



Secondary School Principals' Orientations Toward and Uses of Data for Improvement

A Dissertation Defense

Educational Policy and Leadership

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Why

POLITICAL CONTEXT K12
EDUCATION - ESSA, DATA-DRIVEN
& EVIDENCE BASED PRACTICE



POLICY ESTABLISHED METRICS BUT DOES NOT PROVIDE INSIGHT ON HOW TO ACHIEVE THEM - ESPECIALLY IN SCHOOLS WITH SOCIOECONOMICALLY, CULTURALLY, AND LINGUISTICALLY DIVERSE YOUTH.

CAREER RELEVANCE

RESEARCH INFORMED LEADERSHIP TO IMPROVE QUALITY & EQUITY IN EDUCATION

- CURRENT LEADERS AT SCHOOL AND DISTRICT LEVEL
- LEADERSHIP PREPARATION

Research Questions

WHAT TYPES OF DATA DID OBS PRINCIPALS PRIORITIZE AND FOR WHAT PURPOSE?

WHAT WERE THE ORGANIZATIONAL/STRUCTURAL ATTRIBUTES UNDERLYING THE COLLECTION, ORGANIZATION, AND DISSEMINATION OF THE DATA IN OBS SCHOOLS?

HOW DID OBS PRINCIPALS USE DATA TO FURTHER EDUCATIONAL STRATEGIES AND IMPROVE THE EDUCATION EXPERIENCE?

WHAT WERE THE EXTERNAL AND INTERNAL FACTORS (FACILITATORS) THAT IMPACTED DATA COLLECTION, ANALYSIS, AND UTILIZATION IN OBS SCHOOLS?

DOES RESEARCH INFLUENCE PRINCIPALS' ROLE ENACTMENTS?

LITERATURE SUMMARIZED AND SYNTHESIZED FOR THE CURRENT STUDY WAS DERIVED FROM THREE MAIN SOURCES:

1. DATABASE AND GOOGLE SCHOLAR SEARCHES
2. REVIEW OF LITERATURE AND BIBLIOGRAPHIES OF LITERATURE FROM THE PARENT NY KIDS STUDY
3. 2018 AERA SPECIAL INTEREST GROUP (SIG) PRESENTATIONS AND PUBLICATIONS.

THE SEARCH

- 2013-2019 PEER-REVIEWED ARTICLES SEARCHED IN THE SPRING/SUMMER OF 2019 THROUGH EBSCO - ACADEMIC SEARCH COMPLETE AND GOOGLE SCHOLAR.
 - TERMS
 - SEARCH TERMS USED TO LOCATE ARTICLES SPECIFIC TO THIS STUDY: ACCOUNTABILITY; CONTINUOUS IMPROVEMENT; DATA. DATA OR EVIDENCE USE; DATA - (DRIVEN, INFORMED AND BASED) DECISION MAKING; DATA ANALYSIS; DATA TEAMS; DISTRICT OFFICE; DISTRICT OR CENTRAL OFFICE LEADERSHIP; EVIDENCE (DRIVEN, INFORMED AND BASED) DECISION MAKING; IMPLEMENTATION; INQUIRY; LEARNING ORGANIZATIONS; POLICY, PRACTICE; PRINCIPAL, PROBLEM SOLVING; RESEARCH INFORMED; SENSEMAKING; SCHOOL EFFECTIVENESS; SCHOOL IMPROVEMENT; SCHOOL LEADERSHIP; AND SYSTEM.
- DELIMITED TO K12 (ELEMENTARY AND SECONDARY)

THEORY DEVELOPMENT

- DATA USE FRAMEWORK
- CYCLES OF INQUIRY AND SENSEMAKING
- DATA-DRIVEN DECISION-MAKING
- SOCIAL ECOLOGICAL MODEL
- THEORY OF ACTION

