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Improving Student Engagement in a Digital Environment: An Improvement Science Study

Christopher Scott Gragg
cgragg06@georgefox.edu

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IMPROVING STUDENT ENGAGEMENT IN A DIGITAL ENVIRONMENT:

An Improvement Science Study

by

Christopher Scott Gragg

FACULTY RESEARCH COMMITTEE:

Chair: Dane Joseph, PhD

Member: Gary Sehorn, EdD

Member: Karen Buchanan, EdD

A Dissertation Presented to the Faculty of the
Doctor of Educational Leadership Department

in partial fulfillment for the degree of

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“IMPROVING STUDENT ENGAGEMENT IN A DIGITAL ENVIRONMENT: AN IMPROVEMENT SCIENCE STUDY,” a Doctoral research project prepared by CHRISTOPHER SCOTT GRAGG in partial fulfillment of the requirements for the Doctor of Education degree in Educational Leadership.

This dissertation has been approved and accepted by:

Dane Joseph

Committee Chair

Apr 4.12.21

March 31, 2021

Dane Joseph, Ph.D.

Associate Professor of Education

Gary Sehorn

March 31, 2021

Gary Sehorn, Ed.D.

Associate Professor of Education

Karen Buchanan

Apr 4.12.21

March 31, 2021

Karen Buchanan, Ed.D.

Professor of Education

ABSTRACT

Research sought to improve student engagement in a digital learning environment using an improvement science dissertation in practice (ISDiP) framework of a strategize, implement, analyze, and reflect (SIAR) cycle. The ISDiP convened a network improvement community (NIC) to conduct a 90-day SIAR cycle. The NIC implemented four strategies to address systems, instruction, culture, and leadership functions present at a high school in Oregon. These strategies included progress monitoring and support of students by their *Advisory* teacher using existing systems, connecting instruction by regularly providing student engagement resources to teachers, including culture by connecting with families of English learners, and using leadership to provide teachers with timely and accessible data. Results from a follow-up survey did not indicate that improvement in student achievement was attained. However, the analysis of district-wide survey results, improved student-achievement, and student attitudes towards *Advisory* teachers may suggest improvement in student engagement and other outcomes was accomplished.

Keywords: Digital Learning, Improvement Science, Principal Leadership, Student Engagement

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TABLE OF CONTENTS

CHAPTER 1: STRATEGIZE	6
Definition of Terms.....	6
Problem of Practice.....	7
Aim	11
Literature.....	12
Leadership Theory	12
Professional Literature in Context	13
Professional Knowledge	14
Design	16
Strategize.....	17
Implement	18
Analyze	18
Reflect.....	19
Significance of the Study	20
Ethical Considerations	21
CHAPTER 2: IMPLEMENTATION	22
Advisory Systems	23
Advisory Instruction	27
Advisory Leadership.....	28
Advisory Culture.....	28
Student Engagement Root Cause Analysis.....	29
Student Engagement Drivers	32

Implementation Reporting	33
Measuring Improvement in Student Engagement.....	38
CHAPTER 3: ANALYZE	39
Student Engagement	39
Student Achievement	43
Teacher Satisfaction.....	44
Equity Analysis.....	45
Future Opportunities	50
CHAPTER 4: REFLECT	51
Dependable Data.....	51
Failure Focus.....	52
Technology Theatre	53
Measuring Student Engagement	54
Enlarging and Spreading.....	55
Leadership Factors	56
Dissertator Reflection	57
FIGURES	
Figure 2-1: Padlet Systems Map.....	23
Figure 2-2: Advisory Weekly Grade Report.....	25
Figure 2-3: Request for Assistance Google Form.....	26
Figure 2-4: Padlet Root Cause Analysis.....	31
Figure 3-1: Riverside Staff CDL FAQ's.....	49
APPENDIX.....	63
APPENDIX A: IRB APPROVAL DOCUMENTS	63

Chapter 1: Strategize

In order to determine a method to improve educational outcomes such as student engagement, teacher satisfaction, student achievement, and equity, a problem of practice must present itself. Problems of practice that are ambiguous and acknowledge a variety of ideas and approaches to address the challenges are considered wicked problems. The COVID-19 pandemic in the fall of 2020, in conjunction with an uncharted digital learning environment, presented an exemplary wicked problem. By examining a problem, using professional knowledge, and scholarly theory an aim can be determined to direct a scientific approach. Contributions from and to educational leadership theory and practice desire to improve educational outcomes, with an awareness of ethical implications.

Definition of Terms

Advisory: Four-year course adopted by Riverside High School in 2017-2018 school year. *Advisory* curriculum focuses on student care and connection with a trusted adult – a licensed Riverside teacher. Curriculum also focuses on organizational strategies, college and career readiness, and reinforcing effective instructional strategies. Each *Advisory* teacher is cohorted with 23-29 student for all four years.

Comprehensive Distance Learning (CDL): Oregon Department of Education's designation for instruction that is not in-person. Primarily the vehicles for CDL are a digital environment utilizing learning management systems (LMS) and video conferencing. Charles Douglas Public Schools elected to use *Canvas* as its LMS and *Zoom* for video conferencing.

Improvement Science Dissertation in Practice (ISDiP): Research methodology for scholar-practitioners seeking to improve problems of practice in the context that presents the challenge.

Networked Improvement Community (NIC): Research team of practitioners with professional knowledge and experience. NICs are often present in improvement science research.

Transformational Leadership: Leadership theory aligned with five identified characteristics or factors: attributed idealized influence, behavioral idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

Transformational leadership is often contrasted by transactional leadership characteristics of contingent reward and management-by-exception.

Strategize, Implement, Analyze, Reflect (SIAR) Cycle: ISDiP tool for conducting short (90-Day) iterations to address identified problems of practice. SIAR Cycle is closely aligned with plan, do, study, act (PDSA) cycle found in other improvement efforts.

Problem of Practice

In early 2020, the coronavirus started to take center stage as reported cases and confirmed deaths suggested a global pandemic was dawning. By early March, Oregonians began to experience the virus' impact on every facet of normalcy enjoyed prior to COVID-19. The normal function of public education in Oregon was a primary target of the virus' impact. In response to this impact, state officials provided direction to address the pandemic's disruption to education.

On June 10th, the Oregon Department of Education (ODE) published *Ready Schools, Safe Learners: Guidance for School Year 2020-2021*. It also published a companion document, *Comprehensive Distance Learning: Deepening Care, Connection and Continuity of Learning*. The stated intent of the documents was "to craft guidance that places the design and decision-making into the capable hands of educators, school nurses, counselors, principals, business managers, superintendents, and school boards while providing clear statewide requirements and recommendations for health, safety, equity, and quality instruction across the state" (p. 5). While

the design and decision-making role of principals is explicitly expressed throughout ODE's guidance, it does not overtly provide recommendations or requirements regarding the principals' leadership practices in designing systems and making decisions for the upcoming 2020-2021 school year.

As is often the case in public education, social ideals, such as equity, innovation, care, and connection, are expected components of learning environments without tangible means to operationalize coveted outcomes. Moreover, meeting these expectations looks different for a diverse group of stakeholders. In fact, the only commonality among stakeholders was the extreme context of distance learning in the spring semester of 2020 when distance learning became an overnight reality. As a result of this extreme upheaval, many stakeholders expressed concerns with student engagement, student achievement, teacher satisfaction, and equity.

On March 12, 2020, Governor Kate Brown ordered the closure of public schools from March 16th until at least March 31st (*Executive Order 20-08*). In the executive order, schools and school districts were to “continue delivering supplemental education and learning supports to students to the extent practical through independent study and other appropriate options” (p. 3). During the early closure, distance or online learning was not required, citing access and equity concerns (Campuzano, 2020). Later in March, the Governor extended school closures until April 28th and hinted at the real possibility of students not returning to schools for the remainder of the 2019-2020 school year.

With this reality in mind, ODE published guidance for an extended school closure, *Distance Learning for All: Ensuring Care, Connection and Continuity of Learning*. For Riverside, and most public schools, Distance Learning for All meant moving entirely to a digital environment for the remainder of the 2019-2020 school year. ODE guidance for the 2020-2021

school year acknowledges the deficiencies of Distance Learning for All, stating that, “The statewide pivot to Distance Learning for All in the spring of 2020 was, without a doubt, a crisis response and was designed for a limited duration” (2020, p. 40).

Due to the limitations of a crisis response, the guidance and name change to Comprehensive Distance Learning (CDL) “signal a shift in expectations and quality” in a digital environment for the upcoming school year (p. 40). Eberly et al. (2017) found that transformational leadership practices in extreme contexts, such as in military conflict, helped soldiers “maintain a sense of fit and sacrifice” (p. 81). It is plausible that similar outcomes could be found in the extreme crisis context at Riverside.

Beyond the crisis and mandate, some level of digital learning appears to be a growing component for all learners. Principals need to examine their leadership practices in a digital environment to ensure student engagement, student achievement, and teacher satisfaction is maximized. Prior to COVID-19 and state mandates for distance learning, certain principal leadership practices have been shown to have a significant positive relationship with student engagement, student achievement, and teacher satisfaction (Menon, 2014; Stockard & Lehman, 2004; Tickle et al., 2011). Each of these studies identified principal leadership factors connected to transformational, transactional, laissez-faire leadership characteristics. Each of these characteristics are defined and discussed forthcoming.

Transformational leadership practices exhibited in principals have shown to positively influence teacher satisfaction, student achievement, and leadership effectiveness (Menon, 2014; Tickle et al., 2011). The Stockard and Lehman (2004) study found a similar positive relationship with first-year teachers in addition to increased teacher retention. In a new and evolving

educational setting, known and effective principal practices should be considered with implemented strategies.

In addition to an expanding digital environment, there has been heightened concern with historic systemic inequities in communities where leaders are guided by their individual implicit biases and epistemology (Khalifa, 2018). Effective principal leadership practices of shared vision, high expectations, and challenging traditional norms (Menon, 2014; Stockard & Lehman, 2004; Tickle et al., 2011) should align with culturally responsive school leadership recommendations of promoting a vision of inclusion, rejecting low expectations, and including audit reforms for equity. This alignment is achieved because transformational leadership and culturally responsive leadership share attributes of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

Results matter! According to the District's *Panorama Education* survey (2020), 1,069 Charles Douglas Public School high school students responded with forty-one percent (41%) favorability in survey questions related to student engagement. In the same survey, 268 high school teachers responded with thirteen (13%) percent favorability regarding student engagement and seventy-three percent (73%) favorability in their satisfaction of principal support during distance learning.

Amidst the tenuous COVID-19 Pandemic, with explicit expectations, ambiguous pathways, diverse stakeholder beliefs and preferences, as well as variable outcomes in a complex setting, Riverside High School leadership was faced with a wicked educational problem of practice with respect to comprehensive distance learning for all students; specifically, with the dynamic nature of each factor confounding the overall K-12 public education setting. Some of the dynamic factors include varying and degrees of leadership theory, COVID-19 guidance,

delivery and access to instruction, and stakeholder feelings towards each of the afore mentioned factors. For example, a leadership theory that was analyzed was transformational leadership. Transformational leadership has five distinct characteristics. There are nine leadership characteristics if you include related leadership theories of transactional and laissez-faire leadership. In this example, each principal will have a unique makeup (varying and degrees) of each of the nine characteristics. Each time another factor is added to the current public K-12 conditions the available solutions grow exponentially.

In order to strategize and implement, analyze, and reflect on improvement practices it will be necessary to isolate factors to better understand its impact on an improvement aim. An objective to address this problem may include strategizing, implementing, analyzing, and reflecting on principal leadership practices in a digital environment that fosters student engagement, student achievement, teacher satisfaction, and equity.

