survey:**

Collective Impact (CI) occurs when a group of actors from different sectors commit to a common agenda for solving a complex social or environmental problem (Preskill, Parkhurst, & Juster, 2014, p.4). The five core conditions of Collective Impact are: common agenda, shared measurement system, mutually reinforcing activities, continuous communication and backbone function (Kania and Kramer, 2011). A current complex social problem is described by a recent California Department of Human Resources workforce analysis report found a trend in age demographics revealing that 43% of the state civil service workforce is eligible to retire in the next 5 years. At the time of writing of this report, 26% of the state civil service workforce was already eligible to retire. This means 1 out of every 4 permanent state civil servants could retire today (CalHR, 2013). It is estimated over the next 12 years there will be a shortage of over 200,000 'career ready' civil servants in the Greater Sacramento Region (Milan, 2007).

**Awareness of Collective Impact (CI)**

Q1. “To what extent is your organization aware of or implementing Collective Impact initiatives?”
Qualitative Survey Protocol (Preskill, Parkhurst, & Juster, 2014)

Common Agenda

Q2. To what extent does your organization have a shared vision for change, including a common understanding of the problem and a joint approach to mitigate the civil service workforce impacts from impending civil service retirements?

Backbone Infrastructure

Q3. To what extent has your organization established an effective backbone infrastructure and governance structure to mitigate the civil service workforce impacts from impending civil service retirements?

Mutually Reinforcing Activities

Q4. To what extent has your organization coordinated a mutually reinforcing plan of action with partners in mitigating the civil service workforce impacts from impending civil service retirements?

Shared Measurement

Q5. To what extent and in what ways are your organization’s partners engaged in using shared measurement systems in mitigating the civil service workforce impacts from impending civil service retirements?”

Continuous Communication

Q6. To what extent and in what ways does your organization use cross-initiative communication to build trust, mutual objectives, and common motivation?
Appendix B

Format of Transformative Scenario Planning

What transformative scenario planning is:

- Transformative scenario planning is a way for people to work with complex problematic situations that they want to change but cannot transform unilaterally or directly.

- Transformative scenario planning is most useful when people find themselves in a situation that is seen as: (a) unacceptable, unstable, or unsustainable, (b) too complex to be transformed alone or by only working only with their colleagues, and (c) cannot be transformed directly.

- Transformative scenario planning requires building shared understanding, relationships, and intentions to create common ground for systemic change.

How transformative scenario planning works:

The Five Steps of Transformative Scenario Planning:

1. Convene a team from across the whole system
2. Observe what is happening
3. Construct stories about what could happen
4. Discover what can and must be done
5. Act to transform the system

Appendix C

Transformative Scenario Planning Presentation

Format of Focus Group:
Transformative Scenario Planning

What transformative scenario planning is:

- Transformative scenario planning is a way for people to work with complex problematic situations that they want to change but cannot transform unilaterally or directly.
- Transformative scenario planning is most useful when people find themselves in a situation that is seen as (a) unacceptable, unstable, or unsustainable, (b) too complex to be transformed alone or by only working only with their colleagues, and (c) cannot be transformed directly.
- Transformative scenario planning requires building shared understanding, relationships, and intentions to create common ground for systemic change.


Format of Focus Group:
Transformative Scenario Planning

How transformative scenario planning works:

1. Convene a team from across the whole system.
2. Observe what is happening.
3. Construct stories about what could happen.
4. Discover what can and must be done.
5. Act to transform the system.

Transformative Scenario Planning Presentation

**Question Path: Skills Gap**

What are the mitigating factors impacting the skills gap?

- Considering the driving forces, what stories/scenarios about what could happen in this system are most useful to tell?
- What organizational changes both internal and external might be needed?
- How might leadership best guide this organizational change?

*Nearly half of the state civil workforce (approximately 100,000 state employees) will be eligible for retirement by 2018. This shift in the state workforce demographic creates an unprecedented situation where the rate of retirement and attrition may lead to a critical loss of knowledge, skills, abilities, forming a “skills drought” in the state’s civil service workforce.* — CSU 7C White Paper

**Question Path: Competency Model- New World of Work (NWoW)**

What role could a statewide foundational competency model (NWoW) play in developing civil service workforce skills provision and readiness?

- Why are competencies needed and what could they do for the state civil service workforce?
- What needs to happen or what might be done to operationalize these competencies into an integrated talent management approach?
- How might competencies be developed, measured, validated, and transformed into a higher education partnership?
- What forms of display might verify an individual’s prior competency acquisition?

**New World of Work (NWoW)**

21st Century Skills:

1. **ADAPTABILITY**
2. **ANALYSIS / SOLUTION MINDSET**
3. **COLLABORATION**
4. **COMMUNICATION**
5. **DIGITAL FLUENCY**
6. **ENTREPRENEURAL MINDSET**
7. **EMPATHY**
8. **RESILIENCE**
9. **SELF-AWARENESS**
10. **SOCIAL / DIVERSITY AWARENESS**

**Question Path: CSI Higher Education Partnership**

What role do collaborative partnerships play in establishing career pathways in addressing the skills gap?

- What opportunities and/or scenarios might exist to operationalize the foundational competencies through higher education partnerships?
- What role can the statewide foundational competency model play in forming collaborative and/reducing to meet the needs of the state civil service workforce development?
- What organizational structure, entities, and/or policy changes are needed to best facilitate the development and maintenance of collaborative partnerships to meet the state civil service’s need for skilled workforce development?

**Adjourning:**

Please leave your completed research packet:
- Signed Informed Consent Form
- Completed Demographic Survey

Be sure to exchange your business cards and contact information with members of the CSI Higher Education Partnership to continue our dialogue.
Appendix D

Learning Theories (Hulsebosch, 2015)
Appendix E

Transformative Scenario Planning Question Path

The primary researcher used the following question path to facilitate the transformative scenario planning session:

**Skills Gap:**

What are the mitigating factors impacting the skills gap?

- Considering the driving forces what stories/scenarios about what could happen in this system are most useful to tell?
- What organizational changes both internal and external might be needed?
- How might leadership best guide this organizational change?

**Competency Model (NWoW):**

What role could a statewide foundational competency model (NWoW) play in developing civil service workforce skills provision and career readiness?

- Why are foundational competencies needed and what will they do for the state’s workforce?
- What needs to happen or what might be done to operationalize these competencies into an integrated talent management approach?
- How can competencies can be assessed, validated, and transferred between the actors in the higher education partnership?
- What forms of display might verify an individual’s prior competency acquisition?
Transformative Scenario Planning Question Path

Higher Education Partnerships:

What role do collaborative partnerships play in establishing career pathways in addressing the skills gap?

- What opportunities and/or scenarios might exist to operationalize the foundational competencies through higher education partnership?
- What role can the statewide foundational competency model play in forming collaborative partnerships to meet the state civil service’s need for skilled workforce development?
- What organizational structure, entities, and/or policy changes are needed to best facilitate the development and maintenance of collaborative partnerships to meet the state civil service’s need for skilled workforce development?
Appendix F
Transformative Scenario Planning Questionnaire

**Demographic Information**

**Respondent # ____ (see index card on your seat)**

Please complete the following demographic information to provide information on your background for this project.

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<th>Your job title/position:</th>
<th>Your educational attainment and earned degree(s):</th>
<th>What is your race:</th>
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<td>American</td>
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<td><em>Field of Study:</em> M.A., M.S., MBA</td>
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Transformative Scenario Planning Questionnaire

I would be willing to be contacted for an interview related to this study.

Yes  No

☐  ☐

If Yes, Please provide your contact information (Please print legibly):

Name: ________________________________

E-mail: ______________________________

Phone: ______________________________
Transformative Scenario Planning Questionnaire

Please complete the following survey questions related to the research question(s) of this project.

1. With regard to each of the following, how aware are you these concepts?

2. With regard to each of the following concepts, how important are they to addressing the skills gap?

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<td>Competencies</td>
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<td>Collective Impact</td>
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<td>Transformative scenario planning</td>
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Transformative Scenario Planning Questionnaire

Please complete the following survey questions related to the research question(s) of this project.

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<th>6. In rank order, I am most interested in considering the following approaches to addressing the skills gap.</th>
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<tr>
<th>7. Competencies are best understood as:</th>
<th>Nearly Always</th>
<th>Frequently</th>
<th>Seldom</th>
<th>Never</th>
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Please complete the following survey questions related to the research question(s) of this project.

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<th>Question</th>
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<td><strong>8. What are the key questions CalHR and the Governor’s Office will want to know about the foundational competency model (NWOW)? (key outcomes)</strong></td>
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<td><strong>9. What data might be available on potential employees who would be trained/assessed?</strong></td>
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<tr>
<td><strong>10. What possibilities are there to roll out the foundational competency model (NWOW) that would allow a comparison of outcomes between those who receive the training and those who do not?</strong></td>
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</table>
Appendix G

New World of Work- 21st Century Skills: Primary Attributes

1 ADAPTABILITY
- Aware of and positively responds to change.
- Has a flexible approach to work, which includes various work environments, roles, tasks, and ideas.
- Takes into account diverse viewpoints and input to achieve work outcomes.
- Handles stress, setbacks, and constructive criticism with healthy coping mechanisms in order to learn from experience and continue to move forward.

2 ANALYSIS/SOLUTION MINDSET
- Considers multiple points of view and analyzes motivations behind multiple sources of information.
- Recognizes problems and needs within a societal, community, or workplace context in order to develop solutions.
- Examines information broadly, analyzes data, and utilizes critical thinking.
- Develops multiple solutions using hypotheses/ trial and error to test and determine effectiveness.

3 COLLABORATION
- Builds and maintains mutually beneficial relationships by working collaboratively with diverse groups or teams.
- Incorporates a range of perspectives and cultural norms while reinforcing common ground and shared goals.
- Applies a transformational leadership approach where one seeks input, incorporates feedback, implements new ideas, offers help, and engages all team members.
- Handles conflict constructively and views failure as an opportunity to learn.

4 COMMUNICATION
- Presents information that is appropriate in content, professional in both tone and language, and tailored to the recipient/audience.
- Uses digital media, social media, and other technology communication tools properly for work settings.
- Understands basic etiquette and rules in non-verbal, verbal, and written communication to effectively and accurately convey meaning.
- Uses attentive listening skills, which includes asking clarifying questions and summarizing information back to check for understanding.
New World of Work- 21st Century Skills: Primary Attributes

5 DIGITAL FLUENCY
- Understands the appropriate technology tools to work collaboratively in person and remotely.
- Has basic knowledge of the ethical and legal issues related to information technology and shares information accordingly.
- Understands how to use technology tools including computer components and functions (keyboard, mouse pad, browser windows, email).
- Uses online tools including search engines to gather research and data as well as solve problems.

6 ENTREPRENEURIAL MINDSET
- Self-motivated and strives for professional development by seeking new knowledge, training, and responsibilities.
- Focuses on brainstorming, innovation, and new ideas while connecting information from various sources.
- Takes risks, learns from mistakes, and is driven to complete tasks in order to develop new or improved products, services, or processes.
- Entrepreneur or intrapreneur with the ability to work independently or in teams while being mindful of client/customer needs.

7 EMPATHY
- Knows the difference between empathy and sympathy and when to apply each given the situation.
- Actively uses skills to build empathy including: active listening, honest communication to establish trust, open-ended questions, mirroring, and checking for understanding.
- Builds relationships through understanding and valuing diverse backgrounds and cultures.
- Connects with clients/customers by thinking about their needs and points of view, making decisions based on those needs, and continually evaluating client/customer satisfaction.

8 RESILIENCE
- Sets goals, prioritizes, and anticipates possible consequences of decisions in order to make back up plans.
- Handles setbacks positively by reflecting on experience, learning from mistakes, and using this information to inform future decisions.
- Openness to others’ viewpoints and ability to voice one’s own opinion in order to synthesize feedback and resolve conflicts.
- Has a growth mindset: seeks new knowledge and skills to expand learning and commits to learning as a lifelong process.
New World of Work- 21st Century Skills: Primary Attributes

9 SELF-AWARENESS

- Accurately assesses own personality, strengths, and areas of growth seeking ways to continually develop skills.
- Displays personal responsibility combined with social awareness by maintaining self-control and ethical behavior.
- Cultivates professionalism by being consistent, following required guidelines and rules, and maintaining appropriate dress and communication.
- Maintains an awareness of preferences for types of work and environments to capitalize on strengths.

10. SOCIAL/DIVERSITY AWARENESS

- Demonstrates sensitivity and respect toward others with diverse backgrounds and cultures both locally and globally.
- Values and embraces diversity in the workplace including gender, sexual orientation, ethnicity, and age.
- Leverages social and cultural differences to redefine social norms and generate new ideas.
- Uses professionalism and interpersonal skills to establish rewarding relationships with diverse individuals and groups.
Appendix H

Student Career Interest Questionnaire Protocol

**Method:** The participants were purposefully selected as part of a criteria sample. The criterion to be a participant is the status of a currently enrolled community college in the Sierra College District. Invitations were extended to a randomly selected sample of participants through an email with a cover letter requesting informed consent. The ten question quantitative survey was completed through a secure hyperlink to Survey Monkey.

**Participants:** Currently enrolled community college in the Sierra College. Sierra College’s Office of Planning, Research, and Resources Development provided the random sample.

**Question Path for Qualitative Survey:**

**Demographics**

1. **What is your gender?** Female / Male
2. **What is your age?** 18 to 24 / 25 to 34 / 35 to 44 / 45 to 54 / 55+
3. **What is your ethnicity?** (Please select all that apply.)
   - American Indian or Alaskan Native
   - Asian or Pacific Islander
   - Black or African American
   - Hispanic or Latino
   - White / Caucasian
   - Other (please specify)
4. **Which of the following categories best describes your employment status?**
   - Employed, working full-time
   - Employed, working part-time
   - Not employed, looking for work
   - Not employed, NOT looking for work
   - Retired
   - Disabled, not able to work
Student Career Interest Questionnaire Protocol

5. What is your enrollment status?
First-time Freshman
Undergraduate Returning
Undergraduate Transfer
First-time Graduate
Graduate Returning
Graduate Transfer

**Education-Job Relevance**

“People who match their schooling to an occupation earn a higher return to their post-secondary educational investment (Yakusheva, 2010).”

This suggests those college students whose current academic studies match their intended or current career goals tend to earn higher wages.

6. How do you feel about this statement?
Strongly Agree / Agree/ Disagree / Strongly Disagree

*(Variable 1: General Attitude Regarding Education-Job Relevance [GA]*)

7. Do you feel that your degree/program is “education-job relevant” to your current job/occupation?
Strongly Agree / Agree/ Disagree / Strongly Disagree

*(Variable 2: Currently Matched Education-Job Relevance [CM]*)

8. Should your community college offer “education-job relevant” programs (AA, AS, Certificate)?
Strongly Agree / Agree/ Disagree / Strongly Disagree

*(Variable 3: General Interest in Education-Job Relevant Programs [GI]*)
Civil Service

Civil Service is defined as the public administration industry, a category of the public sector inclusive of California’s government agencies.

The demand for civil service occupations in the Sacramento region is high, employing nearly 125,000 people (Milan, 2007). A recent California Department of Human Resources workforce analysis found a trend in age demographics revealing that 43% of the state civil service workforce is eligible to retire in the next 5 years. At the time of the report, 26% of the state civil service workforce eligible to retire this year. This means 1 out of every 4 permanent state civil servants could retire today (CalHR, 2013).

9. Should your community college offer “education-job relevant” programs (AA, AS, Certificate), specific to civil service jobs?

Strongly Agree / Agree / Disagree / Strongly Disagree

(Variable 4: Interest for Civil Service Education-Job Relevant Programs [ICS])

10. If your community college offered a “education-job relevant” civil service degree/program at which level would you most likely enroll?

Digital Badge/Certificate/AA/AS/BA/BS

(Variable 5: Demand for Civil Service Education-Job Relevant Programs [DCS])

https://www.surveymonkey.com/s/TKNCYQW
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