DATA

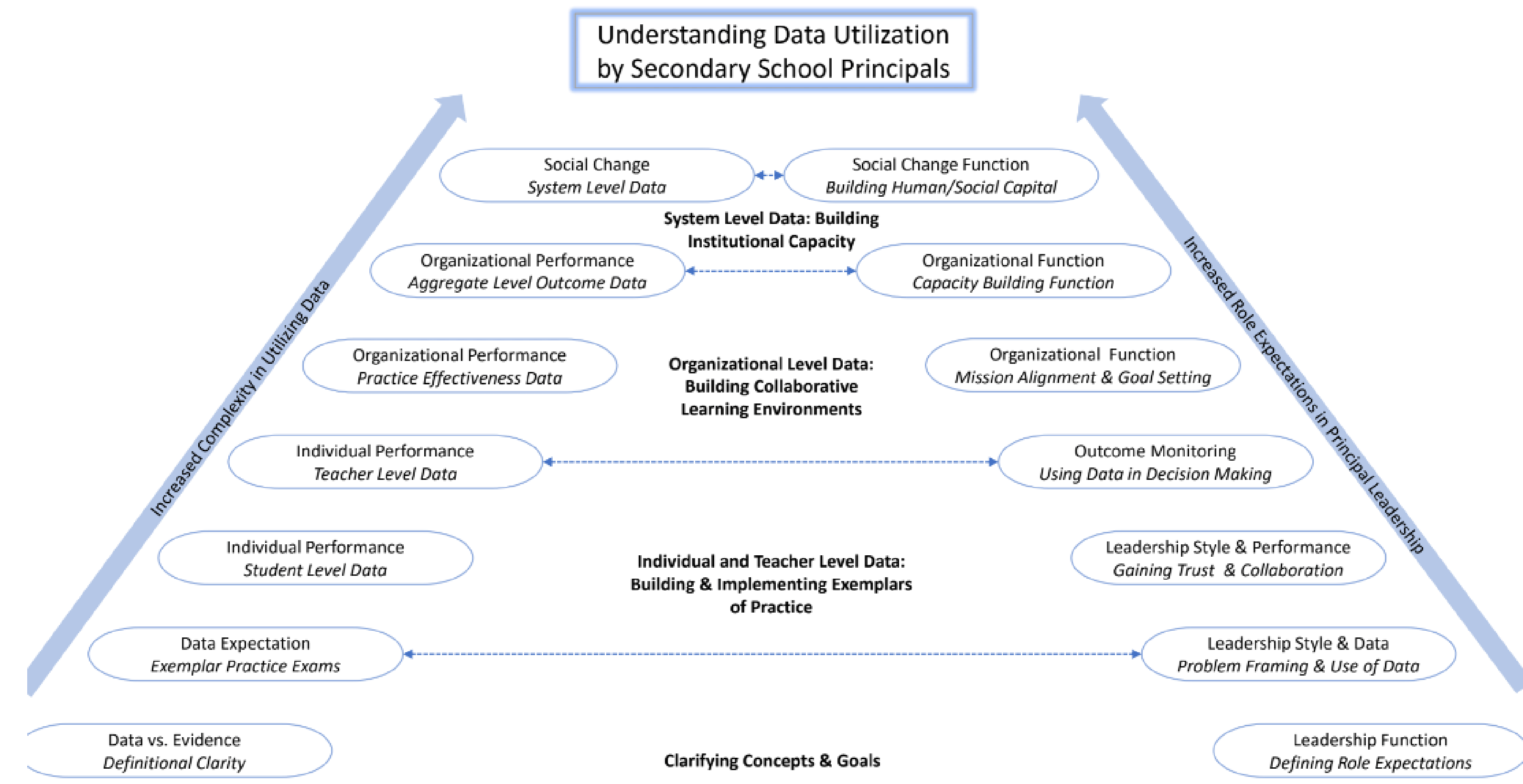
- DEFINING DATA AND DATA CHARACTERISTICS
- MULTIPLE DATA STREAM

EVIDENCE BASED DECISIONS—UNDERSTANDING PRACTICE

- DECISIONS AND INTERVENTIONS
- THE POLICY ENVIRONMENT
- INDIVIDUAL PERFORMANCE DATA
- ORGANIZATIONAL PERFORMANCE
- SYSTEM CHANGE

PRINCIPALS AND ROLE EXPECTATIONS

- INSTRUCTIONAL, ADAPTIVE AND DISTRIBUTED LEADERSHIP
- INQUIRY AND TRUST
- RELIANCE ON DATA IN SERVICE OF EQUITABLE OPPORTUNITIES
- MISSION ALIGNMENT AND GOAL SETTING
- BUILDING ORGANIZATIONAL CAPACITY
- PRINCIPAL ROLE IN FRAMING PROBLEMS



Expansive nature of the literature requires a delimited review summary and study design

Guiding Theoretical Framework



SOCIOCULTURAL
PERSPECTIVES



ADAPTIVE LEADERSHIP



ORGANIZATIONAL
LEARNING

Parent Study

NYKids Sample - 10 High Schools

7 “odds beating” schools: classified with graduation rates that exceed what was expected based on population served

3 classified as “typically performing” with graduation rates that were expected based on population served.

Graduation rates estimated using regression analysis for two types of outcomes:

1. Proportions of cohorts earning any Regents diploma
2. Proportions of cohorts receiving an Advanced Regents diploma.

Three demographic characteristics were used:

1. Proportions of students who are classified as economically disadvantaged
2. English language learners
3. Either black or Hispanic.

My Study

Purposive NYKids Sample 3 Urban/Suburban OBS High Schools

3 “odds beating” schools: classified with graduation rates that exceed what was expected based on population served.

- 3 OBS chosen to identify the largest number of promising practices possible within the scope of the study.
- Similar in their per-pupil spending and state school accountability criteria who serve educationally disadvantaged populations.
- The schools used in this study are considered urban by size and population density, but represent a suburban location.

PURPOSIVE SAMPLING

- Cases selected which represented urban/suburban communities.

Methods Overview

THE STUDY DESIGN REPRESENTS AN EXPANSION OF THE LINES OF INQUIRY WHICH STRUCTURED THE 2017-2018 NY KIDS PARENT STUDY CALLED COLLEGE AND CAREER READINESS: PROMISING PRACTICES FROM ODDS-BEATING SECONDARY SCHOOLS.



SECONDARY DATA - NYKIDS

DESCRIPTIVE AND MULTIPLE CASE STUDY.
PURPOSIVE SAMPLING:

- FREEPORT
- MALVERNE
- PORT CHESTER

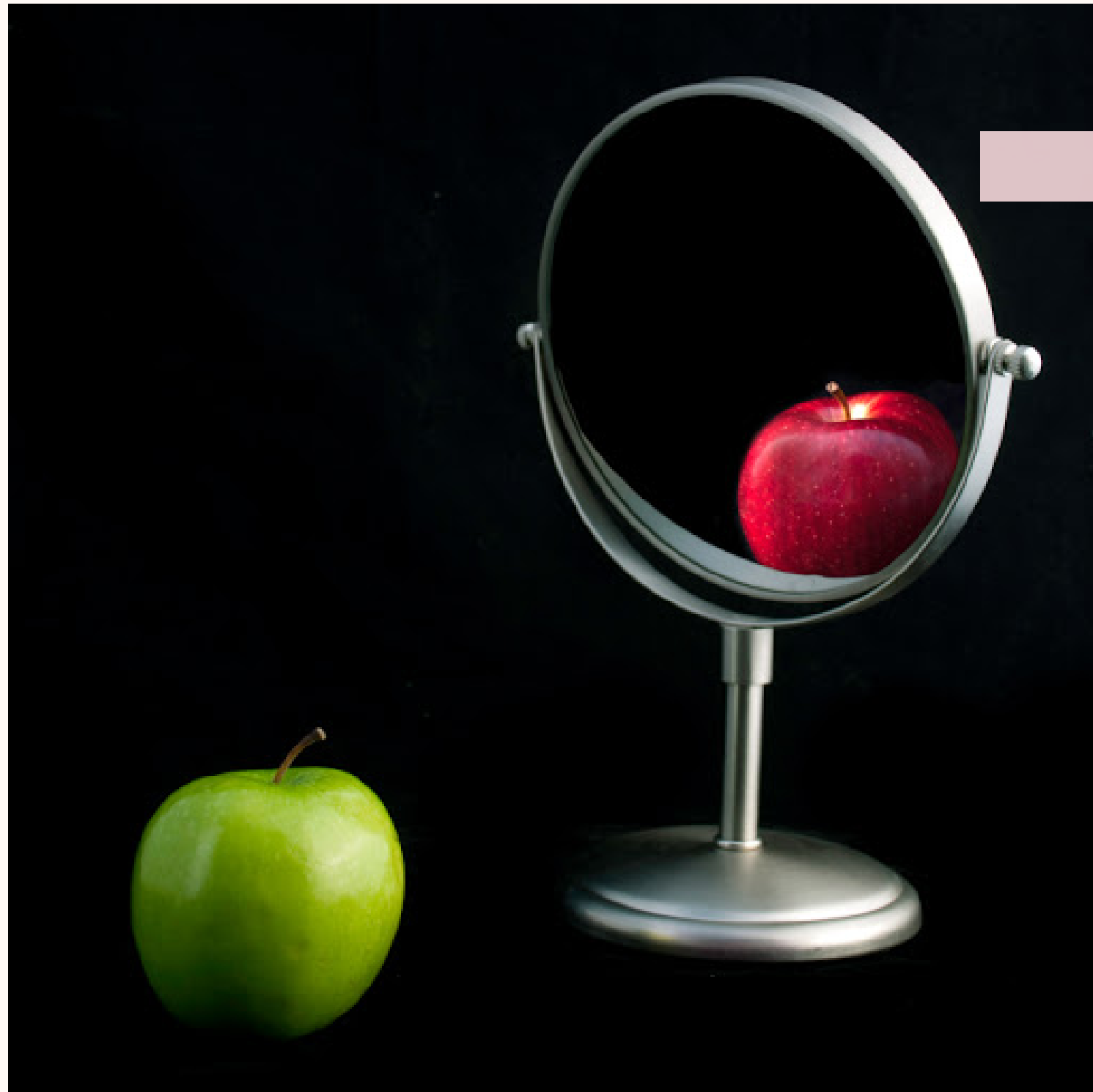
CASES ANALYZED THROUGH A GUIDING THEORETICAL FRAMEWORK

- SOCIOCULTURAL PERSPECTIVES
- ADAPTIVE LEADERSHIP
- ORGANIZATIONAL LEARNING

INTERVIEWS OF PRINCIPALS & DISTRICT LEADERS, TRANSCRIPTS & SUPPORTING DOCUMENTS CODED USING THE QUALITATIVE DATA ANALYSIS COMPUTER SOFTWARE NVIVO 12.

DATA WAS CODED IN THREE PHASES CONSISTENT WITH STRAUSS AND CORBIN (1990) GROUNDED THEORY ANALYSIS (1) OPEN CODING; (2) AXIAL CODING; AND (3) SELECTIVE CODING.

Validity



THREE QUALITATIVE TECHNIQUES
USED TO ENHANCE THIS STUDY'S
VALIDITY:

1. DESCRIPTIVE NARRATIVE IN
AUTHORSHIP OF FINDINGS
2. PEER REVIEW AND DEBRIEFING
3. DISCLOSING POTENTIAL BIAS
WHILE ALSO DEFINING THE
POSITION OF THIS RESEARCHER
(CRESWELL, 2013).

Summary Findings

1. One reason why OBS schools achieve higher than expected outcomes is because educators rely on data to inform decision making and educational practice.
2. OBS principals played an influential role in the schools' collection and uses of data to inform decision making.
3. OBS principals effectively and sometimes creatively addressed complex data and analytic performance challenges by adjusting their leadership styles and management approaches to meet school and community-specific, contextual demands.


Findings

DATA – OBS PRINCIPALS
PRIORITY AND PURPOSE


OBS PRINCIPALS FACILITATED DATA COLLECTION AND USE DIRECTLY FOR TWO MAIN PURPOSES:

1. CREATING ALIGNED AND COHERENT EDUCATIONAL STRUCTURES THAT REINFORCED THE DISTRICT'S CORE MISSION AND VALUES
2. ENGAGING IN CONTINUOUS IMPROVEMENT ACTIVITIES TO INCREASE ORGANIZATIONAL RESPONSIVENESS TO IDENTIFIED STUDENT SUPPORT NEEDS.

Findings



OBS PRINCIPALS DELEGATED THE COLLECTION OF MULTIPLE DATA TYPES TO ORGANIZATIONAL TEAMS PRIMARILY TASKED WITH IDENTIFYING AT-RISK STUDENTS AND THE PROVISION OF INDIVIDUALIZED STUDENT SUPPORT.



Findings

ORGANIZATIONAL/STRUCTURAL
ATTRIBUTES UNDERLYING THE
COLLECTION, ORGANIZATION,
AND DISSEMINATION OF THE
DATA IN OBS SCHOOLS

- PRINCIPALS WERE BOUNDARY-BRIDGING AGENTS
- PRINCIPALS WERE COLLABORATIVE, ADAPTIVE, INSTRUCTIONAL, AND DISTRIBUTIVE LEADERS
- DISTRICT CENTRAL OFFICIALS AFFORDED TRUST AND BOUNDED AUTONOMY IN A COLLABORATIVE ENVIRONMENT TO PRINCIPALS
- PRINCIPALS ORGANIZED AND FACILITATED TEAM BASED DATA COLLECTION AND UTILIZATION

Findings

OBS PRINCIPALS USE DATA TO FURTHER EDUCATIONAL STRATEGIES AND IMPROVE THE EDUCATION EXPERIENCE

PRINCIPALS USED DATA TO DEVELOP WHOLE STUDENT STRATEGIES

- SCAFFOLDING
- MATCHING TEACHER STRENGTHS TO MEET STUDENT NEEDS
- CONNECTING FAMILIES TO COMMUNITY TO SERVICE AGENCIES

PRINCIPALS REGULARLY MONITORED PROGRESS

Findings

FACILITATORS THAT IMPACTED
DATA COLLECTION,
DISSEMINATION OF
INFORMATION, AND
UTILIZATION IN OBS SCHOOLS

ODDS BEATING PRINCIPALS:

- DEVELOPED TEAMS TO FACILITATE INQUIRY AND IMPROVEMENT
- WERE BOUNDARY-BRIDGING LEADERS - ALIGNING SHARED MISSION AND VALUES BETWEEN THE DISTRICT, SCHOOL & CLASSROOM. (TRI-LEVEL ALIGNMENT)
- OPTIMIZED TECHNOLOGY TO SHARE DATA WITH STAKEHOLDERS