Aim

According to Improvement Science advocates, an Improvement Science Dissertation in Practice (ISDiP) framework includes complex problems of practice that are applicable to current contexts and addresses issues of equity and social justice (Perry et al., 2020). Given the nature of the complex educational problem faced by Riverside during the Fall 2020 school semester, it was reasonably determined to investigate whether particular principal leadership practices can have more positive outcomes for student engagement in a digital learning environment than those observed at the end of the Spring 2020 semester. By January 7th, 2021, a networked improvement community (NIC), aimed to improve student engagement at Riverside by using instruments and data connected to implemented systems, instruction, culture, and leadership strategies to measure and analyze improvement.

Literature

In an ISDiP framework, “literature can serve scholarly practitioners in framing problems of practice, developing a theory of improvement, and framing the analysis of the data they gather during the improvement process” (Perry et al., 2020, p. 69). A review of leadership theory research, professional literature regarding CDL guidance, and professional knowledge gained through working in a networked community assisted in meeting improvement science objectives.

Leadership Theory

Research has shown that there is a relationship between principal leadership practices and student outcomes (Menon, 2014; Stockard & Lehman, 2004; Tickle et al., 2011). To gain an understanding of these relationships, several studies have used the Multifactor Leadership Questionnaire (MLQ) to assess leadership types (Eberly et al., 2017; Khasawneh et al., 2012; Menon, 2014). The MLQ was designed in 1995 by Bruce Avolio and Bernard Bass to measure leadership factors in several contexts (Avolio & Bass, 2011). The current MLQ has been expanded to measure nine leadership components among leadership styles: Idealized Influence – Attributed; Idealized Influence – Behavior, Inspirational Motivation; Intellectual Stimulation; Individualized Consideration; Contingent Reward, Management-by-Exception – Active; Management-by-Exception – Passive; and Laissez-Faire (Avolio & Bass, 2011). The first five factors are connected to transformational leadership attributes identified by Burns’ leadership theory (1978). Contingent reward and active management-by-exception are associated with transactional leadership behaviors. Finally, passive management-by-exception and laissez-faire items in the MLQ measure absent leadership. Burns identified transactional and laissez-faire leadership factors in order to contrast attributes in theory and compare perceptions from the MLQ survey.

Menon's 2014 study investigated the relationship between transformational, transactional and laissez-faire leadership of principals with perceived leader effectiveness and teacher satisfaction using the MLQ. In the study a significant positive relationship was found between transformational and transactional leadership factors with teacher satisfaction. The Menon study also found a significant negative correlation between passive management-by-exception and laissez-faire factors with teacher satisfaction (Menon, 2014).

Other studies have observed similar results. In a 2012 meta-analysis, Leithwood and Sun reviewed 79 studies of transformational school leadership effects on school conditions, teacher internal state, teacher behavior, and student achievement. Methods and measurement instruments varied in each of the studies. However, the MLQ is recognized as a "primary measuring instrument" (Leithwood & Sun, 2012, p. 398). Leithwood and Sun's metanalysis found that transformational school leadership had a significant positive relationship with student achievement (2012). While these studies did not specifically investigate principal leaderships relationship to student engagement, they did show a significant positive transitive relationships to other desired student and teacher outcomes (Stockard & Lehman, 2004).

Professional Literature in Context

One of the most challenging aspects of examining principal leadership practices on student engagement, student achievement, teacher satisfaction, and equity in a digital environment was the extremely complex setting within which digital learning resides. Since mid-March, ODE revised their guidance on "distance learning" more than eleven times. Most revisions were in response to government executive orders and health officials. Fortunately, each iteration continued to hold health and safety, care and connection, equity, and innovation as

guiding principles for CDL (*Comprehensive Distance Learning*, 2020). However, most of the guidance did not address principal leadership practices that meet the stated principles.

Aligning institutional knowledge and priorities in a new digital environment was a major component of the ISDiP. Prior to March 2020, Riverside has targeted four priorities; AVID, 1:1:1, *Advisory*, and Multi-Tiered Systems of Support (MTSS). Each priority identified systems, instruction, culture, and leadership as functions to operationalize. Riverside was nearing a five-year goal of becoming an AVID Demonstration School, by implementing evidence-based instructional strategies, establishing a college-going culture, designing organizational systems, and providing effective instructional leadership. Riverside's mission statement embodies this pursuit: "Bold enough to be the best in educating, nurturing, and inspiring." Beyond AVID, Riverside values students building strong connections with Riverside staff and activities. In Riverside's 1:1:1 initiative, it seeks to see every student participating in one club, one sport, or one activity every year. Riverside has also established an *Advisory* class that links every student with one teacher throughout their four years in high school. Riverside also employs MTSS, along with the rest of the District, as an intervention model to promote student behavior, attendance, and academic success. With these priorities in place, Riverside has continued to increase graduation rates, scholarship awards, and other key metrics.

Professional Knowledge

Improvement science includes guiding principles that might assist school leaders in tackling such wicked problems that were faced by Riverside. According to The Carnegie Foundation for the Advancement of Education, one of their *Six Core Principles for Improvement* suggests that improvements are accelerated "through networked communities" (2020). It is in these Networked Improvement Communities (NIC) where professional knowledge resides.

“NICs enable practitioners, researchers, and designers to work together to specify an important problem of practice, develop, test, and refine innovative tools and practices to address the problem, spread and support the uptake of practical knowledge, and analyze data to monitor progress toward a network-wide improvement goal” (Russell et al., 2017, p. 7). ISDiP case studies involving NICs made up of administrators, instructional coaches, counselors, licensed, and classified staff successfully identified problems of practice, implemented strategies, analyzed indicators and adjusted or expanded their work (Crow et al., 2019). A key outcome of NIC work identified in the case studies included building capacity of the organization beyond NIC identified participants. In case studies that sought to improve student achievement or teacher collaboration, stakeholders outside of designated NIC participants observed improvements and volunteered to implement improvement strategies. In each case a critical mass of organizational staff adopted an improvement mindset, broadened their scope, and continued the work (Crow et al., 2019).

It should be noted that the primary role of NIC members, as practitioners in context, was the professional knowledge, professional experience, and professional contributions available to strategize, implement, analyze, and reflect on the process in improving. In addition to the professional knowledge, experience, and contributions, the dissertator provided theoretical knowledge of leadership to the NIC in order to identify principal leadership factors present in improvement efforts. This included providing descriptions of leadership characteristics and reviews of research literature related to principal leadership and educational outcomes including student engagement, teacher satisfaction, and student achievement.

Design

Improvement science advocates credit Gerald Langley and his associates with the improvement science plan, do, study, act (PDSA) cycle as the model of inquiry to design changes or improvements (Perry et al., 2020; Russell et al., 2017). In a PDSA cycle, NICs plan (or strategize) by developing a theory of improvement and then they do (or implement) the theory of improvement. This is vital because implementing the theory of improvement goes a step further than merely documenting one, as is the case in program evaluations. Following implementation, the NIC studies (or analyzes) the results of the implementation to act (or reflect) on further efforts needed and the cycle is repeated (Perry et al., 2020). This is akin to the rapid experimentation that is common in design research enterprises within user experience and learning design fields.

Perry et al. (2020) have adapted the PDSA cycle model to “develop the leadership and intellectual skills that EdD scholarly practitioners need to improve to lead improvement efforts in their educational organizations” (p. 124). The ISDiP model of educational improvement reframes the PDSA cycle as a strategize, implement, analyze, and reflect (SIAR) cycle. SIAR specifically emphasizes the “critical thinking and leadership capabilities” (p. 125) of EdD scholarly practitioners. Therefore, the design of this study implemented the ISDiP model of improvement by utilizing the SIAR cycle. The NIC met on *Zoom* for one hour, nine times.

September 17: NIC Introduction and Invitation

October 1: Strategize #1

October 15: Strategize #2

October 29: Implement #1

November 12: Implement #2

November 24: Analyze #1

December 10: Analyze #2

December 17: Reflect #1

January 7: Reflect #2

Strategize

For the purposes of improving student engagement in a digital environment at Riverside, the NIC was made up of twelve members that included the Principal, four Assistant Principals, the Community School Outreach Coordinator, a Behavior Specialist, a Special Education Teacher, an English Learner Development Teacher, an Instructional Mentor, a School Counselor, and the District Principal Leadership Coach. The NIC also invited the District's *Panorama* survey liaison, a community outreach assistant, and a District equity facilitator to inform the NIC's work. The team's composition was driven by an objective to intentionally represent a diverse spectrum of teachers and leaders connected to and aware of the Riverside context. The NIC composition also aligned with the student demographics, specifically ethnicity and gender. Additionally, NIC members needed to have the capacity and influence to identify, implement, analyze, and reflect on improvement strategies. Members were recruited via invitation to an overview of the challenges facing Riverside and a proposal for a group of practitioners to seek to improve outcomes.

The NIC then gained insight by exploring current systems at Riverside, considering improvement methods, constructing a theory of improvement, and determining a process for measuring outcomes (Russell et al., 2017). Tools available for this step included root cause analysis, a driver diagram, systems map, and Spring 2020 *Panorama* data. Using these tools, the NIC observed evidence-based transformational leadership practices of idealized influence

(attributed and behavioral), inspirational motivation, intellectual stimulation, and individualized consideration operationalized in systems and constructs present in a digital environment.

Implement

Once a theory of improvement was constructed, the NIC moved to execute the change ideas derived from driver diagrams and other planning. During this step, the NIC collected evidence in the form of reports from NIC members. In the reports, members shared observations, presented data, considered modifications, and discussed connections to leadership characteristics at four meetings over the Fall 2020 school semester. Each meeting lasted approximately sixty minutes. This provided the NIC with periodic opportunities to remedy any unforeseen challenges, adapt to any newer government legislation or executive order, and close the assessment loop at multiple points. Chapter 2 of this ISDiP provides more details on the implementation phase.

Analyze

Analysis of the theory of improvement includes determining the success of the theory and what was learned in the process (Perry et al., 2020). This analysis primarily examined leading outcome indicators, rather than lagging outcome indicators, due to the “dynamic fashion” of the SIAR cycle (Russell et al., 2017, p. 20). Leading outcome indicators such as surveys, online attendance rates, requests for assistance, and observations allowed for immediate analysis and ongoing adjustments throughout the SIAR cycle. These are contrasted with lagging outcome indicators, which are “only available well after an intervention takes place”, such as teacher attrition or graduation rates (Russell et al., 2017, p. 20). *Panorama* surveys, similar to the spring 2020 study, were the primary instruments to measure student engagement in the fall. In addition, the District’s learning management system (LMS), *Canvas*, metrics (assignment submissions and

page views), student weekly grade checks, family conferences, and NIC observations informed improvement in student engagement, student achievement, teacher satisfaction, and equity.

While leading outcome indicators provide an in-the-moment snapshot of various metrics, this vantage point does have some limitations. For example, tracking improvement of student grades can be generalized over time (total number of failing grades at Riverside) but is limited in analyzing individual improvement and unique contributing factors. Additionally, in-the-moment data is also limited to the constraints of the instrument used. For example, a survey soliciting perceptions of student engagement at one period in time may have no relationship when solicited at a different time and under different learning circumstances.

An equity lens is an important component to any ISDiP (Perry et al., 2020). In order to ensure that the NIC's theory of improvement promoted equity and social justice, an equity audit was conducted during the analysis phase (Khalifa, 2018). The equity audit looked at four basic areas that examined equity trends, survey data, policy analysis, and culturally responsive school leadership practices (Khalifa, 2018). Chapter 3 of this ISDiP provides more details on the analysis phase.

Reflect

In the final phase, "scholarly practitioners should explain how the work contributes to their personal and professional goals, how they envision the continued use of improvement science in their practice, and how their findings contribute to professional knowledge" (Perry et al., 2020, p. 130). During the reflection process, additional aims and theories of improvement were considered. The NIC also considered expanding the scope and reach of their improvement efforts. Chapter 4 of this ISDiP provides further details on the reflection stage.

Significance of the Study

Failure to examine Riverside principal leadership practices in a digital environment may lead to student apathy, declining student outcomes, teacher frustration, teacher attrition, and continued systemic inequities. At minimum, a digital learning environment will be the primary setting for Riverside High School students and staff during the fall 2020-2021 semester.

However, it is likely that a digital learning environment will continue to grow throughout K-12 education for the foreseeable future. It is critical that frameworks including principal leadership practices meet the needs of a digital environment that improve student engagement, student achievement, and teacher satisfaction. Observations made by the NIC during the SIAR cycle sought to improve student engagement during Fall 2020 semester and garner professional knowledge to address future problems of practice related to a digital learning environment and/or other novel or prevalent circumstances.

Additionally, the examination of the relationship between principal leadership practices with student engagement, student achievement, and teacher satisfaction provided greater understanding of these factors that are local and specific to Riverside. Learning about such factors highlighted the importance of leverage localized and unique knowledge and practices over one-size-fits-all approaches in a complex educational context.

The intent of this ISDiP was to develop and use a NIC-driven theory of improvement as a continuous guide to identify high leverage leadership practices that improve student engagement in a digital environment. Beyond student engagement, we discovered relationships between principal leadership and improvements in other outcomes (student and staff) as shown in other studies (Leithwood & Sun, 2012; Menon, 2014; Stockard & Lehman, 2004). The NIC findings contributed to the knowledge, practice and support towards the improved development,

implementation, and analysis of leadership practices at Riverside High School in a digital environment.

Ethical Considerations

The dynamic of power is present in every setting (Grogan, 2013). According to NIC architects, “Leadership in networks is rooted in the ability to foster commitment to a common vision and motivate others to engage with it, rather than in formal power to impose roles or mandate actions” (Russell et al., 2017, p. 21). Perry et al. (2020) identifies this dynamic as researcher positionality and advise scholarly practitioners to “understand their researcher positionality as privileged and possess awareness about how their personal identity affects their research process in relation to their research subjects and systems of power” (p. 96). They further state, “Power and privilege can distort a researcher’s ability to understand the problem, collect useful data, analyze measures productively, and generate useful findings” (Perry et al., 2020, p. 98). The framework of this ISDiP acknowledged researcher positionality and worked to mitigate potential ethical issues that would hinder improvement.

As internal stakeholders and collaborators, NIC participants had a vested interest in improving student engagement, student achievement, and teacher satisfaction at Riverside. A “commitment to a common vision” had the potential to skew the NIC’s interpretation of results in a way that undermined the objective to improve, which is the crux of improvement science. This study received IRB approval from George Fox University so as to honor the fine line between research and quality improvement studies, given that the project is a partial requirement for the candidate’s dissertation research and educational leadership program completion. Furthermore, the NIC sought opportunities to triangulate their results with multiple measures and stakeholder eyes, as well as an assessment advisor external to the NIC itself.

Chapter 2: Implementation

In the 2017-2018 school year, Riverside implemented *Advisory* after spending two years developing the course and building staff capacity. Early objectives for *Advisory* targeted improving student organization skills, creating meaningful staff connections with each student, and exposing students to college and career going skills and opportunities. Riverside was the first high school in the District to adopt and implement *Advisory*. In the spring of 2020, Riverside utilized *Advisory* to meet the ODE’s “Care and Connect” emphasis during the closure (2020). In the fall of 2020, the remaining five comprehensive high schools adopted *Advisory* as a vehicle to support students during Comprehensive Distance Learning (CDL). During summer planning for the 2020-2021 schoolyear, Riverside’s administrative team recognized the importance of leveraging *Advisory* as a system to support students during CDL.

Systems Map

To determine an appropriate problem of practice for the NIC to consider, the group created a systems map of *Advisory* using systems, instruction, leadership, and culture as primary functions. The NIC utilized Padlet to digitally represent Riverside’s systems map of *Advisory* (see Figure 2-1). In mapping *Advisory* as a system, the NIC found many interrelated subsets of the four primary functions. Rather than list duplicate subsets in multiple functions, The NIC elected to pick the most appropriate function to list each subset.

Figure 2-1

Padlet Systems Map



Advisory Systems

The NIC identified five systems associated with *Advisory* at Riverside. These structures include grade-level professional learning communities, daily classes, common construction and delivery of content, schoolwide instrument to monitor student grades, and student support protocol using a Request for Assistance (RFA) *Google Form*. Professional learning communities (PLC) at Riverside are not unique to *Advisory*. Teachers meet weekly in content PLC's to

construct unit plans, design common formative assessments (CFA), review data from CFAs, and implement strategies to improve student proficiency. The role and activities for the grade-level *Advisory* PLCs is slightly different. *Advisory* PLCs meet monthly to review upcoming curriculum, provide specific training related to upcoming lessons, and answer any questions. In prior years, *Advisory* classes met about three Fridays of every month. For the 2020-2021 schoolyear the District implemented fifteen-minute *Advisory* check-ins Tuesdays through Fridays. In the fall of 2020, daily *Advisory* check-ins were implemented district-wide to meet the care and connection guidance suggested by the Oregon Department of Education (ODE). In addition to the check-ins, Riverside included a thirty-minute *Advisory* lesson on Mondays. These lessons align closely with *Advisory* lessons for prior schoolyears. Each of our 72 *Advisory* teachers deliver common grade-level curriculum throughout the school year. Content and curriculum are designed and disseminated from the *Advisory* planning committee made up of four teachers, the instructional mentor, a counselor, and an assistant principal. Each of the *Advisory* teachers have access to their 23-26 *Advisory* students' current grades posted to a shared *Google* spreadsheet (see Figure 2-2). Grades are updated every Monday and highlight all failing grades. This instrument for monitoring grades provides an easy quick-glance view of students struggling in one or multiple classes. When *Advisory* teachers notice students struggling with attendance, academics, or behavior, they are considered the hub and first safety net for providing support. In general, *Advisory* teachers are accountable for submitting a Request for Assistance (RFA) *Google* form (see Figure 2-3) if their initial contacts or supports are not successful. RFA submissions are reviewed by an administrative assistant with experience in triaging and assigning appropriate student supports personnel.

Figure 2-2

Advisory Weekly Grade Report

STUDENT NAME	EOS Survey Complete	STUDENT ID	1ST	Grade	%	2ND	Grade	%	3RD	Grade	%	4TH	Grade	%
	Yes		MA40152 - ALGEBRA II	A	89.76	BV20252 - INTRO TO ACCOUNTING	A	92.1	S830452 - BIOLOGICAL SYSTEMS 52	B	88.9	UB20652 - BAND 10	A	99.6
	No		UV3065K - CREAT WR I	F	5.7	DH30152 - 20TH US HIS II	F	16.9				LL30152 - ENG 10 LIT	F	0
	Yes		DH50652 - AP WLD HIST	F	29.8	NP30952 - YEARBK PROD	A	100	LL30152 - ENG 10 LIT	F	13	EF2015K - FOOD ESST	B	82.5
	No		MG30152 - GEOMETRY	F	37.5	S830452 - BIOLOGICAL SYSTEMS 52	B	80.1	XD3045K - PSY I	B	80.5	SO3015K - MAR SCIENCE	C	74.6
	Yes		LL30152 - ENG 10 LIT	B	86	DC50152 - AP US GOV/POL	A	100.23	XD3045K - PSY I	A	99	UB20652 - BAND 10	A	98.3
	Yes		S830452 - BIOLOGICAL SYSTEMS 52	B	83.4	FG30152 - GERMAN II	A	99.7	MG30152 - GEOMETRY	B	2.9	AZ2105K - DIG PHOTO I	A	100
	Yes		AZ2105K - DIG PHOTO I	F	14.4	MG30152 - GEOMETRY	F	25.83	XJ30252 - AFJROTC II-52	A	100	S830452 - BIOLOGICAL SYSTEMS 52	D	65.2
	Yes		AZ2105K - DIG PHOTO I	B	89.7	LL30152 - ENG 10 LIT	A	97	US30352 - ORCHESTRA 10	A	92	DH50652 - AP WLD HIST	A	96.1
	Yes		AZ2105K - DIG PHOTO I	D	66.2	DH30152 - 20TH US HIS II	A	95.2	AV2015K - GRAPHIC DESIGN I	C	73.4	LL30152 - ENG 10 LIT	A	98.7
	Yes		MG30152 - GEOMETRY	B	73.9	S830452 - BIOLOGICAL SYSTEMS 52	C	77.5	EF2015K - FOOD ESST	A	100	XD50152 - AP PSYCH	C	76
	Yes		UB2055K - GUITAR	F	22	S830452 - BIOLOGICAL SYSTEMS 52	F	29.9				MA20152 - ALGEBRA I	C	62.5
	Yes		ND3015K - THEATER ARTS I	A	91.2	S830452 - BIOLOGICAL SYSTEMS 52	D	66.9	EF2015K - FOOD ESST	A	97.2	MG30152 - GEOMETRY	D	40.6
	Yes		EF2015K - FOOD ESST	F	32	FZ2095K - PE 10	A	92.6	MG30152 - GEOMETRY	C	2.3	S830452 - BIOLOGICAL SYSTEMS 52	C	73.8
	Yes		DH30152 - 20TH US HIS II	C	55.3	XD3045K - PSY I	F	44.8	LL30152 - ENG 10 LIT	D	67.3	AZ2105K - DIG PHOTO I	F	37.3
	Yes		S830452 - BIOLOGICAL SYSTEMS 52	A	90.5	FG30152 - GERMAN II	A	97.3	AZ2175K - ART 10	A	101.43	MG30152 - GEOMETRY	A	89.9
	Yes		MG30152 - GEOMETRY	D	62.05	S83015K - PALEON & PREHIS LIFE STUDIES	F	34.7	S830452 - BIOLOGICAL SYSTEMS 52	F	38.7	SO3015K - MAR SCIENCE	F	48.1
	Yes		DC3015K - YOUTH & LAW	C	61.7	DH30152 - 20TH US HIS II	D	64.4	LL30152 - ENG 10 LIT	C	75	DS3025K - HIST SPORT AM	F	59.3
	No		S830452 - BIOLOGICAL SYSTEMS 52	F	0	MG30152 - GEOMETRY	F	0	BV2015K - INTRO BUS	F	43.6	XD3045K - PSY I	F	21.8
	Yes		FS30152 - SPANISH II	F	11.3	S830452 - BIOLOGICAL SYSTEMS 52	F	32.1	AZ2175K - ART 10	F	54.62	MG30152 - GEOMETRY	F	6.2
	Yes		MA40152 - ALGEBRA II	C	52.39	S830452 - BIOLOGICAL SYSTEMS 52	B	80.2	UC20752 - CHOIR 10	A	100	XJ30252 - AFJROTC II-52	A	100
	Yes		DH30152 - 20TH US HIS II	F	3.7	XD3045K - PSY I	F	36.8	LL30152 - ENG 10 LIT	F	49.3	DS3025K - HIST SPORT AM	F	6.2
	Yes		LL30152 - ENG 10 LIT	B	86	DC50152 - AP US GOV/POL	A	99.77	IA2015K - KNOW YOUR CAR	A	96.4	UB20652 - BAND 10	A	97
	Yes		DH50652 - AP WLD HIST	A	97.8	FZ2095K - PE 10	A	100	FS40152 - SPANISH III	A	98.8	LL30152 - ENG 10 LIT	A	100
	Yes		S830452 - BIOLOGICAL SYSTEMS 52	A	95	XD3045K - PSY I	A	100	UC20752 - CHOIR 10	A	100	MA40152 - ALGEBRA II	A	98.6