Findings

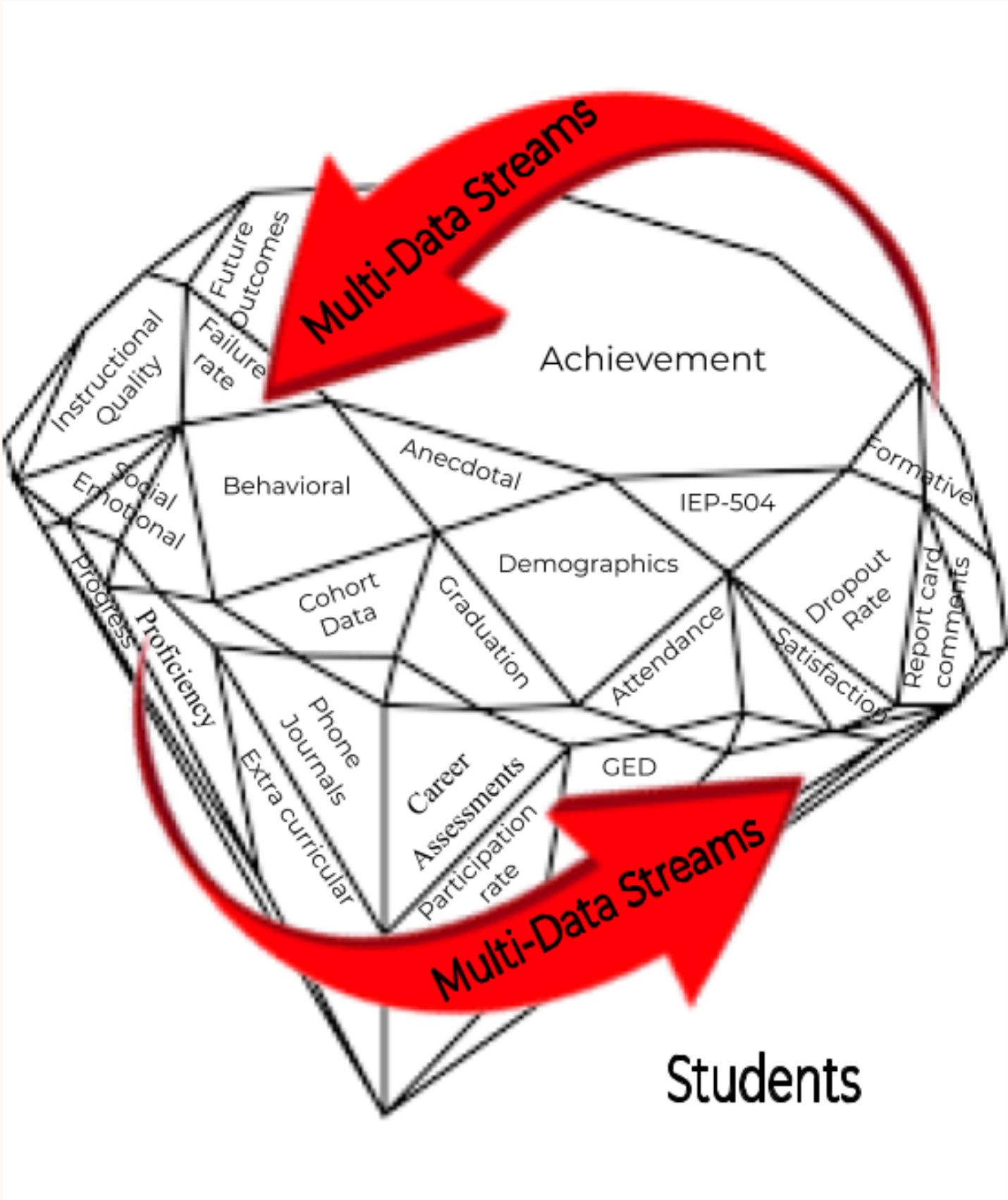
RESEARCH
INFLUENCE ON
PRINCIPAL'S ROLES

OBS PRINCIPALS SELF REPORTED
RESEARCH USE:

- IDENTIFIED EXEMPLARS FOR
TEACHER OBSERVATIONS
- FORMED COLLEGIAL CIRCLES

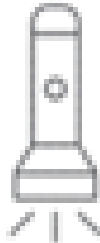
**UNKNOWN IF RESEARCH USE WAS A PRIORI,
POST-HOC OR SOME COMBINATION.*

Principals and District Office Leaders Relied on Multiple Data Streams

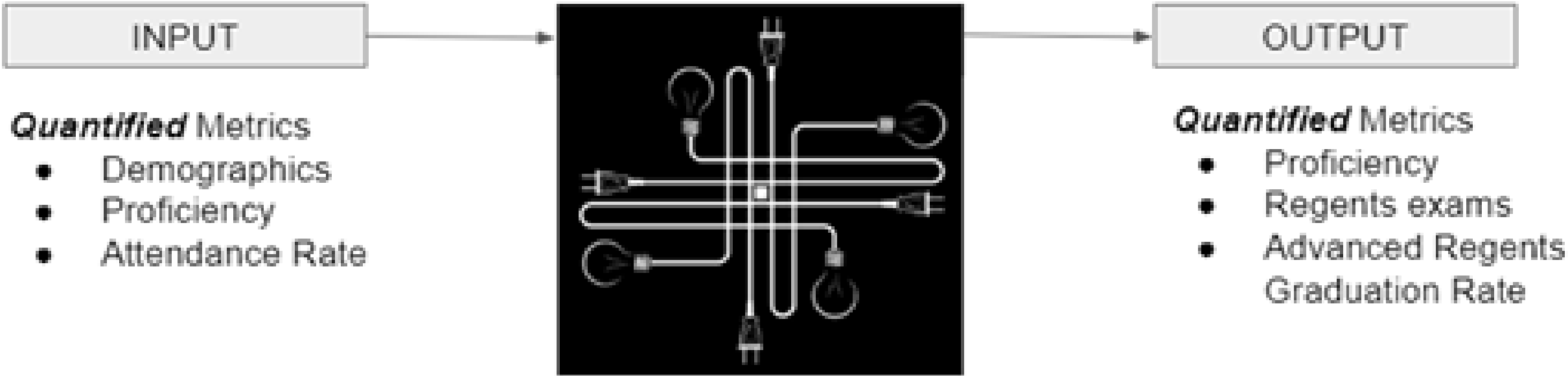


Principals' Data Uses as a Key to "The Black Box"

"Never give up on a student. Period." - Malverne



The Black Box of Education
Data Use for Improvement



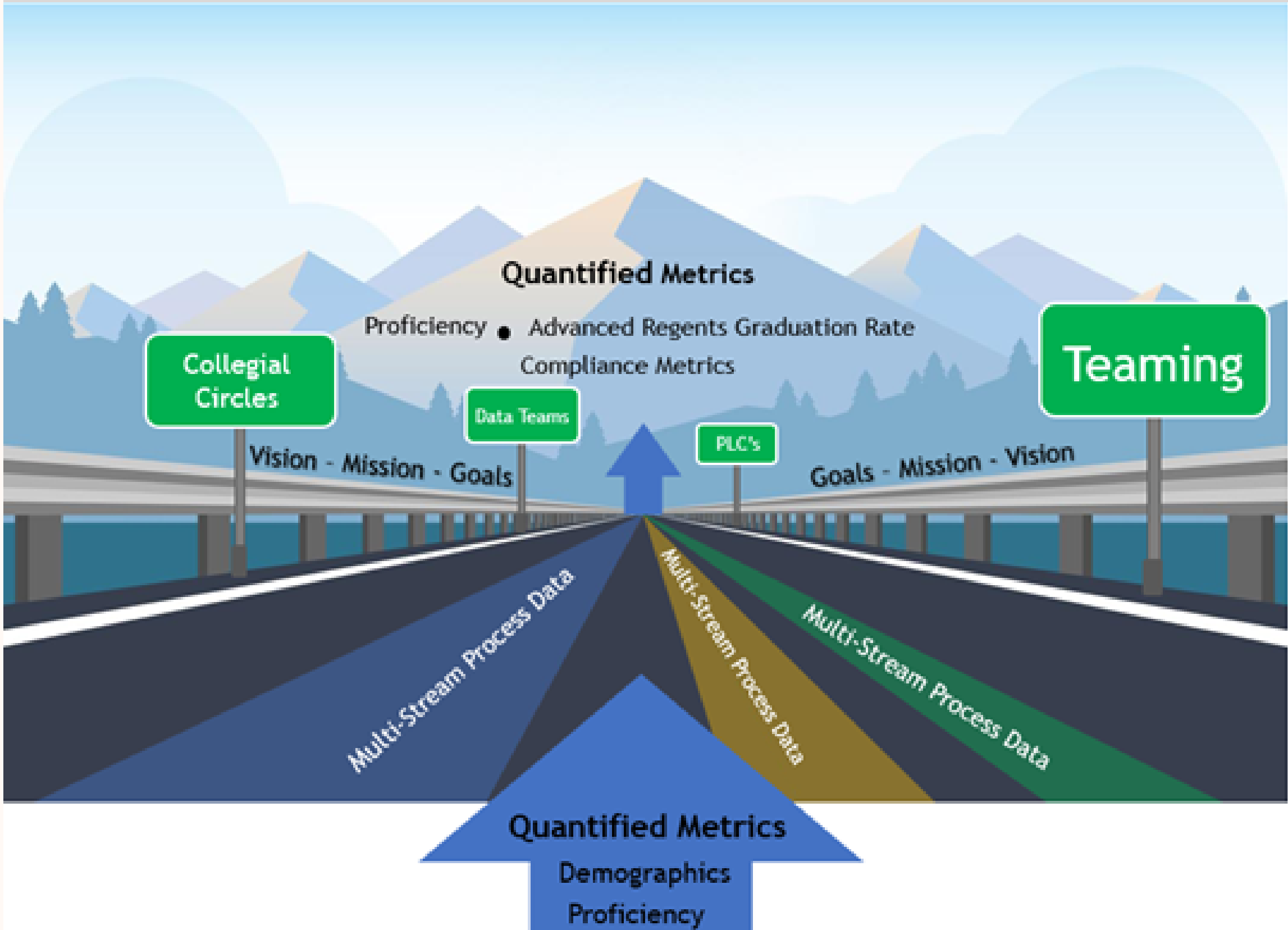
Seemingly invisible - processes are hardwired

High expectations and access to rigorous coursework with built in and individualized student supports

»» Multi-Stream Data Types
Qualitative Dominant ««



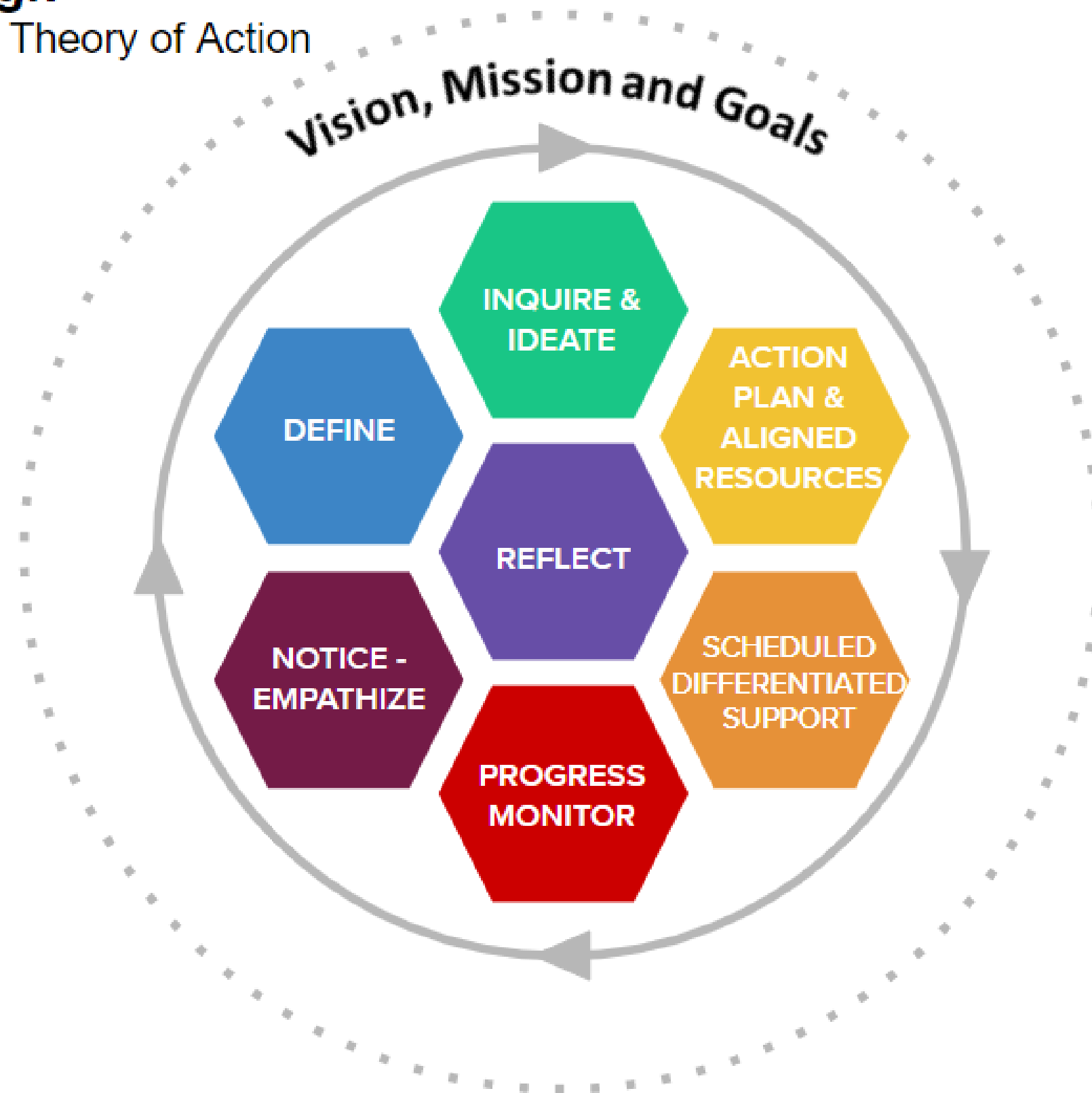
Quantitative Metrics as milestones—Guided by goals, mission, & vision