Figure 2-3:*Request for Assistance Google Form*

<h2 style="text-align: center;">Request for Assistance</h2> <p>Your email address will be recorded when you submit this form.</p> <p>Not [REDACTED]</p> <p>* Required</p>	<h3 style="background-color: #004a87; color: white; padding: 2px;">Observable Behavior</h3>
<p>Student Name *</p> <input style="width: 100%;" type="text"/>	<p>Please include the behaviors you have observed in your classroom. E.g. Student rarely attends Mondays, the student continues to make inappropriate comments, the student appears depressed, the student is reading well below grade level. Please avoid subjective comments.</p>
<p>ID Number of Student</p> <p>Your answer <input style="width: 90%;" type="text"/></p>	<p>Please describe the specific and descriptive observed behavior/s below. *</p> <p>Your answer <input style="width: 90%;" type="text"/></p>
<p>Grade</p> <p><input type="radio"/> Grade 9</p> <p><input type="radio"/> Grade 10</p> <p><input type="radio"/> Grade 11</p> <p><input type="radio"/> Grade 12</p>	<p>Provide any strengths the student possesses.</p> <p>Your answer <input style="width: 90%;" type="text"/></p>
<h3 style="background-color: #004a87; color: white; padding: 2px;">Area/s in need of assistance</h3> <p>The area/s in need of assistance *</p> <p><input type="checkbox"/> Academic</p> <p><input type="checkbox"/> Behavior</p> <p><input type="checkbox"/> Attendance</p> <p><input type="checkbox"/> Technology</p> <p><input type="checkbox"/> Social-Emotional Health</p> <p><input type="checkbox"/> Physical Health</p> <p><input type="checkbox"/> Student Safety</p> <p><input type="checkbox"/> Other: <input style="width: 100%;" type="text"/></p>	<h3 style="background-color: #004a87; color: white; padding: 2px;">Initial Interventions</h3>
	<p>Please check any initial interventions tried, or list others attempted.</p>
	<p>Please check initial interventions completed</p> <p><input type="checkbox"/> Checked in with student and discussed concern</p> <p><input type="checkbox"/> Checked in with student's guardian/s and discussed concern</p> <p><input type="checkbox"/> Checked in with student's case manager and discussed concern</p> <p><input type="checkbox"/> Other: <input style="width: 100%;" type="text"/></p>
	<p>Result of initial intervention/s</p> <p>Your answer <input style="width: 90%;" type="text"/></p>

Advisory Instruction

The NIC identified five components connected to *Advisory* instruction at Riverside. These elements include embedded AVID instructional strategies, college and career going curriculum, clearinghouse of administrative school-related functions, study skills, and academic support. In 2018, Riverside was recognized as an AVID (Advancement Via Individual Determination) Schoolwide Site of Distinction. This designation acknowledges Riverside's intentional implementation of AVID instructional strategies in every class. AVID uses the acronym WICOR to categorize effective instructional strategies towards which they support and provide professional development. WICOR stands for Writing to Learn, Inquiry, Collaboration, Organization, and Reading to Learn. Most *Advisory* lessons include multiple WICOR instructional strategies.

Advisory lessons incrementally point towards life after graduation. Early lessons for underclassmen include resume building and aptitude surveys. As seniors prepare for graduation, lessons focus on applications for colleges, scholarships, and employment. Throughout a schoolyear, students are expected to participate in several activities that are not directly related to their daily courses. These activities include surveys, course requests, testing, announcements, elections, and assemblies. A regular *Advisory* schedule provides an efficient space to be a clearinghouse for these activities to take place without compromising non-*Advisory* instructional time. *Advisory* instruction also includes study skills development and academic support. Time in *Advisory* is often dedicated to reviewing current grades and discussing strategies to improve or sustain academic success.

Advisory Leadership

The NIC noticed that leadership components within *Advisory* center around teacher direction rather than administrative control. As previously mentioned, the *Advisory* planning committee is made up of six licensed educators and one administrator. The administrator's main function is to serve as a facilitator as the committee designs curriculum, conducts *Advisory* PLC meetings, and builds capacity for teachers. In addition to teacher leadership, The NIC also recognized the role of student leadership development as Peer Navigators for freshmen *Advisory* classes. Each year the *Advisory* committee identifies sixteen upperclassmen to serve as Peer Navigators. Peer Navigators serve freshmen *Advisory* classes as mentors to their incoming classmates. Many Peer Navigators play a role in delivering *Advisory* curriculum and supporting a smooth transition from middle school to high school.

Advisory Culture

The NIC recognized culture as the strongest function for *Advisory* at Riverside. Subsets of *Advisory* culture included social and emotional learning (SEL), adult care and connection, sense of family, team building, equity, and school identity. While each *Advisory* class follows a common curriculum, every class is unique to its teacher and cohorted students. In general students remain in their *Advisory* cohort throughout high school. Lessons frequently include teambuilding activities and opportunities to connect with each other outside of their traditional classes. *Advisory* teachers become familiar with the best way to communicate, connect, encourage, and support their 23-26 *Advisory* students. They also serve as the initial safety net for struggling students. This structure helps promote equitable practices by ensuring that access and supports meet the unique needs of each student.

At the conclusion of the systems mapping activity, the NIC was asked to identify principal leadership factors operationalized in the subsets. While many in the NIC are recognized leaders, most are unfamiliar with specific leadership factors to connect to subsets. The District Principal Leadership Coach, Rachelle, mentioned, “There is a shared leadership model and there is an empowerment of all staff to participate in helping lead the work. That is very, very powerful. That is where you get to commitment over compliance.” Cathy, remarked, “One thing I have noticed that has gotten better from my lens as a counselor is that I have seen some *Advisory* teachers step up to the plate and really own their class in ways that we didn’t have last year.” Later she added, “I’m watching *Advisory* become a very key hub in many different systems that are working in the building.”

Student Engagement Root Cause Analysis

After the NIC discussed principal leadership factors related to *Advisory* as a system, the group was given a number of problems of practice to consider improving. Problems of practice the NIC considered improving included student engagement, teacher satisfaction with principal support, English learners’ graduation rate, and freshmen on-track to graduate. Suggested outcomes were proposed due to the leading nature of the indicators as discussed in Chapter 1. While each of these leading outcome indicators are connected to *Advisory* and leadership, the focus of our systems mapping exercise, they also are present in other areas of Riverside systems. This interrelatedness allows for leverage in strategizing and implementing strategies in the SIAR cycle. NIC members were invited to add additional problems of practice for consideration but elected to focus on student engagement. Targeting student engagement meets the actionable problem of practice conditions of urgency, actionable, feasible, strategic, connected to specific practices, and forward-looking as suggested by a ISDiP framework (Crow et al., 2019).

According to the Spring 2020 *Panorama* Survey, 1,069 high school students responded with forty-one percent (41%) favorability in survey questions related to student engagement. In the same survey, 209 high school teachers responded with twenty-four percent (24%) percent favorably regarding student engagement. Once the NIC chose student engagement as a problem of practice, the group conducted a root cause analysis.

The root cause analysis was framed with the same primary functions of systems, instruction, leadership, and culture as it relates to *Advisory*. While *Advisory* was the focus of the systems mapping and root cause analysis, other systems could have been analyzed to determine an aim for the NIC. Narrowing our focus to one component of the overall system of Riverside allowed for the team to better clarify primary and secondary conditions to act on. Again, the NIC used *Padlet* to organize their thoughts (see Figure 2-4). Within *Advisory* systems, the NIC identified means for tracking student progress, inequitable internet connectivity, and challenging learning environments as systemic causes for poor student engagement. Unengaging instructional strategies, novice expertise with LMS *Canvas*, and limited access to students were recognized as instruction-related reasons for low student engagement during CDL. The NIC acknowledged that staff access to timely student data, insufficient technical support, and curriculum restraints were leadership-connected causes for poor student engagement. Finally, within *Advisory* culture, the NIC listed the precedent set (of low expectations) in Spring 2020, freshmen new to *Advisory*, limitations for personal connections in CDL, and barriers with English learners and their families as explanations for less-than ideal student engagement.

Figure 2-4

Padlet Root Cause Analysis

The image shows a Padlet board titled "Riverside Root Cause Analysis" by Scott Gragg. The board is organized into five columns: Problem, Systems, Instruction, Leadership, and Culture. Each column contains several cards with text, ratings, and comments.

Problem	Systems	Instruction	Leadership	Culture
<p>13% Student Engagement in CDL</p> <p>★★★★★ (8)</p> <p>3 comments</p> <p>Anonymous 5mo I think if this is addressed, it will impact ELD Grad rate AND Freshman on track</p> <p>Anonymous 5mo From a leadership standpoint, students may not recognize why advisory is important to them because they have not been given input to the curriculum.</p> <p>Anonymous 5mo I wonder, too what this data would like right NOW from Mcnary, staff perceptions only</p> <p>Add comment</p>	<p>Environment at home/space</p> <p>☆ RATE</p> <p>Add comment</p> <p>Still working on a good way to track student grades (our old grade/attendance spreadsheet needs to be looked at under new models of grading in Canvas and new ways of tracking attendance)</p> <p>☆ RATE</p> <p>Add comment</p> <p>Equity & socio-economic differences</p> <p>☆ RATE</p> <p>Add comment</p> <p>Lack of support by some parents in Spanish</p> <p>☆ RATE</p> <p>1 comment</p> <p>Anonymous 5mo And other languages - Marshallese and Swahili come to mind immediately</p> <p>Add comment</p> <p>Lack of Positive Behavior Supports/ reinforcement</p> <p>☆ RATE</p> <p>Add comment</p> <p>Connectivity</p> <p>☆ RATE</p> <p>Add comment</p>	<p>Good teachers are having to reinvent their schtick and approach while struggling to maximize the use of the available technology. The time crunch and effort it is taking some creates challenges we are still working to overcome.</p> <p>☆ RATE</p> <p>Add comment</p> <p>Student Confusion</p> <p>not understanding what is required, how to use the tools/tech, access</p> <p>☆ RATE</p> <p>Add comment</p> <p>Relative to CDL Environment</p> <p>☆ RATE</p> <p>Add comment</p> <p>Unengaging activities</p> <p>☆ RATE</p> <p>Add comment</p> <p>Technology barriers</p> <p>☆ RATE</p> <p>Add comment</p>	<p>Some staff did not have access to the technology needed to connect with students (ie classified staff w/o Teams phone numbers)</p> <p>☆ RATE</p> <p>1 comment</p> <p>Anonymous 5mo (Thus couldn't assist with "care and connect")</p> <p>Add comment</p> <p>Many student leadership activities have been reduced or cut or postponed. Peer Nav, sports, audition ensembles</p> <p>☆ RATE</p> <p>Add comment</p> <p>Is engagement tracking data shared with staff, and updated regularly? Do teachers know their own data or was this based on their general impression?</p> <p>☆ RATE</p> <p>Add comment</p>	<p>Unimportant view from students in spring</p> <p>☆ RATE</p> <p>Add comment</p> <p>Freshman limited to MS experiences. No connection to HS.</p> <p>☆ RATE</p> <p>Add comment</p> <p>Kids - and staff - feel awkward doing things over a camera. Hence the 'class is quieter than it's ever been' thing that is happening</p> <p>☆ RATE</p> <p>Add comment</p> <p>It's hard to talk about hard things - like healing from ambiguous trauma, over zoom</p> <p>☆ RATE</p> <p>Add comment</p> <p>Difficult for teachers to control the environment and therefore the culture of their class. Instruction has to evolve to find ways to create culture virtually.</p> <p>☆ RATE</p> <p>Add comment</p> <p>Our sense of community is challenged by meeting virtually as opposed to in person</p> <p>★★★★★ (1) RATE</p> <p>Add comment</p>

After completing systems mapping for *Advisory* and root cause analysis for low student engagement, the NIC constructed an aim for the SIAR cycle. By January 7th, Riverside's leadership team, a networked improvement community (NIC), aims to improve student engagement using instruments and data connected to implemented systems, instruction, culture, and leadership strategies to measure and analyze improvement.