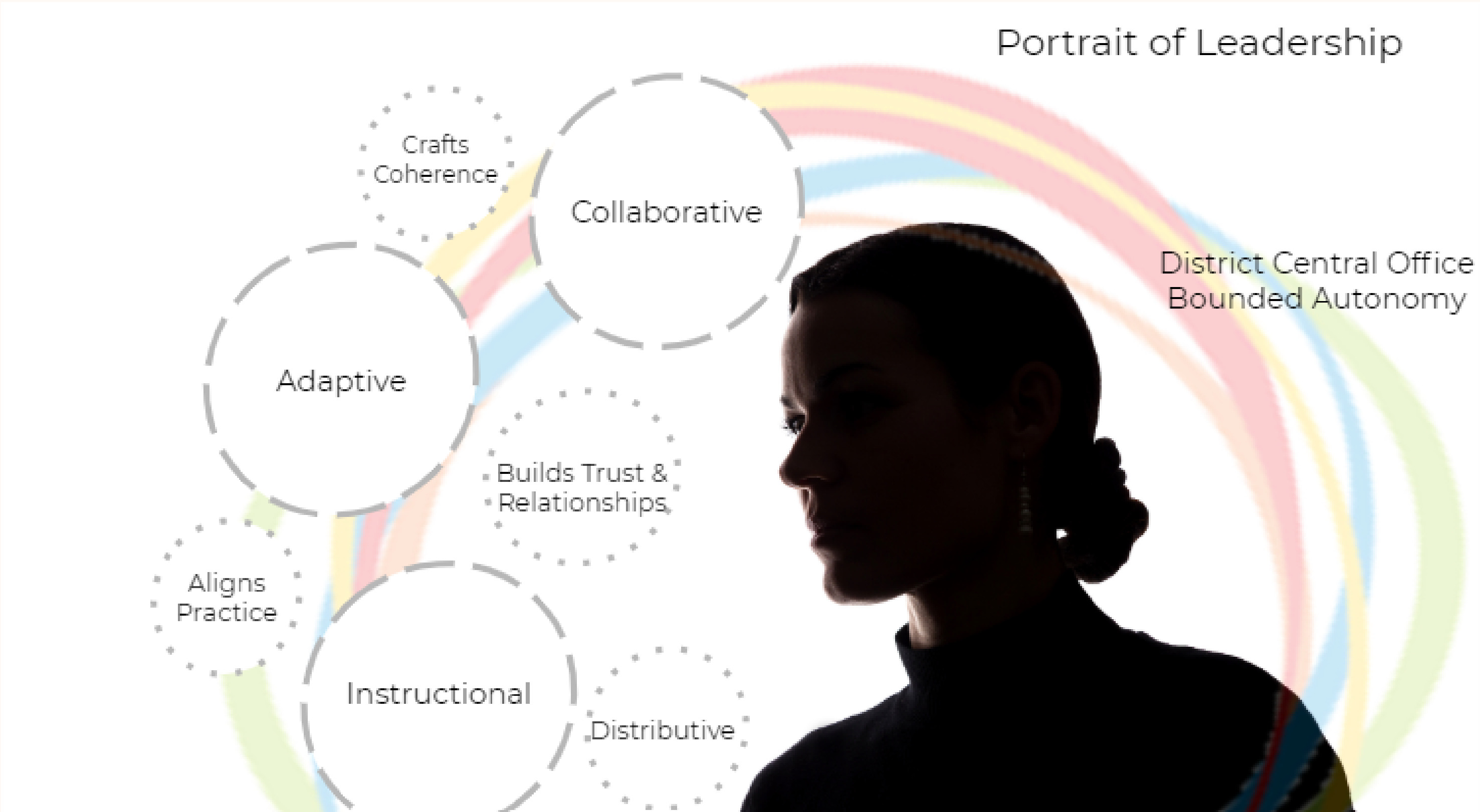
Connecting Data Systems to Problems of Practice

Data System Design

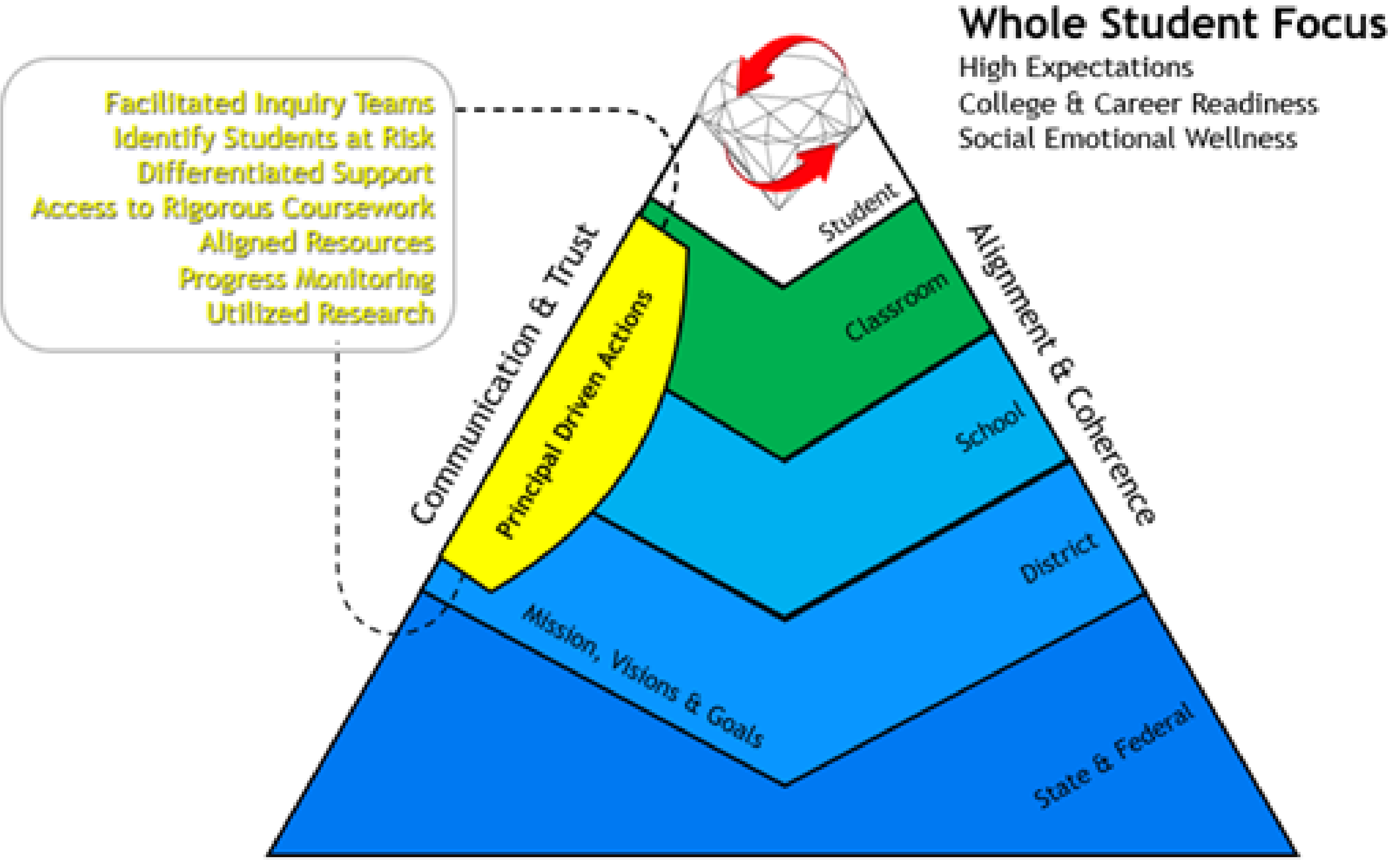
Odds Beating Principals' Theory of Action



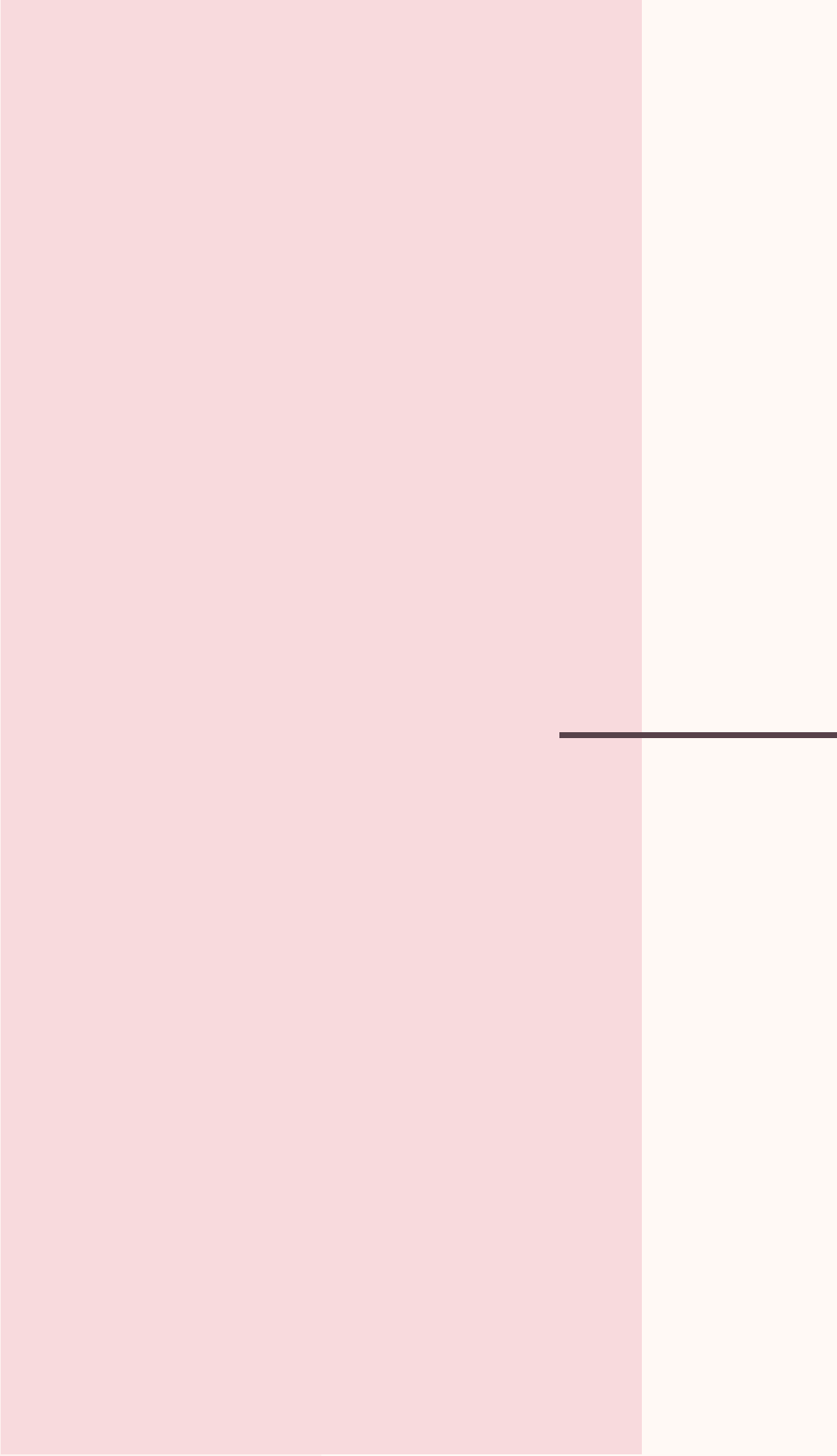
Portrait of Leadership



The Social Ecology of Principals



Conclusions



PRINCIPALS' LEADERSHIP FOR DATA COLLECTION AND USE ARE INTEGRAL COMPONENTS IN ALIGNED AND COHERENT CONTINUOUS IMPROVEMENT PLANS IN WHICH THEY HAVE SOME DISCRETION.

Conclusions

OBS PRINCIPALS WERE DATA **COLLECTORS**

- COLLECTION OF MULTIPLE TYPES OF DATA
- UTILIZE RESEARCH TO GUIDE, IDENTIFY AND RESPOND TO EACH STUDENT'S NEEDS

CONNECTORS

- OBS PRINCIPALS CONNECTED DATA SYSTEMS TO PROBLEMS OF PRACTICE
- UTILIZED TECHNOLOGY
- CONNECTED FACULTY & STAFF TO EACH OTHER & TEAMS
- CONNECTED AND MATCHED TEACHERS TO STUDENTS
- CONNECTED RESEARCH TO PRACTICE.


CATALYSTS

- UTILIZED DATA SYSTEMS TO SPARK AND LEVERAGE IMPROVEMENT PROCESSES AND MECHANISMS
- FOSTERED A SHARED UNDERSTANDING
- ENGAGED IN COLLABORATIVE AND DISTRIBUTED LEADERSHIP - RESPONSIBILITY AND ACCOUNTABILITY BECAME A SHARED BELIEF THAT THEN COULD BE USED AS A CATALYST FOR CHANGE.

Conclusions


ALONGSIDE STATE-MANDATED QUANTITATIVE DATA SYSTEMS, PRINCIPALS PRIORITIZED AND USED QUALITATIVE DATA, ESPECIALLY THE KINDS OF DATA THAT ILLUMINATE IMPROVEMENT NEEDS AND PROVIDE FACILITATE IMPROVEMENT PROCESS MONITORING AND EVALUATION.

Conclusions



DATA SYSTEMS AT ODDS BEATING
SCHOOLS AND PRINCIPALS' DATA
LEADERSHIP ARE DEFINING FEATURES
OF THE SAMPLE SCHOOLS-AS-
ORGANIZATIONS.

Conclusions



OBS DATA SYSTEMS ARE KEY
MECHANISMS FOR EQUITY AND
IMPROVEMENT.

Conclusions

PRINCIPALS RELY ON BOTH DATA AND RESEARCH.

PRINCIPALS REPORT USING RESEARCH OR IMPLEMENTING RESEARCH-SUPPORTED PRACTICES IN SPECIFIC, CONCRETE WAYS. (E.G., INSTRUCTIONAL ROUNDS.)

FINDINGS DO NOT PROVIDE DETAILS REGARDING HOW PRINCIPALS MAY BALANCE THESE TWO KINDS OF EVIDENCE IN THEIR ROLE ENACTMENTS--RESEARCH PRECEDING OR FOLLOWING THESE PRACTICES.

Conclusions

“MOVING THE NEEDLE” ON STUDENT METRICS REQUIRES MORE THAN DATA-INFORMED AND -DRIVEN POLICIES AND PRACTICES WHICH ARE NARROWLY TECHNICAL AND PROCEDURAL. OBS PRINCIPALS' DATA- AND RESEARCH-RELATED ENACTMENTS, FOUNDED ON THEIR CORE VALUES, MAY BE A DEFINING FEATURE OF ALL OBS--AND A KEY FACTOR THAT DISTINGUISHES THEM FROM TYPICAL SCHOOLS.

Policy Implications

IMPLICATIONS FOR LEADERSHIP PRACTICE

- RELATIONSHIP OF DISTRICT CENTRAL OFFICERS AND PRINCIPALS
- CONTINUING TEACHER AND LEADER EDUCATION (CTLE) HOURS
- MOVING FROM EVALUATION AND OPERATIONS TO COACHING AND SUPPORTING PRINCIPALS
- SUPPORTING TECHNOLOGY TO COLLECT AND VISUALLY REPRESENT MULTIPLE TYPES OF LOCAL SCHOOL DATA

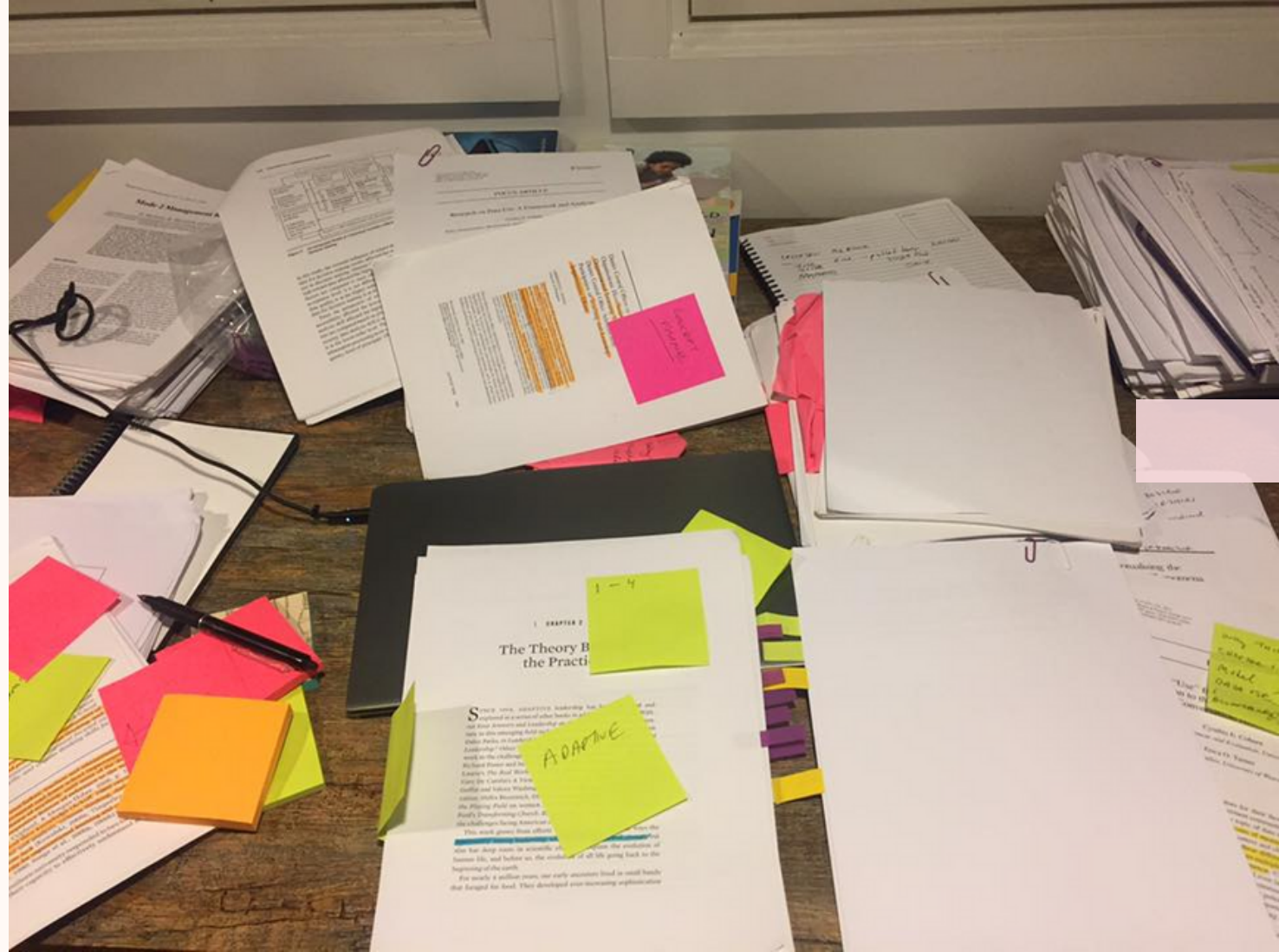
IMPLICATIONS FOR LEADERSHIP PREPARATION

- EXPANDING EMERGENT LEADERS' LEARNING OPPORTUNITIES PERTAINING TO THE USE OF DATA AND RESEARCH - ESPECIALLY FOR IMPROVEMENT.
- UNIVERSITY PARTNERSHIPS

Implications for Future Research

- RELATIONAL UNDERSTANDING - ATTENTION TO TRI-LEVEL ALIGNMENT MECHANISMS AND OUTCOMES, INCLUDING THE CONSEQUENCES OF NOT EMPHASIZING THESE RELATIONS.
- INCLUDE DATA TEAM INTERVIEWS CONSIDER JOB SHADOWING PRINCIPAL'S ROLE IN FACILITATING CONCURRENT DATA SYSTEMS - VOLUNTARY AND MANDATED.
- USE AND PRIORITIZATION OF QUANTITATIVE AND QUALITATIVE DATA
- RELATIONSHIP BETWEEN DATA AND RESEARCH

Thank You!



Thank You

My Family - Luke, Jake & Isabella

My UAlbany Family

- Dr. Lawson, Dr. Wilcox, Dr. Schiller, and Dr. Lisy-Macan
- Brian Rhode, Michelle Mora & Cat Guthrie

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My Work Family

- HCSD Leadership Team, teachers, staff & Students
- Linda Collette
- HVCSD

We all need a little help



From our friends

Theory of Action