Student Engagement Drivers

With an aim constructed the NIC was able to determine leverageable change ideas or strategies by conducting a driver diagram as suggested by improvement science methods (Crow et al., 2019). The NIC used primary structures of systems, instruction, leadership, and culture as drivers for student engagement. Within each structure, the NIC identified specific, improvable primary drivers associated with the root causes the group had the ability to change. Progress monitoring, instructional strategies, access to student data, English learner connections were the primary drivers the NIC elected to expand to secondary drivers.

Secondary drivers to the progress monitoring included submissions of a request for assistance (RFA) and targeted limited in person instruction (LIPI). Weekly staff meetings and regular professional development opportunities were suggested as secondary drivers to instructional strategies. Weekly grade reports of students by their *Advisory* teacher were suggested to be a key secondary driver to access to student data. Regarding the primary driver of connecting with English learners, the NIC listed scheduled family conferences, phone calls, and home visits as secondary drivers.

The final step in constructing driver diagrams is to propose change ideas or strategies to meet the aim of improving student engagement. Change ideas are then implemented during the SIAR cycle. The NIC proposed four structure-connected change ideas listed as strategies.

Strategy #1 (Systems): Teachers will monitor their *Advisory* students' academic progress and submit RFAs and/or schedule targeted LIPI for struggling students.

Strategy #2 (Instruction): Instructional Mentor will share successful student engagement tips during weekly staff meetings. In addition, the Instructional Mentor will provide resources for independent and group professional development related to CDL.

Strategy #3 (Leadership): The leadership team will provide timely building-wide data related to CDL and weekly grade reports of students by their *Advisory* teacher.

Strategy #4 (Culture): An English language development (ELD) Taskforce will connect with Latino students and their families using in-person conferences, phone calls, home visits, and targeted LIPI.

Implementation Reporting

Proposed strategies were implemented prior to the NIC's third meeting on October 29th, 2020. At this meeting NIC members gave implementation reports for each strategy. In the report they addressed four questions. (1) Why was this strategy implemented to improve student engagement? (2) How has this strategy evolved and how do you see it expanding? (3) What data (or instruments) should we mine to measure improvement? and (4) What role did principal leadership play in the adoption of this strategy?

Neil West, an Assistant Principal, provided the implementation report for the systems strategy of teacher progress monitoring of their *Advisory* students. Neil reported the rationale for this strategy was to use the existing system of *Advisory* to create more eyes on students and not rely solely on the counseling staff and administrators to identify unengaged students. *Advisory* provides a system where *Advisory* teachers are tracking a relatively small group of students and identifying those that are struggling academically. *Advisory* teachers can get additional

information by connecting with the student's teachers. Similarly, classroom teachers are encouraged to communicate with a student's *Advisory* teacher so that information can be gained to support struggling students. As an *Advisory* teacher gathers progress information on a struggling student, they begin by trying to help and connect with the student, parents, and, if applicable, case managers. If initial attempts to help or connect fail, the *Advisory* teacher is then encouraged to submit an RFA. This approach allows teachers to utilize relationships already in place in *Advisory* to monitor students more closely and identify those struggling earlier.

Neil stated that the strategy "has evolved a ton." Initially, progress monitoring in *Advisory* was going to be a component to an overall Multi-Tiered Systems of Support (MTSS). The MTSS structure required committees to review RFA's prior to assigning resources to support struggling students. This MTSS structure limited dynamic and timely interventions. In order to address this limitation, the strategy evolved having each RFA submission reviewed by Riverside's behavior administrative assistant, Marie. In the review she determined and assigned the group or person responsible for supporting the student. This approach eliminated the need for committees to determine similar supports and allowed supports to focus on the needs assigned.

Neil pointed to the weekly grade reports as the key instrument to collect data. He suggested analyzing weekly grade report data in two ways. Both approaches looked at F data in individual *Advisory* classes. The first way looked at F data of the whole class by tallying the overall number of failing grades in an *Advisory* class. The second method looked at individual students in the *Advisory* class. Each student would have zero, one, two, three, or four failing grades of their four (first quarter) classes. If either of both tallies reduced (overall number of class F's or individual number of failing classes), it may be an indication of improved student engagement.

Mr. West credited Principal Rich Allen's visionary leadership that provides conceptual ideas for the leadership team to operationalize and implement. Throughout the process Rich has provided feedback to the team and recommended adaptations to the system. He also stated that the Principal contributes to the leadership team's ongoing discussion to mold the system to meet the desired outcomes.

Dianne Reeves, Riverside's Instructional Mentor, reported on the implementation of the strategy addressing instruction. Dianne referred to a particular instructional strategy that were shared in a weekly staff meeting – individual breakout rooms in *Zoom*. She shared that a teacher's ability to speak one-on-one with students, reduced anxiety of student interactions, and the similarity of independent student work time setting found in a traditional classroom as reasons for implementing this strategy. As a result, student engagement should improve "because there is going to be a relationship there now and the teacher can go in and check on them." Dianne suggested reviewing participation in *Canvas* courses and *Zoom* meeting attendance to measure student engagement. She also recommended looking at weekly progress grades, as suggested from Mr. West, as means for measuring improvement.

Mrs. Reeves credited a Social Studies teacher with attempting the instructional strategy and sharing the experience with Principal Allen. Rich then invited the teacher to share the strategy with the staff during the weekly *Teams* meeting. Dianne remarked that the value of a teacher sharing their experiences is greater than her role as an Instructional Mentor providing instructional strategy ideas or resources. She observed how this approach has spread throughout educators. Dianne also attributed Rich's approach of promoting and celebrating teacher experiences as a principal leadership practice that played a role in the adoption this strategy.

The implementation of the leadership strategy of providing timely data to teachers, including weekly grade reports of their *Advisory* students was reported by Cathy Stuart, a counselor at Riverside. Mrs. Stuart suggested two ways implementing this strategy might improve student engagement. First, arming teachers with grade data for their *Advisory* students assists them in providing specific support for specific students. Second, weekly grade reports provide “teachers a snapshot of what’s going on building-wide – which is really important.” Cathy credited Assistant Principal, Eli Lyman, with providing teachers with data that is “easy to consume” and “easy to navigate.”

Cathy acknowledged the weekly grade reports proved “good data on F’s” but suggested disaggregating the data beyond *Advisory* may be an appropriate evolution to the strategy. This evolution might include investigating weekly grade reports of grade levels, content areas, English learners, or those receiving special education services to identify trends and/or better target improvement strategies. She proposed a possible example of the science department reviewing physical science or biology grades to address antecedents of struggling science students. Data could also be analyzed by looking at grade level trends. In addition to disaggregating quantitative grade data, Mrs. Stuart suggested collecting qualitative student data that might help in “gathering stories about what it is like for kids and families to be navigating comprehensive distance learning.” She wondered “how those stories, in conjunction with F data impact how much how we do things (at the school level and with specific groups).”

Cathy pointed to pragmatism and vision as two important principal practices related to the implementing of this leadership strategy. She remarked that Rich’s pragmatic leadership creates consistent time, space, and resources that equip and empower teachers to develop and introduce effective strategies. For example, for seven years Rich has reserved teacher dedicated

time to meet in content PLCs to backward plan curriculum, design common formative assessments, analyze assessment data, and implement strategies to improve student achievement. PLCs meet every Monday for an hour and develop unit plans, assessments, interventions in a shared document that can be revisited routinely. Mr. Allen assigns himself and other instructional leaders to attend these meetings to indicate the importance of PLCs and provide support. Mrs. Stuart listed Mr. Allen's regular review of Riverside's vision and values in the comprehensive school improvement plan (CSIP) and staff meetings as examples of visionary leadership. Evidence of both leadership practices have been observed in Riverside's hiring practices, principal communication, and budgetary priorities.

Community School Outreach Coordinator, Ernesto Gomez, provided a report for the culture strategy. Ernesto is new to this position after serving Riverside as a Security Specialist last school year. Ernesto believes that the ELD Taskforce making connections with students and their families through conferences, phone calls, home visits, and LIPI invitations will improve student engagement and is the reason for implementation. Last spring and this fall, Mr. Gomez has observed the value of making connection with the students and the importance of face-to-face interactions. Specifically, "when kids are here in the school with us, there are multiple adults telling them every single day 'Hey, are you getting this assignment turned in? Are you showing up to this class?' and some of these kids don't have that person encouraging them." Ernesto credits these face-to-face interactions and regular communication with families as meaningful efforts to improve student engagement.

The launch and expansion of targeted LIPI is the primary area where this strategy has grown. Riverside was permitted to pilot LIPI after demonstrating the value of bringing Latino families in the building for conferences. In order to provide targeted in-person support, the ELD

Taskforce and social distancing coordinator designed a plan to meet ODE guidance on cohorting and contact tracing. As guidance evolved the group revises the plan to maximize the number of students receiving support at school.

In order to identify students, document communication, assign resources, and track improvement, the ELD Taskforce created a shared *Google* spreadsheet. Mr. Gomez suggested that this spreadsheet may be a valuable instrument to measure student engagement. A member of the Taskforce regularly updated the spreadsheet and provided reports to the administrative team and other stakeholders.

Ernesto credited Rich and Riverside administrators with the “staffing of a great team” – the ELD Taskforce. He pointed to Rich “taking an initiative to start something new” as a leadership practice that led to the adoption of ELD Taskforce strategy. Mr. Gomez appreciated the administrators’ advocacy, confidence, and empowerment of their efforts. This included the flexibility and resources to adjust and provide manpower.

Measuring Improvement in Student Engagement

During implementation reports, the NIC proposed data or instruments to measure student engagement. Proposed measurements included *Advisory* weekly grade reports, *Canvas* page views, *Zoom* meeting attendance, schoolwide grade distributions, empathy interviews, and the ELD Taskforce tracking spreadsheet. Most of the ideas proposed measured student engagement indirectly. The transitive notion that improved student achievement correlates with improved student engagement is a perception supported by research (Stockard & Lehman, 2004).

Chapter 3: Analyze

Strategies, implementations, and outcomes were investigated in the context of the ISDiP aim to improve student engagement throughout the SIAR cycle. Additionally, student achievement, teacher satisfaction and equity were also examined.

The most direct method of measuring student engagement might come from surveying students directly. In the spring of 2020, a *Panorama* survey posed three questions to Charles Douglas students that they categorized as a representation of (self-perceived) student engagement. (1) “In the past few days, how much effort have you put into your classes?” (2) “In the past few days, how challenging has your schoolwork been? (3) “In the past few days, how often have you stayed focused when doing schoolwork at home?” Using a five-point Likert scale, responses scoring four or five were considered favorable related to student engagement.

In the spring of 2020, 449 (42%) of 1,069 Charles Douglas high school students responded favorably to their student engagement. Unfortunately, Riverside students did not participate in the spring survey. However, 925 Riverside students participated in the 2020 fall survey that queried three analogous student engagement questions with 426 (46%) of the students responding favorably to the prompts. District wide 2,248 of 5,353 (42%) high school students had a favorable response. – the same percentage as last spring. Riverside was provided an opportunity to conduct a follow-up student survey in December. In the follow-up survey, 335 of 859 (39%) Riverside students’ responses were favorable related to student engagement.

Student Engagement

Results from the Fall 2020 *Panorama* survey and the December follow-up survey indicated that student engagement did not improve with the implementation of the four NIC strategies. According to Riverside students, student-engagement favorability decreased seven

percent (7%) from forty-six percent (46%) in October to thirty-nine percent (39%) in December. The follow-up survey was only available to Riverside student. Therefore, District-wide data was not accessible for comparison.

Other factors may have negatively influenced student engagement perceptions in the follow up survey. The primary presumption for the decline is that student responses may have reflected their diminishing attitude towards CDL rather than their reduced engagement in CDL. Student fatigue in CDL could have played a role in a lowered self-perception of student engagement. To accurately assess student attitudes and perceptions regarding student engagement, it is important that other related attitudes and perceptions remain constant in both samplings. Student feelings towards CDL and the forecast of delaying students' return to Riverside likely negatively impacted their responses to the follow-up survey prompts. Additionally, any novelty of *Zoom* meetings, *Canvas* modules, and staying at home for school probably waned by mid-December.

Access to the survey may have also played a part in responses to the follow up survey. In the Fall survey, students accessed the survey as an embedded activity in their *Advisory* course. Most Riverside students completed the survey on Monday, October 12, 2020 – five weeks into the first quarter. On December 14, the fifth week of the second quarter, many students in *Advisory* were invited to complete the survey as an exit ticket. However, the survey was not embedded in the *Advisory* lesson plan. As a result, only 461 students completed the follow-up survey on Monday. On Tuesday and Wednesday reminders were sent to *Advisory* teachers to encourage students to complete the survey during their daily fifteen-minute check-ins. Unfortunately, the window for completing the survey prematurely closed prior to Wednesday's *Advisory* check-in. The window was reopened later that day and remained open for the rest of

that week. By Friday, 859 students completed the survey after overcoming obstacles that may have negatively influenced their attitude towards student engagement.

Teachers at Riverside, however, had a more favorable perception of student engagement in the fall survey. In the fall *Panorama* 2020 survey, twenty-four of forty (60%) Riverside teachers and staff members responded favorable to student-engagement. Teacher favorability was eighteen percent (18%) higher than the average of all six comprehensive high schools (45%) and the highest favorability when compared individually. Staff and Teacher perceptions of student engagement rose notably from the spring survey results of twenty-four percent (24%). It should be noted that teachers and staff at Riverside did not participate in the spring survey. Riverside participation may have positively boosted spring results. Another interesting analysis of the fall survey indicated fifty-two teachers and staff from EDGE, Charles Douglas's newly adopted online school, had a twenty-three percent (23%) favorability towards student engagement.

District psychologist, Ezra Roth, and the NIC identified disaggregated data from the student surveys in October and December that may suggest some improvement related to student engagement. In the December, English learners responded with forty-one percent (41%) favorability regarding student engagement representing a higher rate than the overall student average. The NIC's culture strategy that implemented an ELD Task Force to target struggling English learners may have been a factor in minimizing the drop in engagement from October's survey. This was due to the ELD Taskforce's relentless approach to connect and support our Spanish-speaking students and families. This strategy included multiple phone calls, home visits, invitations for in-person instruction, and technology support. Students on individualized education plans (IEP) also minimized the decline.

An additional survey question was added to the follow-up survey to analyze the role of *Advisory* teachers in student engagement. “During Distance Learning, how helpful is your *Advisory* teacher in keeping you engaged in all of your classes?” Ezra Roth noted from this query that “most students perceive their *Advisory* teachers as being ‘Quite’ or ‘Extremely’ helpful in keeping them engaged in all their classes, especially students from minoritized or historically marginalized demographic groups (ELL, Economically Disadvantaged, Special Education, Race)” (personal communication, December 23, 2020). The overall favorability of this survey question was fifty-nine percent (59%).

Using indirect metrics proposed by the NIC to measure student engagement generally indicated improvement. On October 19th, The NIC began tracking tenth grade *Advisory* weekly grade reports to study students with multiple failing grades. The initial report showed 209 sophomores with more than one failing grade. This represented 47% of all tenth-grade students in *Advisory*. Five weeks later, after implementing the systems strategy for using *Advisory* weekly grade reports to monitor student progress, sophomore *Advisory* teachers reduced the number their students with more than one failing grade to eighty-six students or twenty percent (20%).

Analyzing *Canvas* page views provided limited insight, if any. In September, it appeared that *Canvas* page views, a metric available to administrators of the LMS, may be a good predictor of student engagement because observations showed a relationship with page views and student grade (percentage score). However, the formula for determining page views changed dramatically in the middle of November – reporting more than 450,000 weekly page views in the first quarter to less than 10,000 page views in the second quarter. Regardless of the formula, there was no week-to-week trend to measure. It was also determined that *Zoom* meeting attendance data was unavailable to collect or measure.

Schoolwide grade distributions reflected similar evidence of student engagement improvement to the *Advisory* weekly grade reports. In alignment to the leadership strategy implemented by the NIC, schoolwide grade distributions were used to provide teachers with timely building-wide data. During the October 5th staff meeting, Mr. Allen shared that 2,653 or thirty-eight percent (38%) of all grades at Riverside were F's. By the end of the first quarter the number of failing grades dropped to 1,252 or seventeen percent (17%). The same improvement was observed in the efforts of the ELD Taskforce. On October 27th, 459 of 853 English learner grades were failing; representing fifty-four percent (54%) of their grades. Four weeks later, English learner failing grades improved to 324 of 961 (34%).

Improvement science advocates suggest conducting empathy interviews to observe any improvement trends (Perry et al., 2020). However, the ninety-day SIAR cycle prevented the ability to collect and study improvement in student engagement using empathy interviews. However, the follow-up survey did provide students a free-response opportunity to give a “shout out” to Riverside teachers and staff. More than ninety-three percent of the respondents provided free response submissions. In the “shout out,” sixty-six of seventy-one *Advisory* teachers were recognized for their support.

Student Achievement

While little direct evidence suggests the NIC met its aim to improve student engagement, many of the same leading outcome indicators support an effort to increase student achievement was realized. Three previously mentioned indicators support this assessment. First, sophomores failing more than one of their four courses decreased by twenty percent (20%) in five weeks; representing more than one hundred tenth graders. Second, schoolwide failure rate dropped in the same timeframe from 2,653 F's by more than half to 1,252; representing seventeen percent

(17%) of all first quarter grades. Finally, English learners, reduced their course failures by nearly four hundred – representing another twenty percent (20%) improvement.

Teacher Satisfaction

Improvement in teacher satisfaction over the SIAR cycle is difficult to measure. A single sample from Riverside teachers and staff in October is the primary reason for this challenge. Additionally, this measurement was based on single question in the spring and fall *Panorama* teacher and staff survey. “How helpful have your school leaders been in resolving challenges?” “Quite helpful” and “extremely helpful” were tallied as favorable responses. In the spring 209, seventy-three percent (73%) Charles Douglas staff and teachers responded favorability. In October, favorability dropped to fifty-eight percent (58%) according to 334 high school teachers and staff. As mentioned before Riverside staff did not participate in the spring survey so that no improvement could be measured. Of the remaining five high schools that did participate in both surveys, all but one experienced a significant (>15%) decline in teacher satisfaction with principal support. In the fall, seventy-one percent (71%) of forty Riverside teachers and staff responded favorability. Seventy-one percent (71%) at Riverside is thirteen percent (13%) higher than the District average (58%) for high school teachers and staff. While survey results do suggest Riverside teacher-satisfaction is stronger relative to other high schools in the District, any improvement was not quantifiable. If it were discovered that teacher satisfaction did not improve during the SIAR cycle, explanations (CDL fatigue) cited for decreased student engagement would likely apply to a decline in teacher favorability.

The NIC observed that implemented strategies may have incidental impact on teacher satisfaction. With the availability of all student grades to all the teachers in a snapshot (weekly *Advisory* grade reports), social norms were established that promoted up-to-date gradebooks,

reasonable grading practices, and positive inner-collegial influence to support struggling students. In addition, staff modeled professional development provided credibility and acknowledgement of practical instructional strategies. In fact, virtual staff meetings often extend past the thirty-minute presentation where teachers posed and answer questions to their colleagues for the rest of the week via an ongoing group chat feature in *Teams*. Multiple NIC members cited these examples as evidence of improved teacher satisfaction.

Equity

The ISDiP framework advises an equity lens throughout the SIAR cycle (Perry et al., 2020). This advice is in alignment with Charles Douglas's prioritization of equity throughout the District. In the fall, Charles Douglas shared its definition equity as a beacon to move towards: "Equity is eliminating all barriers so that all students get an education free of bias, systemic and structural racism, therefore ensuring career and college readiness." On December 10, 2021, the NIC invited Diego Alvarez to facilitate an equity analysis on the four strategies implemented by the NIC. Diego is an Assistant Principal at another Charles Douglas High School. He is a member of the District's Equity Committee and regularly facilitates district equity discussions and trainings. Diego was invited to hear reports on implemented strategies, pose equity questions to the NIC, and share any feedback. While Diego was invited to help with an equity analysis at Riverside, he stressed his interest as a "curious colleague" and pursuer of the same outcomes district wide. He advised the NIC to consider the "audit" as a part of an ongoing self, organizational, structural, and community reflection.

Mary Smith, a special education teacher at Riverside, presented a report on the NIC's systems strategy related to *Advisory*. In the report, she observed that the strategy is "pushing (*Advisory*) teachers to take some ownership of caring for our shared kids and helping teachers be

creative about trying to uncover barriers we're still seeing and maybe some that we haven't figured out yet." Diego followed up with some clarifying questions regarding some of the operational components of the system strategy. Specifically, he asked about RFA submissions, Marie's role in the RFA process and the structure of *Advisory* lessons.

Riverside's Community School Outreach Coordinator, Ernesto Gomez, provided a report on the culture strategy related to the ELD Taskforce. Ernesto shared that the ELD Taskforce noticed, during in-person conferences with families, that "students were not receiving the individualized help that they did when they were (at Riverside)." He also shared that "as the word got out that we were helping students, we had other parents that were like 'Hey, my student needs a quiet place to work.' and we were able to bring them in as well." Following the report, Diego asked Ernesto, "How comfortable do you think the rest of your staff feels about the work you're doing to get kids to be successful?" Ernesto answered by expressing the unique opportunity for their team to make multiple attempts to connect with families and work with students. In general, he remarked, this time is not available to classroom teachers and many times these teachers are uncomfortable working with Spanish speaking families because of the language barrier. Ernesto attested that classroom teachers were referring students to the ELD Taskforce sooner and more frequently because of their persistent approach to connect and support students with Spanish speaking families. Neil added that the ELD Taskforce was given freedom and flexibility "to blow up the rules of school" allowing the team to engage families at times and places convenient to the students and families. He also affirmed the team's "doggedness" in making connection, staying connected, and supporting students. Diego was also interested in the format of the parent conferences the ELD Taskforce held in October. Ernesto mentioned that the first five minutes of a twenty-minute conference was spent reviewing grades,

attendance, and behavior. Then, “we spent a lot of time listening to parents vent.” By the end of the conference parents “probably forgot what their grades were because we just talked and listened.”

Cathy Stuart, a counselor at Riverside, provided a report on the NIC leadership strategy of providing timely and helpful data to teachers to inform their practice. Cathy sees several connections between the system and leadership strategies. The primary connection is the use of the *Advisory* weekly grade reports to inform teachers and support students. She believes there is a “social accountability thing happening because teachers’ grades are showing up when you’re looking at your *Advisory* kids.” This condition brings awareness to teachers in three ways. First, they become readily aware of their *Advisory* students’ academic situation. Second, teachers become aware of their grading practices as it relates their colleagues. And third, teachers become aware that their colleagues are making the same comparisons.

Cathy did identify a “good problem” that has resulted from the implemented leadership and system strategies. On occasion, student supports have overlapped because “the right hand doesn’t know what the left hand is doing.” Cathy mentioned that a group of counselors and case managers were working on a system (spreadsheet) to consolidate and track support efforts so that the overlap was minimized and ensure that some students were not being overlooked. Following the report, Cathy shared an *Advisory* weekly grade report with Diego that is available and utilized by *Advisory* teachers. She pointed to the red and yellow cells that easily identify students with an F or a D. The report also displays percentages for each class that can help teachers make some early interpretations of a student’s academic status. Diego noticed that several classes were identified as ‘N/A’, and made the correct observation, “If it says ‘N/A’ does that mean that a

teacher has not turned in their grades?” This observation helped illustrate the social accountability Cathy was describing.

Finally, Dianne Reeves, offered a report on the instruction strategy of providing teachers with professional development around comprehensive distance teaching and learning. Dianne shared that teacher support had shifted from the early days of survival mode to developing consistencies in *Canvas* courses throughout the teaching staff, troubleshooting syncing issues between LMS *Canvas* and SIS *Synergy*, and creating an online archive of all the resources related to CDL. After enduring the first quarter and observing some areas where students struggled with navigating *Canvas*, Dianne along with the administration team identified “three things in modules that everybody could do to help students.” In the second quarter, all teachers were expected to organize their *Canvas* courses by labeling each module with a date, identify synchronous and asynchronous activities using common language, and giving explicit instructions for submitting assignments. Teachers were provided examples of Riverside courses with each of the three elements present. Inconsistency in the “crosslisting” between LMS format and the SIS gradebook were also identified as barriers to student success and support. It was determined that the best resolution for this syncing problem was to have one person crosslist all the *Canvas* courses for the remainder of the year. This decision improved two aspects of CDL. First, one person crosslisting provided a welcomed service to teachers that could focus on instruction rather than technical formatting. Second, any subsequent issues with LMS and SIS integration would be easier to identify and solve. The final shift in professional development was to construct a living opensource archive (See Figure 3-1) of CDL topics related to instructional strategies, virtual meetings in *Zoom*, *Canvas* course formatting checklists, FAQ’s, and recorded

staff meetings. The housing and ongoing expansion of resources related to CDL forced the construction of the resource.

Figure 3-1:

Riverside Staff CDL FAQ's

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Presentation Tools		Videoconferencing Platforms			Other Online Learning Tools											
2						Learning Management Systems	Free Engagement Tools	Paid Engagement Tools *some free components too	Document Cameras	Digital Whiteboards & Annotation Tools *some components paid	Accessibility & Tools						
3	Create a PowerPoint Presentation	Design a Google Slide Presentation	Introduction to Zoom	Introduction to Google Meets	Introduction to Teams	Canvas Tutorials Playlist	Seesaw Tutorial	Room Cards- Digital Task Cards	Document Cameras in Zoom	JamBoard*	Immersive Reader						
4	Saving a Template	Saving Google Slide Presentation	How To Use Zoom for Remote Learning	Set Up a Meeting	How to Schedule a Meeting	Google Classroom Tutorials Playlist	Flipgrid	Padlet	Document Cameras in Google Meet	Web Whiteboard	Live Caption and Translations in PowerPoint						
5	Copy and Paste within Slides	Adding Slides	Remote Control	Remote Control	Remote Control	Clever Tutorials Playlist	Flipgrid- Turn GoogleSheet into Flashcards	BrainPop*	Document Cameras in Teams	ScreenBrush for Macs	Google Read&Write						
6	Toolbar Overview	Closed Captions	Using Whiteboard	Whiteboard Tools for Google Meet	Using Whiteboard		Kahoot	Brainpop Jr.*	Turning Phone/Tablet into a Document Camera	Epic Pen for PCs	Custom Cursor						
7	Duplicate a Slide	Create Drag & Drop Activities	Breakout Rooms	Creating Break-Out Rooms	How to Set up Teams and Channels		Name Wheel	Nearpod*	CD Hack for a Document Camera	Whiteboard.fi	Desmos						
8	Flip or Rotate an Object	Embed Links and Videos into Presentation	Record Zoom Meetings	Record a Google Meet	Record a Teams Meeting		Digital Dice	Pear Deck*	ScreenCast-o-Matic	Explain Everything*	Vocaroo						
9	Layering Objects	Insert Image	Screen Sharing	Screen Sharing	Screen Sharing		Name Picker Tools	Menimeter*			Online Voice Recorder						
10	How to Arrange Slides	Linking a Slide	Disable Chat	Disable Chat	Hide Chat		ClassroomScreen	ThingLink									
11	Add and Edit Images	Add a Timer	Muting and Unmuting	Muting and Removing	Muting and Removing		Kami										
12	Add and Edit Shapes	Animate an Object	Using Zoom on an iPad or iPhone	Google Meet on a Tablet	Microsoft Teams on Tablet		Quizlet										
13	Live Captions and Translation	Add Google Slide to Doc	Screen Sharing & Annotating with Chromebook	Screen Sharing on Chromebook	Microsoft Teams on Chromebook		Google Drive- Sharing Files										
14	How to Make Jeopardy Game		Closed Captioning	Layouts and Live Captions	Live Captioning		Google Slides Grid View for Small Group Instruction										
15	Convert PP to Google Slides		Document Cameras in Zoom	Document Cameras in Google Meet	Document Cameras in Teams												
16	Animating Text and Objects		Document Cameras in Zoom	Google Chrome Extension for Teachers	How to Create a Poll												

At the conclusion of the reports, Diego offered some observations related to equity. He commended the NIC for “all of the different things (the NIC) is doing in a coordinated and systematic way to make sure kids are successful.” He stated this approach is where to begin “in terms of equity.” He also affirmed the NIC’s pursuit to “reduce or eliminate barriers” as foundational to equity work. Diego noticed “a lot of creativity, and on many levels” referring to innovation that is fostered at Riverside. He did acknowledge that most of the reporting discussed logistics and was also supported by data.

Diego suggested the NIC investigate the staff’s comfort in discussing differences with their diverse students. He shared *Panorama* data from his own school that showed teacher

satisfaction high but willingness to discuss racial differences with students as low. He suggested this might be an area where equity work could be connected to the innovative logistics being implemented. He further challenged the NIC to consider equipping teachers with the confidence to connect with diverse families rather than assigning this undertaking to the ELD Taskforce as an initial strategy.

Future Opportunities

During the closing minutes of the equity analysis, Diego's feedback to develop confidence in the teachers with their diverse students seemed to strike a nerve with the Principal. While Rich did not dismiss the need to improve in the area of teacher confidence, he did point to key components embedded in *Advisory* that help students be successful. Rich's rationale may have been received as dismissive of the feedback provided by Diego. It may also indicate some blind spots present in the NIC due to pride and a vested interest in positive outcomes. Moving forward, Riverside leadership should strive to receive feedback as a means of improving awareness in areas that cannot be observed internally.

Chapter 4: Reflect

In the final two meetings, the NIC was provided a number of reflection prompts to guide their discussion on the implemented strategies and subsequent analysis. In the initial “Reflect” meeting, NIC members responded to eclectic or paradoxical prompts that helped draw attention to things that might be going on below the surface level. In this meeting the group took a deeper look at data trustworthiness, preoccupation of student failures, and technology as both an art form (theatre) and a space (theater). In the final meeting, the NIC reviewed the follow-up *Panorama* data and compared results to the fall survey. The team also considered the future of the NIC and strategies that were implemented. Finally, the group shared observations of the leadership characteristics present in the improvement efforts at Riverside.

Dependable Data

Reflection prompt: “Can we trust the sources of data that we’re collecting? If not, why not? What can we do about it? How are we dealing with politicization?” Most NIC members agree that the available data is multidimensional and trustworthy. The NIC and Riverside stakeholders have access to data that tracks student grades, contacts, interventions, invitations, limited in-person instruction participation, and attendance. Ernesto and the ELD Taskforce have noticed a positive relationship between student connections and student academic success. He stated that, “We’ve got a wide range of information, and based on what we’ve seen from it, there is a correlation between the kids who come into Riverside for in-person instruction and kids that have increased their grades from F’s to passing grades.”

A key component that challenges the reliability of the data is the ongoing issues with the source of the data connected to student grades. Throughout the fall, *Synergy* and *Canvas* inaccurately synced and inaccurately represented students’ actual course grades. Discrepancies

ranged from a few percentage points to two or three letter grades. Unfortunately, the reasons for the discrepancies were as varied as the discrepancies themselves. This made troubleshooting the problem difficult. Eli reflected that, “There’s just so many levels of complexity that it gets kind of challenging and frustrating because by the time we get it ironed out, it changes again.” It appears, however, that inaccurate grade data is not negatively impacting support efforts and is not being politicized for ancillary reasons or self-interest. In fact, Ernesto has experienced greater collaboration with other efforts. Specifically, he has observed greater cooperation with special education case managers. The only politicization that the NIC has encountered has come from outside entities or constructs that limit human resources for academic support and governmental restrictions to in-person instruction.

The goal for the leadership strategy was to provide teachers easy, timely, and accessible data to assist and inform their strategies, instruction, and support. The consequence to this strategy is the limitations for disaggregating information for deeper analysis by the NIC or other stakeholders. As discussed earlier, snapshots provided easily consumable and actionable data along with driving social norms for timely grade entries. Future efforts by the NIC could embed more demographic information and tracking elements for more nuanced analysis.

Failure Focus

Reflection prompt: “Are we sufficiently preoccupied with failure? Are we reluctant to simplify? Are we sensitive to operations? Are we committed to resilience? Do we defer to expertise? Are we mismanaging the unexpected? Are we sustaining successful performance?” When the NIC considered whether the team was “sufficiently preoccupied with failure,” they initially interpreted the prompt literally rather than a critical eye on the success or failure implemented strategies. Cathy, acknowledging the deviation from the intended question mused,

“sometimes I wonder if we’re just too focused on failure.” She continued, “I feel like I look at F data all the time.” This response speaks to the disposition of the NIC and other systems of support at Riverside.

In a digital environment, F data is one of the few ways to identify, target, and support students. *Advisory* teachers are limited by interpreting letter grades and percentages to measure engagement, proficiency, connectivity, learning environment, and cognitive ability. Rachelle mentioned that educators, with limited understanding “go straight to interventions and we haven’t even figured out if the interventions work in this (CDL) world. She challenged the group to “take the time, frequently, to really talk about the different barriers the F represents.”

The increase oversight by *Advisory* teachers and the work of support groups such as the ELD Taskforce has provide a clearer picture of the different barriers that students face in CDL. However, the urgency of improving student engagement and academic success has prevented the NIC from simplifying strategies. This in not out of reluctance to simplify but as a necessity to understand and improve systems. Cathy did acknowledge that “we’re asking questions that challenge our system.” In addition to focusing on student data, the NIC also acknowledged the extreme intrinsic resilience of teachers in an unfamiliar and capricious CDL environment as a disposition represented in most of the staff.

Technology Theatre

Reflection prompt: “What's the story that's unfolding during this project? That is, who are the main characters/players? Where are these players usually having their 'stage' moment? What conflicts have arisen on-stage and off-stage? What resolutions have damned or solved those conflicts? Which conflicts remain unresolved?” Technology was a central theme to the December 17th meeting. There is high reliance on technology by all the characters in the CDL

story. And, unfortunately, teachers, students, parents, and administrators are noticing a troubling theme unfolding. Technology is critical and unreliable. Since September, students experienced *Chromebooks* without updates, random drops from *Zoom* sessions, and unstable connectivity. Teachers have struggled with crosslisting *Canvas* and *Synergy*, connecting *Google Assignments* with *Canvas* assignment and inconsistent direction from District and platform technology support.

These experiences really test the resilience of all those in the cast. For example, struggling students find little motivation when connectivity limits their ability to stay engaged. For the hard-working students, issues with assignment submissions and varied *Canvas* formats diminishes their grit. Teachers experience the roller coaster of constructing courses, to connecting students to *Zoom* meetings, to “crunch time” of improving grades before the end of the quarter. “And now” Dianne attests, teachers “are having to go through the same process four times a year.”

Measuring Student Engagement

January 7th was the first time the NIC had an opportunity to review the follow-up *Panorama* survey and compare it to the student engagement surveyed in October. While the results did not show an improvement in student engagement, NIC members pointed to other anecdotal evidence that supported their belief that improvement was realized. The leading reason for their belief was the success and continued expansion of limited in-person instruction (LIPI). Cathy stated, “I feel encouraged when I see the schedule for LIPI, and I see all the kids who are coming in. Not only did they sign up, but they also showed up.” She also questioned the trustworthiness of the survey given the limited vague questioning and challenges to complete the follow-up survey. Ernesto observed students coming in for math help, he witnessed English

learners coming in for support, and he saw *Advisory* teachers “willing to bring student into their classrooms.” “And” he continued, “kids are wanting to get help so I think that itself shows that our engagement might be a little higher than what the (*Panorama*) number reflects. Dianne pointed to other follow-up survey results to suggest improvement was achieved. In some supplementary questions in the December survey, Students expressed a higher value on *Advisory* teacher’s role in their student engagement and most *Advisory* teachers received personal “shout outs” by their students in *Advisory*.

Unfortunately, the *Panorama* survey provided the only measurable instrument to determine student engagement. It is likely results showing an increase in student engagement from the *Panorama* survey may have misrepresented student engagement as well. In hindsight, an alternative survey and/or additional engagement specific questions may have provided a better picture. The analysis would have also benefited from empathy interviews and instructional observations to better study student engagement.

Enlarging and Spreading

During the reflect stage of the SIAR cycle, ISDiP framers suggest considering the future of NIC in terms of enlarging, spreading, and/or sustaining (Perry et al., 2020). Enlarging speaks to scaling up current improvement efforts. The NIC believes there is a lot of potential to enlarging implemented strategies. Cathy sees *Advisory* as an important vehicle to ramp up LIPI in the current quarter and through the end of the year. She suggests the team strategize ways to get more teachers in the building to help more students. Dianne agreed stating that *Advisory* is a system that has been in place for four years and has established relationships that has “made a huge difference for a lot of these kids.”

Opportunities in spreading or sharing improvement strategies with groups outside of Riverside had mixed theories among the NIC. Cathy acknowledged that Riverside was leading the District in the expansion of LIPI and thinks “other schools could look at the model of what we are doing and, if they can get people in to do it, then they can just copy what we are doing.”

Rich cautioned replication:

“I think if I was placed at another high school tomorrow, I don’t think I could take exactly what we are doing at Riverside and do it exactly the same way at another school. I think they have to own it for themselves. We can share some concepts with them, but the reality is if you don’t have the right people at the table and the right culture in place and if you don’t have some of those intangibles in place it won’t thrive.”

NIC members agreed that leveraging existing systems such as *Advisory* is key to implementing or scaling up student supports in other schools or settings.

Sustaining the NIC speaks the team identifying other problems of practice that need to be improved. The group overwhelmingly agreed that great progress had been made in increasing student engagement in CDL. However, they felt that more improvement is achievable in this area. They also believe that these strategies would transcend CDL and benefit improving student engagement and student achievement when students return to the classroom fulltime.

Leadership Factors

Several members reflected on leadership characteristics they observed during the SIAR cycle and discussed how their leadership had developed during the process. The most consistent theme shared throughout the group was the observation that the leadership had equipped the staff with the capacity to develop strategies for improvement and then they were given the flexibility to implement those strategies without a lot of oversight. Many commented that this approach

built leadership capacity in themselves and that was shared to others on the team. Dianne remarked, “I think what Riverside does really well is grow leaders. It’s been fun for me to step up in my leadership and then also bring in people alongside of me as well.” Giovanni has also seen his leadership grow in his first year as a Behavior Specialist, “My leadership has evolved through the actions and results of working with (the NIC). When (Rich) has delegated responsibilities to us, it puts us in a position that we know we can do this.”

Rich credits the ability to have this leadership development approach with a “tight” hiring process that is not delegated to a committee. This tight leadership hiring philosophy allows Rich to be “loose” with their work once they are on board. He summarized saying, “We hire great people, and we make sure that we’re clear with our expectations and then we let people go and be the professionals that they are.” Rachelle credits “such buy-in by (the Riverside) staff with the investment Rich has put into his “building leadership and others” approach.

Student engagement in a digital environment continues to evolve. The NIC and Riverside leadership continues to strategize, implement, analyze, and reflect on ways to improve student engagement, student achievement, and teacher satisfaction. Growth and a greater understanding of principal leadership in these efforts will assist in ongoing improvement efforts.

Dissertator Reflection

Improvement Science as a methodology for scholar practitioners is a new framework for George Fox University education doctoral students. Considering who might benefit from this endeavor should be discussed. Primarily, seeking the continued improvement at Riverside High School, this research should offer insight to Riverside stakeholders beyond the NIC itself. Professional learning communities, professional development committees, Multi-Tiered Systems of Support (MTSS) teams, and comprehensive school improvement planning at Riverside should

review ISDiP implemented strategies, analysis, and reflections to inform future efforts. Beyond Riverside, other schools and districts could review implemented strategies, analysis, and reflections to determine aspects that might fit other unique contexts. Finally, this ISDiP has the potential to contribute to theoretical constructs if investigated formally from a scholarly perspective.

Dynamics of the NIC at Riverside, tasked with the SIAR cycle to improve student engagement in a digital environment, should also be discussed. Of the twelve invited to participate in the NIC (including the dissertator), five currently serve as administrators at the school. Another three regularly attend leadership meetings at Riverside and provide input into school decisions. Three members are recognized effective educators in their respective roles in English Language Development, Special Education, and Community School Outreach. Only one member of the NIC, Rachelle Garcia, serves as the District's Principal Mentor and is not exclusively attached to Riverside. This makeup provided an environment for the team to work nimbly with institutional knowledge of systems and culture to adapt to the everchanging setting in the fall of 2020. However, theoretical knowledge was limited, in general, to the dissertator and ideas were rarely questioned because of the institutional knowledge of the NIC. In hindsight, the NIC would have benefitted greatly from NIC members outside of Riverside and the District. While unknown, it is likely that Riverside NIC members share common blind spots that may only be identified by nonresident participants.

The unique makeup and hierarchy of the NIC provided the greatest strength to strategizing, implementing, analyzing, and reflecting on improvement efforts at Riverside. However, this unique makeup and hierarchy had the potential to be the greatest weakness to any efforts. Fortunately, the identity and function of NIC adopted pre-established norms present in

other improvement approaches at Riverside. While rare, each member of the NIC has permission and has demonstrated the autonomy to dissent and/or suggest contrary ideas. For example, the notion of *Advisory* as a foundational element of instruction at Riverside was discussed, debated, and developed for more than two years before it was adopted as one of the four pillars of Riverside's comprehensive school improvement plan. It is likely, as other schools in the Charles Douglas School District experienced, *Advisory* as a concept for care and connection is not enough for sustainable leverage in improving student outcomes.

As a result of this ISDiP, the dissertator was impacted greatly by the growth and development of future leaders within the NIC. It was humbling to hear an instructional mentor, counselor, second-year special education teacher, and new community school outreach coordinator see in themselves and express their role as leaders and their desire to pursue greater leadership roles; even formally. In fact, Riverside's instructional mentor applied to pursue her administrator's endorsement in October. One of the most rewarding aspects for dissertator is to see others seeking similar paths because of the beliefs and experiences shared in the pursuit of improvement and achievement.

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APPENDIX A
IRB APPROVAL DOCUMENTS

Networked Improvement Committee Member

Informed Consent

RESEARCH SUBJECT INFORMED CONSENT FORM

Prospective Research Subject: Read this consent form carefully and ask as many questions as you like before you decide whether you want to participate in this research study. You are free to ask questions at any time before, during, or after your participation in this research.

Project Information

Project Title: Principal Leadership in a Digital Learning Environment	Project Number:
Site IRB Number: 2201028	Sponsor: Dane Joseph
Principal Investigator: Scott Gragg	Organization: George Fox University
Location: Newberg, OR	Phone: (406) 493-8621

1. PURPOSE OF THIS RESEARCH STUDY

○ As a member of a networked improvement community or as an Advisory teacher, you will be asked to investigate principal leadership through a strategize, implement, analyze, reflect (SIAR) cycle. The objective of this improvement science dissertation in practice (ISDiP) research study is to improve student engagement and teacher satisfaction in a digital learning environment at ██████████ High School.

2. PROCEDURES

- Members of the NIC will be asked to participate in eight one-hour meetings over the course of a 90-day SIAR cycle.
- Advisory teachers will submit Request for Assistance (RFA) as student attendance, academic, or behavior issues arise
- During the SIAR cycle, NIC members will investigate Panorama survey data, request for assistance submissions, and ██████████ systems.
- The NIC will use this investigation to design, implement, and study a change idea.
- The ISDiP is scheduled to meet every other week and conclude on January 7th, 2021.
- The NIC may decide to amend, expand, or conclude their efforts following the January 7th meeting.

3. POSSIBLE RISKS OR DISCOMFORT

- NIC is made up of [REDACTED] administrators and educators. While there is a power differential present in the NIC, the activities of the NIC are not different from other comprehensive school improvement systems present at [REDACTED]. Advisory teachers have submitted RFA's outside the scope of the NIC. It is likely that RFA submissions during the SIAR cycle will not create greater risks or discomfort.

4. OWNERSHIP AND DOCUMENTATION OF SPECIMENS

- Virtual meeting recordings and electronically shared documents will be restricted to and the ownership of the NIC for documentation and review purposes only. These recordings will be passcode protected and available only to NIC members. All recordings will be removed from Zoom's cloud and deleted on or before December 31st, 2021.

5. POSSIBLE BENEFITS

- It is reasonable to expect that NIC members will benefit practically and professionally in their leadership and educator development. It is also reasonable to expect that [REDACTED] High School students and staff will benefit from NIC efforts.

6. FINANCIAL CONSIDERATIONS

- There is no financial compensation or costs for your participation in this research.

7. AVAILABLE MEDICAL TREATMENT FOR ADVERSE EXPERIENCES

- This study involves minimal risk to adverse experiences requiring medical treatment.

8. CONFIDENTIALITY

- Your identity in this study will be treated as confidential. The results of the study, including laboratory or any other data, may be published for scientific purposes but will not give your name or include any identifiable references to you.

However, any records or data obtained as a result of your participation in this study may be inspected by the sponsor, by any relevant governmental agency (e.g., U.S. Department of Education), by the George Fox University Institutional Review Board, or by the persons conducting this study, provided that such inspectors are legally obligated to protect any identifiable information from public disclosure, except where disclosure is otherwise required by law or a court of competent jurisdiction. These records will be kept private in so far as permitted by law.

9. TERMINATION OF RESEARCH STUDY

- You are free to choose whether or not to participate in this study. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate. You will be provided with any significant new findings developed during the course of this study that may relate to or influence your willingness to continue participation.

Please notify Scott Gragg ([REDACTED]) of your decision terminate participation and/or follow the progress of the NIC without participating in the SIAR so that your participation can be orderly terminated.

In addition, your participation in the study may be terminated by the investigator without your consent under the following circumstances.

- [REDACTED] or George Fox University rescind permission for the study.
- Investigator fails to meet the requirements of the ISDiP

10. AVAILABLE SOURCES OF INFORMATION

- Any further questions you have about this study will be answered by the Principal Investigator:

Name: Scott Gragg

Phone Number: (406) 493-8621

Email: [REDACTED]

- Any questions you may have about your rights as a research subject will be answered by:

Name: Dane Joseph

Email: djoseph@georgefox.edu

- In case of a research-related emergency, call:

Day Emergency Number: (406) 493-8621

Night Emergency Number: (406) 493-8621

11. AUTHORIZATION

I have read and understand this consent form, and I volunteer to participate in this research study. I understand that I will receive a copy of this form. I voluntarily choose to participate, but I understand that my consent does not take away any legal rights in the case of negligence or other legal fault of anyone who is involved in this study. I further understand that nothing in this consent form is intended to replace any applicable Federal, state, or local laws.

Participant Name (Printed or Typed):

Date:

Participant Signature:

Date:

Principal Investigator Signature:

Date: