THE ROLE OF AN EARLY WARNING SYSTEM TO SUPPORT FRESHMEN:
AN ACTION RESEARCH STUDY

By

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To the Faculty of Washington State University:

The members of the Committee appointed to examine the dissertation of WENDY LYNN WATSON find it satisfactory and recommend that it be accepted.

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THE ROLE OF AN EARLY WARNING SYSTEM TO SUPPORT FRESHMEN:
AN ACTION RESEARCH STUDY

Abstract

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The purpose of this action research study was to examine the role of an early warning system as a technological tool used by administrators to support high school freshmen. The research questions guiding this study were: (a) What are the perceptions of high school administrators regarding the transition processes occurring for freshmen? (b) How is the early warning system used to support students? and (c) In what ways does an early warning system inform the intervention and support practices for transitioning freshmen? Qualitative methods included transcribed data from individual interviews, fieldnotes of observations, archived and artifact data, and a focus group meeting of high school administrators. Findings indicated that administrators support the transition of freshmen from middle to high school through events and programs to meet the procedural and academic needs of freshmen with limited attention paid towards meeting the social needs. The early warning system was used to primarily support freshman academic needs and somewhat support social needs through prevention and intervention programs. Conclusions and implications drawn from the study are that (a) transition supports should be focused on meeting the procedural, academic, and social needs of freshmen, (b) early warning systems are a useful tool to identify struggling freshmen for prevention and
intervention supports, (c) high school staff are not adequately trained on freshman transition, (d) high school staff are not adequately trained on early warning systems considering technology use, data interpretation, and predictive analytics, and (e) adequate funding is needed to support freshmen, transition programs and teacher training.
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Dedication

This study is dedicated to the secondary administrators in this district, especially those who participated in this study, who work hard to provide supports and interventions to help middle school students successfully transition to high school so that eventually they can graduate and pursue post-secondary educational options.
CHAPTER ONE

INTRODUCTION

Schools across the United States are struggling to reduce dropout rates. According to the National Center of Educational Statistics, in 2006 the national dropout rate was 32.4% for students between the ages of 16 and 19 years of age (McIntosh, Flannery, Sugai, Braun, & Cochrane, 2008). In some cities with high minority populations and low socioeconomic status, the dropout rate exceeds 50% (Turner, 2007). This problem prevails at the secondary school level because traditionally this is when students choose to leave education and seek alternative routes leading into adulthood. These alternative routes, like getting a GED or going straight to work, often ensure a life of low paying jobs or poverty because young adults who drop out of school lack more advanced skills or educational credentials to obtain better paying jobs. The long-term effects of having a low-skilled and uneducated workforce threaten the stability and well-being of our nation’s economy and social structure. High school dropouts are more likely to work in low wage jobs and to experience health problems, higher incarceration rates, and substance abuse than comparable students who persist and receive the high school diploma (McIntosh et al.; Smith, 1997). It is in our nation’s best interest to implement educational strategies and practices that keep students in school through high school graduation.

To address the dropout problem, educators must carefully analyze the multiple factors that are associated with students who disengage from the educational system. One factor consistently shown as contributing to the dropout issue is the challenge students experience transitioning from middle to high school. Students fail the 9th grade more than any other grade and this failure is a precursor to dropping out of school (Cauley & Jovanovich, 2006; Donegan, 2008; Herlihy, 2007). In transitioning to high school, students are confronted with increased
academic demands, acclimation to a new and bigger environment, and managing new relationships which perpetuate student anxiety (Chapman & Sawyer, 2001). When students fear being lost and alienated in high school, coupled with their own feelings of anonymity and the stress of learning new faces (Cooper & Markoe-Hayes, 2005), they become more at risk of becoming a dropout. Complicating matters further, adolescents transitioning to high school are also experiencing developmental changes in their bodies associated with middle adolescence (Isakson & Jarvis, 1998) that can negatively impact them academically and socially. Even the number of school-to-school transitions within a school district increases the high school dropout rate (Alspaugh, 1998). It is incumbent upon educators to recognize the key factors that are associated with students who disengage in the 9th grade and provide interventions that support students’ individual needs and decrease the chances of students dropping out.

The emergence of secondary transition programs is one strategy receiving much attention in the push to address the national high school dropout crisis. In an attempt to smooth the transition from middle to high school, administrators are challenged with providing support and interventions to assist transitioning freshmen. An example of a unique strategy involves the implementation of freshman academies where students are uniquely grouped to provide a small school atmosphere within the larger, impersonal high school environment (Allen, 2001). In addition, creative ideas include the involvement of key stakeholders in the transition process: parents, teachers, counselors, and administrators (Morgan & Hertzog, 2001). However, the research literature is limited regarding how school systems should attempt to connect students to an appropriate intervention strategy. Whether administrators attempt a one-size-fits-all transition intervention for students or attempt to personalize the transition process, there remains the
urgency for administrators to carefully analyze the needs of freshmen in order to provide an
intervention that mitigates the risk of students dropping out of high school.

One way for administrators to match the needs of freshmen to transition interventions is
through using technology to provide a more prescriptive and analytical approach to identifying
and assessing their needs. In the last decade, the popularity of early warning systems (EWS) has
gained momentum across school districts as a technological tool to assist school officials with
identifying at-risk students. Data often included in an early warning system are attendance,
grade point average, course failures and credits earned as these indicators are considered highly
predictive of students dropping out of high school (Johnson & Semmelroth, 2010). Thus early
warning systems not only provide information about which students are at risk but also identify
which factors or area of performance they may be experiencing difficulties that can be used to
predict their likelihood of dropping out of high school (Therriault, Heppen, O’Cummings, Fryer,
and Johnson, 2010). School officials have access to the information in order to provide
interventions to students displaying at-risk data. In addition, the early warning system may be
used for the purpose of predicting student dropouts.

This process of prediction, referred to as predictive analytics, involves using real time
data to plan for the future. Stehlik-Barry (2005) broadly defines predictive analytics as:
a class of software — which includes data mining, text mining, Web analytics and similar
analytic technologies — that connects data to effective action by drawing reliable
conclusions about current conditions and future events. The lesson learned is that K-12
schools can better serve their students by understanding the needs of the individual
student in much the same ways businesses need to understand their customer’s needs.
There is a large amount of student data with which to work — most of it is an untapped
gold mine. By using predictive analytics, school systems are better able to report and comply with state and federal standards; and, most importantly, meet the educational needs of their students. (¶ 4)

While early warning systems provide rich data, organizations should be cautious regarding the interpretation of data for predictive purposes. Specifically in school systems, the use of data for the purpose of determining student performance including the prediction of students at risk of dropping out of school, is a field of study lacking in rich research. According to Johnson and Semmelroth (2010) in specific reference to one early warning system, “screening tools and suggested guidelines require cross-validation across settings. At the time of this writing, there are no published cross-validations establishing the effectiveness of the EWS tool in suburban or rural areas” (p. 123). Macfadyen and Dawson (2010) also add that, “There are few examples that demonstrate the successful and systematic application of academic analytics across an institution in order to inform and enhance teaching and learning practices” (p. 590).

Research Problem

High school freshmen who perform poorly both academically and socially are exhibiting the at-risk behaviors that contribute to dropping out of school. The transition to high school shows an increase in student disengagement and a decline in student motivation playing a role in the prediction of school failure (Kemple, Herlihy & Smith, 2005). In order to mitigate the transition risks, administrators are challenged to meet the academic, procedural, and social needs of students moving from middle to high school and decrease freshman failure rates impacting the long-term dropout rate. As school districts are pressed to find solutions to the dropout problem, school officials are challenged to effectively identify students who struggle in the transition from
middle to high school along with the challenge to appropriately analyze the reasons for at-risk behavior in order to support the students by providing meaningful interventions.

To help administrators meet those freshman needs, school districts have access to early warning systems with personalized and historical student data including information around attendance, grades, assessments, and behavior. Administrators are tasked with using the early warning system as a new technological tool to influence interventions and supports for transitioning freshmen. As a caution, Herlihy (2007) mentions:

Many states have begun to adopt common methodologies for measuring graduation rates, few states, districts, or even schools have developed monitoring systems that will identify students who are ‘off track’ early in their high school careers- or better yet, identify those whose performance in middle school indicates high risk for school dropout. (p.5)

While administrators are adept in the field of instructional strategies with most rising to the ranks of administration by first being teachers, administrators may struggle with the expectation to use data in an early warning system as a means of predictive analytics to identify, analyze, and support students transitioning to high school. Stehlik-Barry (2005, ¶ 3) adds:

Gathering and managing the student data within a warehouse or data mart is a critical step. Equally important is the next step — analysis — which finds the patterns and relationships among the data points and turns it into usable, actionable information. A category of analytical software that is already familiar to the business world but has just recently been introduced in academia is predictive analytics.

Having access to a rich technological data source potentially confounds the ability of administrators to effectively identify, analyze, and provide interventions for struggling students. Research in organizations suggests technology change to reduce errors and improve outcomes
can create opportunities for “unintended consequences that make systems more brittle and hide the sources of resilience that make systems work” (Woods, Dekker, Cook, Johannesen, & Sarter, 2010, p. xviii). In studying technology adoption, investigators identify and analyze the demands or “changed tasks such as device setup and initialization, configuration control, or operating sequences. Cognitive demands change as well, creating new interface management tasks, new intentional demands, the need to track automated device state and performance, new communication or coordination tasks, and new knowledge requirements” (Woods et al., p. 145-146). In short, further study is needed to better understand in what ways the use of early warning systems provides support for freshmen in the transition process from middle to high school.

This action research study examines the use of an early warning system by high school administrators in supporting the transition of incoming freshmen from middle to high school.

**Action Research**

This research study is qualitative in nature with a design emphasis on action research methods. According to action researcher Geoffrey Mills (2000), Kurt Lewin is credited with coining the term “action research” in the early part of the twentieth century. Adelman (1993) adds that Lewin viewed action research as a process that “gives credence to the development of powers of reflective thought, discussion, decision and action by ordinary people participating in collective research on ‘private troubles’ that they have in common” (p. 8). Mills reflects on the origins of other early action researchers including John Dewey during the progressive education movement and clarifies that, “the primary focus of all of these efforts, regardless of the context, is on enhancing the lives of the children in our schools” regardless of the “different schools of action research thought” (p. 7).
Kathryn Herr and Gary Anderson (2005) state that, “While action research shares some similarities with qualitative research (and even quantitative research), it is different in that research participants themselves are either in control of the research or are participants in the design and methodology of the research” (p. 1). Ernest Stringer (2007) adds, “The primary purpose of action research is to provide the means for people to engage in systematic inquiry and investigation to ‘design’ an appropriate way of accomplishing a desired goal and to evaluate its effectiveness” (p. 6). The value of action research is that it fully engages participants in the research process. “Action research seeks to engage people directly in formulating solutions to problems they confront in their community and organizational lives” (Stringer, pg. 35). As active participants, “This information is gathered with the goals of gaining insight, developing reflective practice, effecting positive changes in the school environment (and on educational practices in general), and improving student outcomes and the lives of those involved” (Mills, 2000, p. 6).

There are a variety of action research methods but for this study, action research was inquiry-based through a simple yet powerful process that Stringer (2007) refers to as a “look, think, act” routine. Its foundational elements involve a collaborative and democratic approach to investigating a specific problem through a “constant process of observation, reflection, and action” (p. 9). I engaged in this participatory process as a professional practitioner and research facilitator who engaged a community of stakeholders at the high school level to investigate the process of using an early warning system to provide interventions and supports for students transitioning from middle to high school. Guided by Stringer’s three revolving stages of inquiry, the first cycle of this research serves to “Look” at the complexity of the problem by gathering relevant information in order to define and describe the problem appropriately. This critical first
cycle of the action research process enables “researchers to extend their understanding of the experience and perspective of the various stakeholders” (p. 65). The second cycle of inquiry offered in this report allows practitioners to “Think” about the problem in order to analyze and theorize what is happening and explain how things are happening. During this stage, “The end result of analysis is a set of concepts and ideas that enable stakeholding participants to understand more clearly the nature of the problematic experiences affecting their lives” (p. 95). The final phase of the action research process empowers stakeholders to “Act” on the problem by planning, implementing, and evaluating strategies for sustainable solutions. This stage is a vital step that serves to “distinguish action research from other approaches to inquiry” (p. 125).

This study focuses on Stringer’s action research cycle of inquiry where “change is an intended outcome of action research” (p. 208). As administrators continue to search for meaningful supports and interventions to assist students through the challenges of transitioning from middle to high school, action research provides the appropriate methodology for them to collaborate as a team of stakeholders and bring their shared experiences to the table to problem solve for sustainable solutions.

The Study

The purpose of this action research study was to examine the role of an early warning system as a technological tool used by administrators to support high school freshmen. The research questions that guided this study were: (a) What are the perceptions of high school administrators regarding the transition processes occurring for freshmen? (b) How is the early warning system used to support students? and (c) In what ways does an early warning system inform the intervention and support practices for transitioning freshmen? By exploring the procedural use of a newly adopted early warning system as described by administrators to
identify and analyze struggling students in the transition to high school, this study examined the potential for an early warning system as a technological tool to help administrators provide meaningful interventions to support the needs of transitioning freshmen.

Qualitative research criterion recommend the involvement of information rich participants (Patton, 2002) which aligns with the precepts of action research. All invited participants in this study: principals, assistant principals, and Achievement Gap Intervention Specialists (AGIS’s) are information rich because they work in high schools and are tasked with meeting the academic, procedural, and social needs of transitioning freshmen. This action research proposal explored the role of an early warning system equally accessed by this group of participants to provide interventions and support for transitioning freshmen. The role of the administrators is to access the early warning system for broad purposes. The role of the AGIS is to use data from the early warning system to specifically target a small segment of the student population, usually around 50 students who are often targeted freshmen, and provide interventions to keep the students enrolled in school. The AGIS works collaboratively with principals, assistant principals, teachers, counselors, and parents.

Principals, assistant principals, and AGIS’s who work in 1 of the 5 large, comprehensive high schools in one large urban school district with approximately 29,000 students were invited to participate in this study. The school district is located in a city in the Northwest with approximately 210,000 people. There are two alternative high schools in this district with a combined total of approximately 500 students who were not included in this study. The 5 high schools enroll an average of 1500 students from 9th to 12th grades. The average free and reduced lunch rate is 59% ranging from 35% to 76%. Approximately 12% of students have Individual Education Plans ranging from 8% to 17%. District data on ethnicity indicate that 71% of the
high school students are white with a range from 63% to 79%. Three percent of students are black ranging from 1% to 4%. Seven percent of students are Asian ranging from 5% to 16%. Nine percent of students are Hispanic ranging from 6% to 10% and 2% are American Indian ranging from 1% to 4% (Office of the Superintendent of Public Instruction, 2013).

At each of the 5 high schools, there is one principal and three assistant principals with the exception of one high school that has four assistant principals for a limited time due to grant funding. Each high school also employs one AGIS. Of the 26 potential study participants, all were issued an email notice that a formal invitation to participate in the study along with an overview on the purpose of the study would be delivered in the school mail. Participants were encouraged to call or email me with specific questions regarding the study. Respondents included only principals and assistant principals with AGIS’s choosing not to participate in the study. See Appendix A for a demographic view of the participants’ respective high schools accounting for enrollment, free and reduced lunch, special education, and ethnicity.

The participants are employed in a dynamic school district that is progressively studying student achievement and dropout data. With a third of students dropping out of school in 2010, the school district hired an outside consultant in 2012 from Northwest Decision Resources to identify the indicators of risk of failure for two cohorts of students. The report affirmed that almost half of the dropouts could have been identified at the elementary and middle school levels for displaying school performance and behaviors that would lead to dropping out. The final report issued to all of the district administrators identified the at-risk indicators that eventually comprised the backbone of the district’s early warning system.

The school district implemented a data dashboard in 2012-13 developed by the district Chief Academic Officer in consultation with fellow administrators and a district assessment team
of data analysts. The data dashboard shows a wide range of data in five different categories: student learning, college and career readiness, academic press, powerful instruction and supportive learning environment. Student learning data focus on how students are progressing on state and district assessments in the core areas of reading, writing, math and science. College and career readiness (CCR) data predict how students are faring towards CCR targets through PSAT and SAT scores, college-ready transcript information, and financial aid applications. Academic press explores district survey data regarding student and staff beliefs around topics like safety, work ethic, academics, and school culture. Powerful instruction, a section of the data dashboard still under construction, holds data regarding perceptions of instructional strategies and malleable growth mindsets based on student surveys and administrative observations. And finally, supportive learning environment not only focuses on student and staff survey data measuring perceptions of trust and personalization, but also classifies data within an early warning system to specifically identify students with at-risk indicators based on attendance, behavior, and academic performance.

The unit of analysis in this research study was the early warning system. Through the action research cycle of “look, think, act,” this study engaged principals and assistant principals in a study to discover if and in what ways the early warning system informed transition practices of incoming freshmen from middle to high school.

Positionality

An important element in action research studies is the consideration of positionality or the role of the researcher in relation to the participants or stakeholders. The position of the researcher to the participants is labeled on a continuum ranging from “insider” or “outsider” based on the researcher’s position relative to the setting of the study (Herr and Anderson, 2005).
Recognizing one’s positionality is critical when collaborating with stakeholders for the purpose of gathering thick and rich data that is trustworthy. Herr and Anderson clarify the importance of positionality stating, “Much action research is centrally concerned with these issues of the relationship between outsiders and insiders, since clarity about them is necessary for thinking through issues of research validity as well as research ethics” (p. 29).

Given my role as a central office administrator with experience in middle to high school transition, my positionality in this action research study was as an insider working in collaboration with other insiders who are high school principals and assistant principals. All of us work in the same school district. I am currently the Director of Secondary Curriculum but for 12 years I was also a high school assistant principal in this district. Despite my change in position in the last 3 years, I frequently collaborate with high school assistant principals and principals, many of whom I have known and worked with for years. For example, I meet with Assistant Principals of Curriculum every other week and play a liaison role between this team and central office administrators. As an insider in collaboration with insiders, we operate more like a collaborative leadership team. I am very familiar with their role as I served in this position for 5 years previous to my current position. While I don’t formally collaborate with Assistant Principals of Student Services, I do have 5 years of experience in the role and talk with them informally at district administrative meetings.

Regarding the leadership role of the principal, I have not been a principal but I do meet formally with principals to lead them in professional development and communicate district initiatives for their feedback. My role in this arena as researcher needed clarification to build trust with their participation. As the principal is in charge of leading the school improvement plan for his or her building, I was sensitive to principals who may have perceived participation in
this study as a central office mandate to focus on use of the early warning system in the middle to high school transition process. Principals have many competing initiatives for school improvement that are unique to each building. Mandates from central office administrators may confound a principal’s leadership plans. Respecting their leadership role was critical in maintaining my role as a trustworthy insider. Stringer (2007) warns that, “Difficulties often arise when newcomers or people aspiring to change the status quo attempt to invade or change territory that is already occupied” (p.49). Participation in this study was not considered a mandate for change to individual school improvement plans, however, findings were offered as contributing to research as a whole. Principals were assured that the focus on middle to high school transition through use of an early warning system was acknowledged in the school district as only one strategy of many for decreasing the dropout rate and increasing the graduation rate.

While I do not evaluate any of the participants, I do assume some semblance of authority as a central office administrator. I lead a variety of district initiatives on behalf of the district’s Chief Academic Officer (CAO) who is the creator of the data dashboard that houses the early warning system and expects all administrators to use the tool to make data driven decisions as part of their school improvement planning. Participation in this action research study meant that the participants would expose their skill set in working with the early warning system. Knowing that I am directly supervised by the CAO and that the CAO is a key figure in the hiring of administrators, participants may have felt threatened that participation in this study could have a direct impact on their potential to be hired in other leadership positions. Acknowledging this perceived power differential was critical in setting up and staging the interviews to build trust and confidentiality. Participants were assured that responses would be kept confidential.
My positionality is also influenced by personal interests and experiences with middle to high school transition. During my first 2 years of teaching at the high school level with primarily freshman students, I struggled to understand why freshmen did so poorly in school. My fellow educators and I often complained of the frustration in dealing with freshmen who weren’t organized, wouldn’t do homework, couldn’t pay attention, and participated in the majority of fights. I immediately volunteered to lead the 9th Grade Committee to figure out how to solve the problem. In hindsight, our ignorant problem solving involved cracking down on the rules to get students to comply. We did not come to the table as researchers and learners but as disciplinarians. Years of implementing strategies that did not solve the freshman behavior problem eventually lead me to research. For the past 20 years, I have been heavily engaged in the issues surrounding middle to high school transition. My experiences in trying to tackle the problem through research-based strategies with about 6 years of overseeing the “Freshman Transition Program” as a high school assistant principal offers the potential for bias throughout my research methodology, especially in the area of analysis. Being aware of this potential bias by constantly examining my impressions and assumptions was a strategy I used to heed Herr & Anderson’s (2005) cautionary note that, “Insiders, because they are often true believers in their particular practices, are too often tempted to put a positive spin on their data” (p. 35).

Finally, the closing section of this report provides an opportunity for me to reflect on my experience throughout this process as a means of addressing bias due to my positionality. Action research lends itself to this self-reflection process when the researcher plays a collaborative role with stakeholders in the research process. Herr and Anderson (2005) state, “One way to deal with bias is to acknowledge one’s presence in the study and build in self-reflection” (p. 35).
Reflecting on my experience allows the reader to consider my positionality in the analysis of my findings with considerations for bias.

**Research Ethics**

Several qualitative research strategies based on the best practices of experienced qualitative researchers (Anfara, Brown, & Mangione, 2002) were used to produce credible and trustworthy research findings to understand the role of an early warning system to support students in the transition from middle to high school. Building credibility began with the clarification of my researcher positionality to the participants to provide full disclosure of my intent and possible bias in relation to the findings. Credibility of findings were established through prolonged engagement in the field through interviews, observations in a focus group meeting, and limited documents followed by a continual process of analysis where mining data further would have had little value because “core categories are already saturated” (Glaser & Strauss, 2008, p. 225). Using a codified procedure for analyzing data details, I obtained the findings of the study. Coding and recoding strategies produced relevant and cogent themes that accurately reflected the data and increased dependability. The triangulation of data sources (Patton, 2002), particularly as it applied to checking interview transcripts and comparing the perspectives of the participants combined with the focus group data, was used to enhance credibility. Interview transcriptions were sent to each participant along with summary statements of their respective interviews. Participants conferenced with me in a one-on-one meeting or by phone for the purpose of member checking the transcriptions and summary statements. Seven of the 9 participants met in a 2 hour focus group where assumptions of understanding were addressed and clarified which is detailed in Chapter 3. They were also invited to read the final paper and provide feedback to clarify misinterpretation of meaning.
Finally, credibility was increased through a solid writing style of this report by providing a sound methods section, detailing methods for double-checking findings, and adhering to precision in style and tone (Rubin & Rubin, 2005).

Trustworthiness was fostered through ethical and confidential considerations. Each participant was notified through a formal letter regarding the dual purpose of this study: to examine the role of the district’s early warning system as a technological tool to improve the middle to high school transition practices of the students they serve, and to support the researcher’s doctoral work by participating in this study to help the researcher meet the requirements of a doctoral degree at Washington State University. To address confidentiality and trust, participants signed a Research Study Consent Form clarifying the purpose of the study and guaranteeing confidentiality through their participation. Interviews were conducted in a time and place that met each participant’s personal schedule in order to provide an atmosphere of trust that was comfortable. Participant names and schools were not recorded in the report. During the coding process, to ensure confidentiality, each participant’s information was color-coded on paper with a key indicating the names matched to a participant that was locked in a cabinet. Finally, participants were assured that the results of this study would be distributed to the researcher’s professor and to each participant along with potential for publication. Finally, they were also informed that the results could lead to changes in the structure of the district’s early warning system along with influencing the middle to high school transition practices related to their respective schools.

With all attempts at confidentiality, there still lies a risk of participants reading the study and determining the voice of another peer. While I cannot promise that one participant may
identify another participant’s voice, every attempt was made to avoid disclosure of participants’ opinions and experiences. The participants were informed of this risk of exposure.

**Definition of Terms**

In order to provide clarity, several terms have been used that require explanation in order to provide context throughout the report. These terms include clarification of “dropout,” “freshmen,” “transition,” and defining the difference between “data dashboards,” and “early warning systems.”

In the context of this report, a “dropout” is a student who does not graduate from high school with a high school diploma. Research studies and statistics report a variety of methods for calculating a dropout rate which requires careful scrutiny. Dropout data may be reported based on a student’s ability to obtain a high school diploma within the traditional 4 year time frame from entry into high school in the freshman year until the projected graduation year. Comparatively, a student who took 5 years to graduate with a diploma or earn a GED may still be reflected in the data as a “dropout.” In the broader context, dropout data may refer to students who left the educational system and were never accounted for as having earned a high school diploma, GED, or any such equivalent degree. The context of this report does not rely on an in-depth analysis of dropout data but instead focuses on the early patterns of behaviors from kindergarten through 12th grade that indicate a student’s increased risk of dropping out of school.

In reference to who are considered “freshmen,” this report defines them as students in the 9th grade where they were once 8th graders in a middle school or junior high. Depending on the school district, some freshmen are educated in 7th through 9th grade middle schools or junior highs while other districts include all grades, K through 12, in one building. The freshmen referred to in this study participate in a process of “transition” where they move as group of 8th
graders from one school building into an entirely larger school setting where they become 9th
graders or “freshmen” in a 9th through 12th grade setting.

And finally, it’s also necessary to clarify the differences and similarities between “data
dashboards” and “early warning systems” to provide context on how they are used
interchangeably in an educational setting which may be confusing. In the business world, a
comparable term to data dashboards and early warning systems would be “performance
dashboards.” Performance dashboards serve to focus the work of the employee so that everyone
is clear on the “organization’s strategy into objectives, metrics, initiatives” and serves to
“measure, monitor, and manage the key activities and processes needed to achieve their goals”
(Eckerson, 2006, p. 4). Data dashboards in schools are similar to performance dashboards in
businesses as they include performance data, typically referred to as student achievement data
measured by state and local assessments, where the school as an organization can set goals for
improvement and determine the objectives and initiatives that will produce the desired outcome.
A data dashboard may also include a broader scope of information and include information like
survey and enrollment data not traditionally considered performance indicators. However, an
early warning system is a subset of a data dashboard and specifically focuses on those key data
points that may predict if students are at risk of dropping out of school based on attendance,
grades, assessments, and behavior. As schools build the capacity in their organizations for use of
such technology, there is a gap in consistent interpretation of terms like “data dashboards” and
“early warning systems.” For the purpose of this study set within a particular school district with
a clearly defined data system, an early warning system is focused on attendance, grades,
assessment, and behavior indicators that show a student underperforming and on a pathway to
dropping out of school. This early warning system is a subset of a much broader data dashboard.
Organization of the Report

Chapter 1 provides an introduction and overview of the research topic that frames the research questions. The review of the literature in Chapter 2 is presented in three sections: (a) dropout crisis, (b) middle to high school transition, and (c) early warning systems. Chapter 3 details the methods of the study including data analysis results through the action research lens of “look, think, act”. In Chapter 4 of this report, I provide the outcomes of the study including a discussion of freshman transition, an early warning system, and how each informs the other. Finally, I offer conclusions and limitations about what was learned through this study and the implications it affords followed by a brief reflective note on this action research process.
CHAPTER TWO

REVIEW OF THE LITERATURE

The review of the literature includes three separate sections that frame the issues for this study. The first section examines the national dropout crisis from a broad perspective. The second section explores the transition of students from middle to high school as a compounding factor that has implications for students dropping out. The last section considers the use of an early warning system within school districts as a technological tool to influence supports and interventions for students in order keep them enrolled in school with the intent to decrease the dropout rate and increase graduation rates.

Dropout Crisis

Across the nation schools are struggling to find answers to decrease the dropout rate. Dropouts are students who leave high school without obtaining a high school diploma. Despite being a nation of wealth and prosperity where students are mandated to attend school, students continue to drop out at an alarmingly high rate. At the secondary level, students leave the public school system for alternatives such as passing the General Educational Development (GED) test, going to work or joining the ranks of the unemployed. Students who drop out of school too often experience a life of low paying jobs, chronic underemployment and the need for social services. In addition, dropouts are highly likely to face incarceration and poverty (Schweinhart, Montie, Xiang, Barnett, Belfield, & Nores, 2005). Neild, Balfanz, and Herzog (2007) state that, “What makes current graduation rates alarming is a reality of the new U.S. economy: It is practically impossible for individuals lacking a high school diploma to earn a living to participate meaningfully in civic life” (p.28). Schools face the moral imperative to educate, support, and nurture students from elementary school through high school in order for students to realize that
meaningful civic life. “This means addressing the cognitive and social needs of all children, with an emphasis on including those who may not have been well served in the past” (Fullan, 2003, p. 3).

Research heavily indicates that students who are most at-risk in school exhibit a variety of negative behaviors that serve as predictive indicators for dropping out of school. First, social and family background increase the risk of dropping out when students are poor and in a minority group, male, come from single parent homes, have a mother who dropped out of high school, have parents who don’t value learning, attend numerous elementary and middle schools, and take on adult responsibilities like getting a job or becoming a parent. Second, students are also more at risk of dropping out when their educational experience involved low academic performance and high level levels of disengagement from school in regard to poor attendance and behavior. And finally, the individual school’s characteristics play a role in increasing the dropout rate with some schools able to effectively mitigate the risk of students leaving school by providing personalized, supportive, and rigorous environments (Jerald, 2008).

The pathway to becoming a dropout often begins well before the high school years. Elementary students who send signals of becoming potential dropouts by failing math and English, attending school below 80% for the year, and receiving marks for “unsatisfactory” behavior, have a three in four chance of dropping out of school (Neild et al., 2007). Neild et al. caution that “schools should pay special attention to students who send a signal in 6th grade” because, “The earlier a student first sends a signal, the greater the risk that he or she will drop out of school” (p. 30).

As elementary students experience the transition to middle school, factors like poor course grades, low test scores, and poor behavior continue to increase the likelihood of students
dropping out of school. In a comprehensive study by Melissa Roderick in the early 1980’s, it was determined that there were definite factors that identified a pathway for students dropping out of school, especially in the transition years. Her study indicated that students in middle school, defined as 7th through 9th grades, could be identified early because they “fit the stereotype of the dropout as a student who encounters substantial difficulty early on in his or her school career and whose path to dropping out is marked by persistent and deteriorating levels of school performance” (p. 129). The attitudes and behaviors of middle school students, whether positive or negative, appear to be relatively consistent when comparing 7th graders to when they become 9th graders. A study by Murdock, Anderman, and Hodge (2000) found that “students who are less adapted in Grade 9 were less adapted in Grade 7,” and “Students who seemed the most at risk in Grade 9 brought a pattern of negative behavior and negative experiences with them” (p. 347). Interestingly, their study also showed that “students who are most at risk for leaving school do not necessarily feel bad about themselves” (p. 346). It is an indication that school officials should also be wary that even middle school students who appear to be doing well in school “can be knocked off the path to graduation by the new academic demands and social pressures of high school” (Neild et al., 2007, p. 30).

Compounding the national dropout problem is the concern that freshmen struggle to graduate from high school in 4 years. The average freshman graduation rate (AFGR) calculates the number of freshmen who graduate on time and receive a diploma. According to a report by the NCES (2011), the AFGR for public school students in the United States for the class of 2009 stood at 75.5% indicating that approximately 24% of freshmen did not graduate on time. While there remains the opportunity for the students to continue their education and receive a diploma
or GED, schools must still address the issues around why the students cannot successfully navigate through school in a timely manner.

“In the last five years, educators and policy makers—including federal agencies, governors, and foundation and business leaders—have recommitted themselves to addressing the challenge of reforming secondary education, particularly in low-performing schools” (Herlihy, 2007, p. 4). Herlihy adds that some states like Indiana are taking proactive steps to help students succeed by requiring high schools to annually report the number of freshmen without the credits to earn sophomore status as a necessary first step in identifying the students at the highest risk of not graduating.

**Middle to High School Transition**

One important factor to consider in regard to the dropout problem is the negative impact to adolescents due to the transition from middle to high school. There are consequential educational outcomes, like achievement loss, for students who experience the instability and adjustments that occur in the transition from school to school (Alspaugh, 1998). The 9th grade is particularly challenging as students experience increased academic demands, acclimate to a new and bigger environment, and deal with beginning afresh relationships with teachers and fellow students (Chapman & Sawyer, 2001) which increases student anxiety significantly. Herlihy (2007) adds, “It is easy for ninth graders to get lost in the shuffle, skip school without consequence, or quietly fail without any concerted intervention by the school” (p. 7) due to the lack of personalization in a large, comprehensive high school. A study by Benner and Graham (2009) found that while students had a more positive outlook about education in middle school, “the high school transition experience negatively altered the positive academic and psychosocial life course trajectories observed in middle school” (p. 370).
Drawing close connections between dropping out of high school and the transition from middle to high school is necessary although not always clearly associated through a causal lens. “The transition into high school is difficult for many students. It is usually the end result of unsuccessful transitions – high dropout rates, low on-time graduation rates, and low achievement – that receive the most attention” (Herlihy, 2007, p. 4). However, Roderick’s study (1993) provides evidence that transition years are highly correlated with dropping out of school:

It was largely following these school transitions that trends in the academic grades of late-grade dropouts diverged from those of graduates. For example, from the eighth to the ninth grade, the percentage of tenth- to twelfth-grade dropouts who failed 25% or more of their credits increased from 5.3 to 60.7% compared to an increase for graduates from 2.6 to 8.3%. Why would grade changes associated with school transitions as early as the sixth grade raise the chances that a youth would drop out? One answer is that whenever students do more poorly in school, they are more likely to drop out. In addition, students’ academic and adjustment difficulties during the first year of middle school and high school may pose significant barriers to their ability to form positive attachments and become integrated into these larger and more complex environments. (p. 85)

“The needs of ninth-grade students are multidimensional, and efforts to support their transition must be as well” (Herlihy, 2007, p. 10). Given the scope and significance of the dropout problem, educators are gathering and analyzing data to assess and develop theory and programs that can effectively explain and address the factors that lead to students disengaging from school. Educators should consider that, “The U.S. graduation rate crisis is not fueled by students who lack the potential or desire to graduate, but rather by secondary schools that are not
organized to prevent students from falling off the path to graduation or to intervene when they do” (Neild et al., 2007, p. 32). However, moving students smoothly from middle to high school requires educators to understand the complexity of transition in order to create interventions that meet the needs of students already on the path to dropping out of school.

The transition from middle to high school suggests that school officials acknowledge the psychosocial adjustments of teenagers through an organizational socialization lens. Organizational socialization is broadly defined by Hoy (1969) as “the processes by which requisite role orientation of offices, statuses, and positions is acquired by participants in the organization” (p. 258). In the context of education, the socialization process involves student adaptation to the norms and values of their new environment (Hoy). In regard to moving to high school, middle school students report anxieties about isolation, academics, safe environment, and peer relations (Smith, Akos, Lim, & Wiley, 2008) along with consistently reporting concerns about social and organizational changes regarding school bus issues, getting lost in school, and not being able to see their peers (Akos & Galassi, 2004b). Where leaders of organizations must nurture the socialization process in order to support a positive culture (Schein, 1990), school administrators and teachers should recognize that the transition from middle to high school is a time of high anxiety for students that has more to do initially with “fitting in” than graduating.

Middle to high school transition may be misunderstood as a simplistic process of moving a group of students from one school to another. The reality is that the socialization of freshmen into a new organization is a complex process that requires educators to understand the stress factors experienced by students as they attempt to adapt to the new values, norms, and behaviors of being a high school student. Without this understanding, educators may not be able to understand the internal and external challenges that freshmen face and they will not be able to
offer transition supports and interventions that specifically serve to address the struggles of freshmen. This lack of understanding may lead to increased student anxiety during the transition phase.

The factors contributing to student anxiety when transitioning to high school were found to be many. Socializing freshmen for adaptation to their new environment presented concerns that were divided into four themes: academic, social, procedural, and developmental challenges (Cauley & Jovanovich, 2006). Academic concerns were broadly defined to include issues around grading, class difficulty, homework, and achievement loss (Cappella & Weinstein, 2001; Turner, 2007). Social concerns generally included issues related to peer relationships, harassment and bullying, participation in activities and athletics, and familial support or relationships with parents (Akos & Galassi, 2004b; Cillessen & Mayeux, 2007; Falbo & Lein, 2001; Isakson & Jarvis, 1999; Letrello & Miles, 2003; McIntosh et al., 2008; Newman, Newman, Griffen, O’Connor, & Spas 2007; Rice 2001). Procedural concerns largely referred to students’ anxieties about navigating through a new and bigger building and finding lockers and classes (Akos & Galassi, 2004a; Alspaugh, 1998; Cauley & Jovanovich). Developmental concerns referred to the physiological changes of students associated with adolescent development (Letrello & Miles).

Studies consistently showed that student perceptions indicated fear and anxiety towards high school in regard to academics. Grade point averages decreased from the 8th to 9th grade (Isakson & Jarvis, 1999; Akos & Galassi, 2004b) which Akos and Galassi found resulted from students’ difficulty with assignments and teachers’ high expectations for homework completion. Math and science performance was negatively impacted by the systemic transition to high school
In addition, students struggling academically in the transition to 9th grade often exhibited negative social behaviors (McIntosh et al., 2008).

Regarding social concerns, research showed that students were afraid and anxious about the transition to high school. Attendance rates initially increased immediately following the transition and then significantly dropped to a lower level with an overall decrease in attendance (Isakson & Jarvis, 1999). Students perceived a decline in school belongingness and experienced more symptoms of depression (Newman et al., 2007). Students perceived high school to have meaner and harder teachers along with meaner peers where bullying would be an issue (Morgan & Hertzog, 2001). These social fears can have a negative impact on student aggression. One study showed that students’ perception of aggression increased amongst their peers in the transition process as a social function of students feeling the need to reestablish dominance over peers as a means to handle the stress of moving to a new environment (Cillessen & Mayeaux, 2007).

Students in 8th grade reported feelings of stress and angst regarding the procedural changes of moving to high school. Transitioning to a larger school was negatively associated with the dropout rate (Alspaugh, 1998). The most difficult aspect of transitioning had to do with student concerns around getting lost in the building, the schedule and time management (Letrello & Miles, 2003). Studies showed that students feared isolation in high school and worried about their safety. The organizational structure of the high school, like how students were graded, was another source of concern for parents and students (Smith et al., 2008). Other procedural concerns for students involved anxiety at finding lockers, eating lunch, and riding the bus (Morgan & Hertzog, 2001).
Students transitioning to high school not only struggle due to their fears and anxieties, but also because of developmental changes in their bodies. Middle school students are transitioning from school to school at a time when their bodies are physically and hormonally changing which complicates the transition process. In addition, cognitively they are experiencing leaps that change their ability to think more abstractly and hypothetically (Cauley & Jovanovich, 2006). All of these changes can be confusing and exhaustive for teens at a time when school systems are asking them to adjust from the security of middle school to a large and impersonal high school. These insecurities and lack of self-confidence result in lower achievement levels and potentially increase the dropout rate.

Academic, social, procedural, and developmental challenges have a negative effect on the transition from middle to high school on all students; however, those changes can have an increased negative effect on particular groups of students in regard to gender, race, socioeconomic status, and cognitive ability. Girls felt much less connected to high school than boys and Latino students reported that the transition to high school was difficult and they relied on counselors more than their families for guidance (Akos & Galassi, 2004a). Inner-city minority students from low socioeconomic backgrounds perceived parental, teacher, and peer support negatively in regard to their readiness and confidence in preparation for high school. They also negatively associated control and independence with the transition to high school due to lack of teacher and peer support (Turner, 2007). Students with learning disabilities also struggled with the transition to high school and studies showed that only slightly more than half of students attended their IEP meetings where conversations about transitions take place (Weidenthal & Kochhar-Bryant, 2007).
The research suggests the need for interventions and practices to support transitioning students given their fears and anxieties around academic, social, procedural changes during a time when their bodies are developmentally changing too. Comprehensive transition programs involve transition planning teams to create strategies and interventions for students based on their academic, procedural, and social challenges with a parent component (Cauley & Jovanovich, 2006). Programs could be least intensive or intensive considering that framework with a few specific examples cited in this research study.

The research on transition interventions that were least intensive included programs involving structural changes to school organization systems that positively impacted students. For example, organizing students into peer networks or groups would get students connected to each other and decreased student anxieties regarding meeting new people in a bigger school (Cooper & Markoe-Hayes, 2005). Another example included programs that had a career development connection with workshop-based curriculum, partnerships with businesses, field trips, advisories, and summer programs (Dedmond, Brown & LaFauci, 2006). The Freshman Wing concept (McIntosh & White, 2006) or freshman academies described students grouped into cohorts to support a feeling of connectedness that improved students’ developmental assets including commitment to learning, social skills, positive identity, and values (Holland & Mazzoli, 2001). Some of the least intensive programs like advisory programs and isolated activities like orientation nights can have little impact on keeping students engaged and connected to school (Donegan, 2008) so educators must implement programs that strongly impact student connectedness.

Intensive transition programs went beyond structural changes in the school system. Some programs provided counseling components that involved family members with the intent
of doing more than easing the transition to high school, but also to ease the psychological struggles of students during the transition process. The Adolescent Transitions Program, a program for the prevention of substance abuse and other problem behaviors in teens, provided intensive behavioral therapy for troubled adolescents. Parent participation was mandatory. Families completing the program showed improved relationship among each other and teen aggressive and delinquent behaviors decreased (Andrews & Dishion, 1995). The Communities-In-Schools High School Transition Initiative implemented a transition program based on social bonding theory in order to connect at-risk and disengaged students to society and high school life. The theory was based in four constructs: attachment, commitment, involvement and belief. Students who participated in program activities like transition day, ropes course, career activities, parent nights, career activities, and mentoring, successfully transitioned to high school (Chapman & Sawyer, 2001).

Helping students participate successfully as a member of a new organization requires that educators understand that students have to be socialized to the new organization called high school. Freshmen face the barriers of learning the new values and norms of their environment that may be dramatically different from middle school. There are required behaviors in the new high school set by teachers and upperclassman that are unknown and unexpected that create fear and anxiety for incoming students. In addition to those barriers are the academic, social, procedural, and developmental challenges that are related to the transition process. The implications for the development of transition interventions and practices indicate that understanding middle to high school transition as a socialization process is necessary to meet the needs of all freshmen struggling to acclimatize to high school in order to decrease the dropout rate and keep kids in school. Letgers and Kerr (2001) state:
As educational researchers and practitioners work to find the best ways to organize high schools for the benefit of teachers and students alike, more attention must be given to the unique needs of ninth graders as they transition to a new school environment while also facing the challenges of adolescence. (p. 20)

**Early Warning System**

Acknowledging the complexity of the transition from middle to high school as having a causal impact to the dropout rate begs another very important question for researchers: How should students be appropriately identified for specific intervention and support during the transition? One possible way is for school officials to use technology. Administrators have access to technology that houses rich student data in what is broadly referred to as a student information management system. As technology resources become more sophisticated, prevalent, and affordable, there is a significant amount of student information that is readily available to administrators, teachers, and counselors. In order to keep up with the fast pace of the advancement of technology throughout the world, schools are challenged to build technologically advanced infrastructures that not only include more computer hardware and software, but also include the professional development demands of students, school staff, and parents.

While Student Information Systems (SIS) include a wide variety of personal information regarding a student’s health and home address, it also includes information that identifies students struggling in school. Stehlik-Barry (2005) adds:

Even the most advanced school districts have just begun to extend the data incorporated in their student information system beyond classroom assignments, attendance records, grades and bus routes to include standardized and state test results and local assessments.
Gathering the student data into one central location enables the school districts to analyze the data and develop individualized student learning plans. (¶ 2)

School districts are exploring ways in which advanced technology resources can keep students engaged in school and reduce the dropout rate.

One specific element of advanced technology to help school districts decrease the dropout rate is the use of early warning systems as a relatively new technological tool that complements existing SIS. The purpose of the early warning system is to provide data that are indicators of students struggling in school. “A robust early warning system uses readily available student data and validated indicators of risk to identify students who are at risk of dropping out of school so that they can be matched with appropriate supports and interventions” (Therriault et al., 2010, p. 7). For students at-risk of dropping out of school, the data indicators used in an early warning system include evidence of poor attendance, failing grades, low assessment scores, and at-risk behavior. Administrators use early warning systems as a technological tool to identify which students are most at-risk of not graduating in order to build support structures and interventions to help get students back on track.

With access to readily available student at-risk indicators, early warning systems are also designed to have an element of prediction. Referred to as predictive analytics, it is a “broad term describing a variety of statistical and analytical techniques used to develop models that predict future events or behaviors” (Nyce, 2007, p. 1). For school systems, this is a challenging but innovative area of exploration due to the potential of using data to identify struggling students at an early age in order to provide the supports they need to be successful. “Innovative U.S. school districts are harnessing cutting-edge predictive analytics software to enhance academic performance and meet the requirements of the No Child Left Behind Act” (WebWire, 2006, ¶ 1).
While predictive analytics has played a significant role in the business world, it has been much slower in the education world although it shows promise for K-12 schools in considerations for dropout prevention (Sparks, 2011). In order to interpret data effectively, predictive analytics also involves a process of data mining. Nyce (2007) defines it as such:

Data mining is the analysis of data to identify underlying trends, patterns, or relationships. It is a necessary first step in predictive analytics, because the data that the mining process identifies as relevant can then be used to develop the predictive model.

One can think of data mining as gathering knowledge about relationships, and the resulting predictive analytics model as applying that knowledge. (p. 9)

School districts across the nation are moving forward with the implementation of early warning systems in hopes of decreasing the dropout rate. Heppen and Therriault (2008) suggest that a high school early warning system track two main types of information: attendance and course performance including the number of F’s, course credits earned, and the grade point average for freshmen. A study by Balfanz, Herzog, and Mac Iver (2007), demonstrates “how four predictive indicators reflecting poor attendance, misbehavior, and course failures in sixth grade can be used to identify 60% of the students who will not graduate from high school (p. 223).” Although Allensworth and Easton (2007) remind us that while consideration for some of the high risk indicators for not graduating may appear conclusive, the problems of failure and dropping out are complex where “in a school system where about half the students drop out, it is not just aberrant students who are at high risk of not graduating but average students as well” (p. 37).

Other cautionary notes in the literature address the difficulty of data analysis in an early warning system by those not specifically trained in data analysis. Sparks (2011) adds that,
“Experts in predictive analytics in higher education and business say education may have a long way to go to develop the data infrastructure and staff capacity to make the tools useful on a broad scale” (¶ 5). The complexity of an early warning system through predictive analytic software system requires school officials to analyze and interpret data. Acknowledging that, “Early warning systems provide information about which students are displaying risk factors that predict an increased likelihood of dropping out of high school” (Therriault et al., 2010, p. 3), policymakers and educators “view the experiences that precede a specific student’s dropping out as mysterious, difficult to predict, and idiosyncratic” (Neild et. al., 2007, p. 28).

The literature also cautions the predictive validity of early warning systems. Developing a set of high risk indicators in a data base is to develop a simple early warning system that requires local context because the pathways to dropping out vary (Heppen & Therriault, 2008). Therriault et al. (2010) add that, “It is important to acknowledge that the indicators of risk are merely signs of deeper and likely more complex problems related to student disengagement with school and academic failure” (p. 13). Schools that use data as a mere checklist for dropout prevention risk students being misclassified as at-risk and placed in prevention programs when one was not needed (Jerald, 2006). In turn, it is possible that a student seemingly on-track to graduate who exhibits no at-risk behaviors on an early warning system may drop out of school.

In the context of middle to high school transition, administrators have access to early warning systems to identify struggling students in the first year of high school in what is considered the “make it or break it” year as it applies to predicting high school graduation (Heppen, O’Cummings, & Therriault, 2008). Allensworth & Easton (2005) advise that systematic collection of course performance and attendance data should be developed in an early warning system as it is the most powerful predictor of a student dropping out in the first year of
school. As a new technological tool, it informs school officials of the at-risk indicators associated with students dropping out of school that provides insight into the interventions needed to support students. But they are only the first step in facing the dropout problem followed by the important step to identify and provide meaningful and effective dropout-prevention strategies (Heppen & Therriault, 2008). “Ideally, an early warning system allows users to identify students with accuracy and provide supports to students through interventions, resulting in improved graduation outcomes for students” (Therriault et al., 2010, p. 3). Neild et al. (2007) summarize several challenges in determining appropriate early intervention strategies:

The first is to figure out which signals to look for and when to look for them. These signals form an early warning system that schools can use to identify students who are at risk of dropping out. The second challenge is to develop a set of structures and practices within schools that enable educators to review data and pinpoint those students who are sending signals. The third challenge is to determine the help that students need, on the basis of the signals they send and their responses to previous interventions. (p. 28)
CHAPTER THREE
REPORT OF THE STUDY

Introduction

The purpose of this study was to examine the role of an early warning system as a technological tool used by administrators to support high school freshmen. The research questions guiding this study were: (a) What are the perceptions of high school administrators regarding the transition processes occurring for freshmen? (b) How is the early warning system used to support students? and (c) In what ways does an early warning system inform the intervention and support practices for transitioning freshmen? The genesis of this research project began many years ago by administrators like myself searching for answers to the reasons behind the difficult transition of many students from middle to high school.

Approximately 5 years ago, the previous superintendent of the district developed the district goals. One of the key performance indicators placed a focal point on middle to high school transition. As a team of over 100 administrators, we looked at district dropout data from a district perspective and individually by schools noting that approximately a third of students were dropping out of school. In examining the data longitudinally, a trend emerged that showed no signs of improvement. Careful scrutiny of those numbers revealed that not only were failures rates high among freshmen, but even more predictable were students who were showing signs of dropping out as early as elementary school. Discussions focused on preventative measures to identify the early signs of students struggling and to provide supports and interventions well before the senior year. High school administrators began a more intentional focus on the transition of students from middle to high school with the intent of helping freshmen pass classes.
At the time, I was a high school assistant principal and I became deeply involved with researching the reasons behind high freshman failure rates. With oversight of the Freshman Transition Program, I implemented a variety of best practices from the research and shared those best practices with my administrative peers who were also searching for answers for how to successfully transition students from our middle to high schools. In all five comprehensive high schools, strategies like “freshman cores” or “freshman houses” were implemented in order to simulate a small schools environment for students with the hope of personalizing the transition experience to help students acclimate to high school. Best practices like freshman coring were started based on research, word of mouth, and what seemed like common sense. There was no consistent or formalized framework on behalf of the district to look at best practices that actually considered the wide scope of the students’ needs.

The school district received a grant for the specific purpose of helping students transition from elementary to middle school. With my transition to central administration and considering my research background on middle to high school transition where studies frequently included the transition from elementary to high school, I was asked to assist elementary and middle school administrators in coming up with a plan to implement researched best practices on transitioning students. Basing my work on the Cauley and Jovanovich (2006) transition framework, administrators were introduced to a tri-fold strategy for offering academic, social, and procedural supports and interventions. They were given specific research-based activities and strategies to meet the individual needs of incoming freshmen through the three lenses of the academic, social, and procedural framework. I encouraged schools to start a transition team at the building with teachers, counselors, parents, and administrators to monitor their progress. At the same time, I trained a group of middle and high school counselors and administrators to do similar work.
Unfortunately, due to competing state and district educational initiatives, the issue of middle to high school transition began to fade as a top priority with central office administration and subsequently, the topic was rarely discussed. However, at the grass roots level of the high schools, administrators continued in silos to address the high freshman failure rates and implement strategies to help students in the transition process.

What did become a priority with the school district was to implement an early warning system within a broader data dashboard. With accountability measures for teachers, administrators, and district officials based on student achievement results at the state and national level, mounds of student achievement data were initially created on paper reports without a way to contextualize the results in a useable way. Stacks of paper reports left administrators with little time to read, analyze, and act on the data. The district Chief Academic Officer created a comprehensive electronic data dashboard based on his research from his own dissertation. This data dashboard included an early warning system that designated researched-based performance indicators that were highly predictive of students dropping out of school starting in the elementary grades.

Administrators in this district have spent about 2 years in mandatory training on the data dashboard, a technology tool that has garnered national attention for its comprehensive look at student achievement results and perception data. However, there has been no required, formalized training for administrators on middle to high school transition, aside from the small groups who have been voluntarily trained, indicating its low level of priority. While the graduation rate of the district has improved, the issue of consistently high freshman failures rates remains a topic of concern. The early warning system provides rich data to immediately identify freshmen at risk based on attendance, grades, and behavior. This action research study served to
explore how use of an early warning system within the context of a middle to high school transition framework was influential in supporting and developing interventions for freshmen.

This chapter provides the details of the qualitative methods used in this study. In addition, the findings are offered in three sections: (a) interactions with freshmen, (b) an early warning system, and (c) an early warning system informs transition practices. A summary closes the chapter in preparation for a discussion on the outcomes of the study in Chapter 4.

**Method**

The methods guiding this study are detailed throughout this section beginning with a review of the study setting. Qualitative research methods are also described throughout the sections on participant selection, data collection and data analysis. In planning for the study to begin in the spring of 2014, I used Stringer’s (2007) action research guidelines to create a plan for engaging in the “look, think, act” stages of this study. These action research stages are used as a lens to not only explore the use of an early warning system to support the transition of freshmen from middle to high school but to provide solutions as well. For example, the “Look” phase is incorporated throughout this chapter as it briefly recounts the role of a literature review, recaps the selection process of the participants, includes specific data collection methods, and begins an analysis process to look at the data. The data analysis section details the method of analysis used to “Think” about the problem which also includes stakeholder participation in the process. Finally, the findings of the study offer a glimpse into the actionable steps taken and needed by stakeholders in a reflective process to use an early warning system to support transitioning freshmen. A focus group meeting offers the perfect opportunity for the recursive nature of looking, thinking, and acting by the stakeholders to create solutions to the problems.
associated with using an early warning system to support students in the transition from middle to high school.

To complement Stringer’s systematic approach to investigation using the “look, think, act” cycle as a tool for interpretation and analysis, I also relied on Braun and Clarke’s (2006) six phases of thematic analysis. Another expert in qualitative analysis, Boyatzis states that this method “characterizes it, not as a specific method, but as a tool to use across different methods” (as cited in Braun & Clarke, p. 78). Braun and Clarke add that, “Through its theoretical freedom, thematic analysis provides a flexible and useful research tool, which can potentially provide a rich and detailed, yet complex, account of the data” (p. 78). Each phase identifies a step by step process of qualitative analysis: (1) familiarizing yourself with your data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. Throughout Chapter 3, I dovetailed Stringer’s “look, think, act” cycle with Braun & Clarke’s 6 step thematic analysis method to thoroughly analyze the data.

Setting for the Study

Stated briefly in Chapter 1, the study took place in a school district located in a city in the Northwest with approximately 210,000 people. This large school district has five comprehensive high schools with a per building enrollment average of 1500 students from 9th through 12th grades. Administrators from four of these high schools participated in this study. There are also two small alternative high schools although their administrators were not included in this study.

Participant Selection

In order to explore the procedural use of a newly adopted early warning system to identify and analyze struggling students in the transition to high school, high school
administrators and AGIS’s were targeted as the information rich consulting experts to address these questions. Both groups are specifically tasked with oversight of student achievement. Counselors were initially determined to be another group of consulting experts who could provide valuable insight as they are also tasked with using an early warning system and monitoring student achievement results. However, I determined that their lens for transition and use of an early warning system was unique in itself and warranted an entirely different study focus. Including them in this study would have made for a much broader analysis. I narrowed the focus on administrators and AGIS’s to allow for a more narrowed analysis.

At the beginning of the year in 2014, I sent emails to five high school principals, 16 high school assistant principals, and five Achievement Gap Intervention Specialists located at each of the high schools. The email was an invitation to participate in this research study in the spring of 2014. This invitation included a thorough explanation of the study in a Research Study Consent Form. The process explained the purpose of the study, provided the research questions, explained data collection methods through interviews and a focus group meeting, offered potential benefits and risks of participating, shared the methods of providing confidentiality, explained what it meant to give consent for participation, and assured participants a copy of the final dissertation report. Each participant signed, dated, and returned this form and they received a copy as well. As a trust measure, the email invitation also included a copy of the interview questions to be as transparent as possible regarding the purpose of this study. The interview questions were designed to specifically address the guiding questions of this study. The interview guide categorized 12 semi-structured, focused questions into three overarching topics: description of job duties, interactions with freshmen, and perceptions of an early warning system (see Appendix B).
Of the 26 invited stakeholders, 9 responded to the email invitation to participate in the study. Three of the respondents were high school principals and 6 respondents were high school assistant principals. Three principals and 2 assistant principals were males and 4 assistant principals were females. The 9 high school administrators represented 4 of the 5 comprehensive high schools in the school district. No AGIS’s chose to participate. As AGIS’s were invited to participate and chose not to, it further narrowed my study to include just the high school administrator lens. In hindsight, it was to my benefit to focus on one defined population to allow for an in-depth analysis of perception that potentially avoided confounding results due to a broader sample of participants.

I also engaged members of the district’s Assessment Department to assist me in working with early warning system data. Tracking administrators’ use of an early warning system is confidential data. Permission by the Director of Assessment was necessary in order to use some aspects of the district’s data dashboard to enhance the analysis section of this report. In addition, the assessment team was necessary to assist me in the interpretation of some data that were provided. After a meeting with the Director of Assessment, it was determined that I could have access to some data for a limited time that would meet the scope of this study. It was clarified that the data should be held confidential in this report with participants’ individual use of an early warning system to be unrecognizable to others. Access was allowed because the potential for this report to improve the transition of students from middle to high school was valued and the risk of harm to administrators to be individually exposed considering their use of an early warning system was minimal.

With my participants defined, I determined that the high school administrators would be directly involved in all three phases of the “look, think, act” action research cycle. While the
assessments provided access to data, the Director of Assessment was also a contributor to the “think, act” phases of this report due to his district role of collaborating with administrators for the purpose of improving the overall data dashboard. This team would meet with me through individual interviews and as a large focus group to consider use of the early warning system through the lens of middle to high school transition.

Data Collection

Chapter 2 provided a review of the literature as a critical first step of the “Look” stage. Stringer (2007) states, “In the first stage of action research the purpose of investigations is to extend and clarify participant understanding of the issue” (p. 80). The literature review provided an extensive knowledge base to frame this study leading to ideas around informative data to be collected. Stringer reminds us that, “While the research literature does not provide definitive answers to all issues, it does provide information that has been thoroughly established through rigorous and systematic studies that provide us with much higher degrees of certainty than can be gained from any other source” (p. 80). In order to contribute to this research topic and build on that current knowledge base, careful consideration was given to determine appropriate sources of information to gather during the “Look” stage of my research study.

I needed thick and rich descriptions from my participants regarding their lived experiences and perceptions regarding middle to high school transition and use of an early warning system so I could “understand participant experiences in order to work toward a viable solution in which people will invest their time and energies” (Stringer, 2007, p. 65). Participant interviews were the primary source of information gathered in this stage of the study although some documents were used too. This method of data collection supported qualitative action research through interviews and analysis of documents (Patton, 2002; Emerson, Fretz & Shaw,
1995; Rubin & Rubin, 2005; Stringer, 2007). I needed to “Look” at this relevant information in order to gain insight regarding their experiences and perceptions. This knowledge would help me define and describe the research issues surrounding this study. This critical first cycle of the action research process enables “researchers to extend their understanding of the experience and perspective of the various stakeholders” (Stringer, p. 65).

The interview process took place in April and May of 2014 using recommended protocols outlined by Rubin and Rubin (2005). Each participant was interviewed individually in a setting of his or her choice to ensure the participant’s comfort. The purpose of the first 60 minute interview was to represent the “Look” phase of action research to discover how the topics of freshman transition and early warning systems were perceived by the administrators. The interviews were recorded and field notes were also written during the interview to capture nuances of the conversation that couldn’t be recorded. I transcribed the nine interviews as an “interpretive act” (Braun & Clarke, p. 87) and wrote summary statements for each one. To enhance credibility, I member checked the transcriptions and summary statements. The participants received a copy of the transcription along with summary statements. Seeing the raw information allowed them to “verify that the research adequately represents their perspectives and experiences” in addition to allowing them to “clarify and extend information related to their experience” (Stringer, 2007, p. 58). To further enhance credibility, I also conferenced with each individual in person or by phone for an additional 30 minutes in a participant debriefing activity recommended by Stringer (2007) because, “Debriefing focuses on the feelings and responses of the participant rather than the information participants have provided” (p. 58).

Continuing in the “Look” phase, I gathered anecdotal notes through informal and unplanned conversations with participants regarding spring activities to support 8th graders
preparing to transition to high school. I met with half of the participants bi-monthly as a small group of Assistant Principals of Curriculum regarding a variety of topics that sometimes included discussion of freshman transition and the early warning system. The other half of the participants met with me randomly at all-principal meetings regarding a wide variety of topics and sometimes the topic of freshman transition and the early warning system occurred spontaneously without my prompting. Due to random encounters with assistant principals and principals, I kept notes of conversations that occurred in the field by happenstance.

I also gathered data that indicated my participants’ access to the data dashboard that houses the early warning system. This confidential data indicated the number of logins to the data dashboard by all high school administrators from September, 2012 through June, 2014. I used this data to provide context in the analysis of my findings regarding usage of the data tool by all high school administrators which is addressed in subsequent sections of this report.

Data Analysis

In order to “Look” carefully at the data, as the primary researcher I started the first of six steps of Braun and Clarke’s (2006) thematic analysis process of familiarizing myself with the data through immersion in the thick descriptions of transcribed interview notes and data from documents. Initially, data was read and re-read twice to search for meanings and patterns relevant to the research questions of the study: (a) What are the perceptions of high school administrators regarding the transition processes occurring for freshmen? (b) How is the early warning system used to support students? and (c) In what ways does an early warning system inform the intervention and support practices for transitioning freshmen? I wrote notes in the margins throughout the process to frame my thinking in the context of these questions and assure that I was deeply familiar with the content. Often I reviewed the interview transcriptions again
to clarify questions. This first stage of analysis provided a “bedrock for the rest of the analysis” (Braun & Clarke, p. 87) that dovetailed smoothly with Stringer’s “Think” phase.

The “Think” stage is a time for the researcher and participants to engage in a “process of reflection and interpretation” where, “The end result of analysis is a set of concepts and ideas that enable stakeholding participants to understand more clearly the nature of the problematic experiences affecting their lives” (Stringer, 2007, p. 95). In order to achieve that clarity for myself and with my participants, I applied the second through fifth steps of the thematic analysis process as a “foundational method for qualitative analysis” (Braun & Clarke, 2006, p. 78).

The second step of thematic analysis served to generate initial codes. It involved open-coding “line-by-line to identify and formulate any and all ideas, themes, or issues they suggest no matter how varied and disparate” (Emerson et al., 1995, p. 143). My interview transcripts were printed in different colors for each participant with principals recorded in different shades of one color and assistant principals in a variety of other colors. This would provide a better visual to look for potential themes among principals compared to their assistant principals. Using the individual interview questions as a framework, I coded the entire data set and identified initial codes in the margins. These initial codes were coded twice to “code for as many potential themes/patterns as possible” (Braun & Clarke, 2006, p. 89).

I searched for themes in step three of thematic analysis. Codes were placed into themes and sub-themes creating a thematic map within the context of the two primary topical categories of the interview questions: interactions with freshmen and an early warning system. In step four, themes and sub-themes in each of the three topical areas were reviewed and refined to check for coherent patterns. All data from interviews and documents were analyzed using this constant comparative method where emergent concepts were systematically examined and refined.
Inconsistences in data and themes were carefully reviewed until step five where themes were finally defined and named.

As part of the refinement of themes in step five of thematic analysis, it was important to engage my participants in this “Think” stage to check my assumptions in the data. The participants were invited to a 2 hour focus group meeting in October of 2014 where seven attended and two could not. It should be noted that one of the principals returned to this focus group meeting despite having moved on to a position of superintendent in another school district. Likewise, one of the assistant principals returned to this focus group meeting despite having moved on to a central office position in this same district. Previously, I asked for permission from all participants in an anonymous survey for their consent for the district’s Director of Assessment who oversees the early warning system to join us in the focus group, a person known well by the group, because his participation was not clarified in the Research Study Consent Form. No one rejected to his participation. The focus group meeting allowed participants to actively engage in all three phases of “look, think, act” in a democratic and recursive process. During this meeting I reviewed some of the research literature allowing the administrators to “Look” at some background information on middle to high school transition and early warning systems to provide context for them to fully engage in the “Think” and “Act” stages. Throughout the meeting, participants were able to work together to “look, think,” and “act” as a reflective process for problem solving. The findings from this process were organized into three sections: (a) support for freshmen, (b) an early warning system, and (c) an early warning system informs transition practices for presentation and discussion.
Findings

The initial stage of the interview sought to explore the administrators’ interactions with freshmen. Their commentary revealed the first set of findings regarding current and needed supports for freshmen, both during the transition process and throughout the freshman year. I wondered if they had any intentional support practices in place for freshmen, and if so, what were they and how were they implemented. While the school district had listed it as a priority topic with the former superintendent years ago, I wanted to explore their specific practices to address freshman transition.

The second part of the interview determined the second set of findings that explored staff practices regarding the early warning system in general with no designed intent to connect its use specifically to freshman transition. As the early warning system housed with the district’s data dashboard is a new tool that is large and comprehensive, I had very limited knowledge regarding the ways administrators used the tool. The interview questions were designed to explore general usage of the tool.

And finally, the third set of findings resulted from a focus group meeting where the participants were lead through a discussion protocol to specifically draw connections between freshman transition and the early warning system. The findings revealed current practices to support freshmen in transition with a plan for improving practices based on their collaboration as a team.

Before continuing to the details of the three sections that form the study’s findings (a) support for freshmen, (b) an early warning system, and (c) an early warning system informs transition practices, it is important to consider the individual roles of the administrative participants to provide context. While not considered a primary topical question in the interview,
I first wanted to find out the role each administrator played in their interactions with freshmen. Three themes emerged for role clarification: primary, secondary, and reactionary. Assistant principals with the role of curriculum and program management played a primary role in working with freshmen. They had oversight of large scale events like 8th grade registration in preparation for high school. Principals, with oversight of everything in the school, played a secondary role with freshmen which should not be translated as a lack of involvement. But as one principal stated, “Moving from being an assistant principal to a principal means I just don’t have as many interactions with students as I used to.” According to another principal, his responsibility to “oversee full operation of the building from maintenance to plumbing all the way to attendance” meant that duties surrounding oversight of freshmen needed to be delegated. However, all three principals were engaged at some level with freshmen. Assistant principals with the role of managing student services or discipline played a more reactionary role in working with freshmen. Their encounters with freshmen were more a result of the students getting referred to the office for not following school rules or not attending classes regularly. As one assistant principal shared, “Freshmen certainly are our most frequent flyers down here in the student office for behavioral issues, attendance issues and academic issues.” However, one assistant principal with discipline oversight played a key role in the transition of freshmen during the spring and summer months by meeting with over 200 freshmen and their families as a proactive step to welcome them to the school. As there was no absolute divide in roles and responsibilities toward freshmen, it was clear that all administrators played an active role in the transition of freshmen from middle to high school.

**Support for Freshmen**
The beginning phase of the interview focused on the first research question to explore the perceptions of high school administrators regarding their transition processes for freshmen. The findings highlighted the current and needed efforts and practices of administrators and a variety of staff members to support freshmen during the transition from middle to high school along with support efforts throughout the course of the freshman year. Four themes emerged to represent the administrators’ perceptions on support: events that support freshmen, programs that support freshmen, acknowledging a need to support freshmen, and in addition, a final theme emerged where administrators voiced a prevalent need to support freshman teachers. For clarification in the context of a high school, “events” are defined as a single activity, usually on a large scale and for a brief time, to provide information or support to students; for example, the registration process of students. A “program” is defined as a small or large scale activity implemented for an extended period of time; for example, a math intervention course taught all year.

**Events.** Regardless of administrative role, 7 of the 9 administrators talked explicitly about events at their schools to support freshmen in the transition process. Almost all events took place when students were still in the middle school or they occurred during the summer before students arrive to high school. Two events that all schools had in common was the process of 8th grade registration and 8th grade parent night, an expectation for all administrators to manage in this district. The specifics of their practices were similar and yet different. Middle school students either visited the high school for registration and a tour of the school or the high school staff and students visited the middle school to complete registration. High school counselors, administrators, teachers and students offered a variety of activities to 8th graders to not only inform them of course choices, but to also create a welcoming and exciting view of their
new school. “Link Crew” or “Leadership” students at the high school were viewed as an integral part of the transition events to provide peer to peer connections as opposed to just student to adult connections. High school staff encouraged the middle schoolers to get involved in high school and often had high school students actively present their club or sport in a pep con setting. Parent night was an opportunity for parents and incoming students to gather information about the high school. One principal of a school that offered a variety of interest-based sessions stated, “We had a full group session about what it looks like to transition holistically here. So it’s kind of big picture, creating a sense of understanding of our programs, what kind of choices kids have, what it means to go to high school, and what outcomes are expected for all kids.”

Another common event was a freshman orientation day in August before the start of school. According to one high school principal:

One of the last things that we do is let freshmen in for an activity right before the beginning of school where they come in and our Leadership teacher has the Leadership kids in there and we have a great presentation on getting into the culture at (school name) and know what we’re doing. We feed them hot dogs and chips and pop and then we all get them on buses and head out to the first football game. So it’s really the community-rousing thing that’s going on really good. I love that.

It was clear that administrators saw the value in offering these events as valuable tools to smoothly transition students to high school. Cauley and Jovanovich (2006) categorize these events as procedural activities that are very important for students in the transition to high school. They serve a purpose to inform students about their new and bigger surroundings which decreases student anxiety during the transition process.
Programs. All 9 of the participants talked about freshman programs that were necessary to support students in their first year of high school. The programs could be classified as serving either all students or serving a target population of students. Advisory or pods are an example of programs designed to serve all students that was mentioned by some administrators. Depending on the school, students are grouped in an advisory with a teacher. Advisory meetings take place randomly throughout the year to discuss a variety of school topics including post-secondary information and life skills. Students typically have the same teacher and advisory group for four years. For one principal, it was an important part of the transition process:

And that’s another part of the freshman transition that’s more of a school-wide model, but it’s there for a purpose as our Pods or advisory program. So a kid comes in as a freshman and they are assigned a Pod teacher, which is either a teacher, administrator or counselor and even some of our classified staff for Pod advisors that will be with them for four years. And we tried pretty intentionally those first weeks of school to have Pods several times so that they get that connection with an adult rather rapidly.

For one assistant principal, advisory was a smooth extension of their feeder middle schools’ advisory where administrators from those schools collaborated to align their advisory curriculum through the Navigation 101 program as “one support that’s very familiar to them as they come up here.”

Administrators also addressed programs unique to their respective schools that targeted specific populations of freshmen. One assistant principal talked about the Success First program as a “required class after school every Wednesday for freshmen if they are failing a course.” Another assistant principal talked about their Bridges program:

We pulled every kid that was failing all six classes halfway through the year. We self-
contained them one through four and about half of them passed Algebra and the Algebra EOC (end of course exam) at the end of the year. So they have two teachers in there full-time for four periods with fifteen kids. They’re passing everything and then they go on to two classes outside 5th and 6th.

One school has implemented support classes for 85% of freshmen that focus on soft skills, study skills, and addresses college and career readiness topics. CAP class, Careers and Academic Preparation, is designated for students with IEPs, Individualized Education Plans. And the AVID program (Advancement Via Individual Determination) targets students of color, poverty, or those living in unique circumstances, and places them in a highly rigorous and supportive environment to achieve a post-secondary goal of graduating from a four year university.

The variety of programs explained by the administrators demonstrated an intentional practice of identifying targeted populations of freshmen for support. Teachers were a critical component of support for the transitioning students. In reference to the intentionality of teachers supporting freshmen, one principal added this about their Academic Bridging program similar to the Success First program previously mentioned:

So, the big idea was teachers taking a personal interest. And a personal interest meaning, I’m going to work with this kid one on one. I’m going to be intentional about when I meet with you, worker. I’m going to make contact with the parents and clear that ahead of time. So we are going to work hard on reducing the number of failures in our math, science, and English classes. No doubt there were several staff that were successful and continue to be super successful because of the intentionality that they are doing. They are making a date, making a time, and they have specific things with that kid to do. So when
the kid starts making progress, they feel stronger about their performance, and frankly, closer to the teacher because the teacher cares.

What was not mentioned throughout this stage of the interview regarding interactions with freshmen, were direct references to an early warning system in regard to identifying students for participation in particular events or programs. Participants were not prompted to discuss usage of the tool; however, once prompted in the later part of the interview to talk about the early warning system, administrators did reference use of the tool to target students for particular programs. Those experiences are discussed in later sections of this study.

Acknowledging freshman needs. The study participants from all four comprehensive high schools unanimously voiced a need to support freshmen and the teachers who serve them. Not only was this voiced in the beginning of the interview process when prompted to talk about supporting freshmen, but it was largely the topic of concern at the close of the interview when asked if there was something else they wanted to share. Overwhelmingly the administrators talked about the need to support freshmen in the transition from middle to high school.

One assistant principal acknowledged the anxiety level felt by freshmen when entering the high school:

We still need purposeful transition. Something that is going to catch those kids who enter this environment of 14 to 1500 kids and it’s just a shell shock. It’s, “Man, this is a lot different. Yeah, I have a lot more freedoms but I have a lot more responsibilities. I don’t know how I’m going to do this. I am very anxious and nervous.” And, you know, how do we get to the bottom of those? One of the questions is, “What are you most nervous about when you come into high school?” So we try to get that out to their family, but, it doesn’t stop the shell shock. So I would really like a system of support.
Coupled with these comments regarding student anxiety about the transition to high school were comments by another assistant principal regarding students’ frustration when they transition to high school unprepared academically due to a history of poor performance manifested in the elementary and middle school setting:

When a kid leaves the 4th grade and they can’t read at a 4th grade level, and they leave the 6th grade still not being able to read at a 4th grade level, we’ve doomed that kid. We’ve set that kid up for failure. And it’s something that happens way, way too often. And we’re constantly playing catch up with that kid. And that kid is frustrated about academics and it manifests itself in behavior and attendance and manifests itself in all subject areas, not just Language Arts class, but in all subject areas.

The concern for students not being successful at the earlier grades as a compounding factor for students not transitioning successfully to middle school was mentioned by several participants. Although, it should be noted that the tone and context of their responses was not one of pointing fingers or blaming the teachers and administrators at the earlier grades. It was more of an affirmation that freshmen who struggle in high school showed signs of disengagement and poor behaviors long before reaching the 9th grade:

How do we seal the deal with that 22% population of children that struggles the most? And we know they’re going to struggle the most. We’ve seen it from year to year to year. Whether it’s 3rd grade, 4th grade, or 5th grade, all the way through 8th grade. How do we seal the deal for them in terms of making them see themselves as more successful? Because this is truly a challenge for them to reinvent themselves. But we really, really, really see that possibility.
Engaging students and staff at elementary and middle schools was viewed as another need in the transition process to prepare students for high school. One principal added, “I think that vision for the future is one of the keys for kids to be successful. So, you’ve got to start that early. I guess part of me wishes that some of this transition would actually start in 6th or 7th grade. But we’ve got to figure out how as a high school we can reach down some more to support that transition.”

Reaching out to the earlier grades was coupled with the need to reach out to families to support the transition process. The two assistant principals who addressed this topic in depth saw a need to personally connect with parents in order to put into context a student’s unique family dynamic as a key component to understanding the child. One of the assistant principals shared her method of connecting with families during the transition process:

And for the summer, I’m really a big believer in doing home visits with our most at risk. And it’s great to not just have them (parents and students) in your building, but when you get at their comfort level in the summer time, it’s relaxed. And we would try to do one or two a night in the evening and it was great. I think it really got your eyes on them so when they walk through the door you know them. And that’s a big one for me.

This strategy of connection was intended to help the student transition by engaging parents in the transition process. One assistant principal shared the emotional response of one parent who did not believe her child would do well in high school. She had simply given up that her child would be able to acclimate to a new school given the troublesome issues with her child in the past. Upon encouraging the parent to bring her son to the school’s transition activities she stated, “This isn’t going to work. It sounds great, but it just isn’t going to happen.” When she brought her son to the school’s orientation night, she watched a high school student connect with her son
personally. After some time, the students left to continue the orientation activities together. As the assistant principal recounted:

She sat there in tears because it was something that she thought her son would never do. Something that she thought would never happen at all. And she just sat there in tears because she was so happy that it happened so early. And we have a great team and a great group of kids here. And it was just wonderful. It was one of those things where in that moment I could kind of feel the stress just melt away.

Acknowledging freshman teacher needs. Engaging students and staff before entry to high school along with engaging parents in the transition process paled in comparison to the participants’ concerns around the need for more freshman teacher support. As much as the administrators spoke of the need to support the freshmen due to the high degree of failing grades, poor attendance and behavior, they also acknowledged that to do that high level of support for freshmen also required a high level of support for the teachers who managed those students. When specifically asked in the interview how the freshman teachers were supported, it was often met with a pause followed by comments similar to one principal’s, “Well, we don’t do a good job with that I think,” or an assistant principal who added, “Yeah, we don’t currently do much more to support teachers.” The participants’ current efforts to support the freshman teachers emerged into three themes: communication, professional development and programs.

Communication. Finding avenues to talk with freshman teachers about their students was perceived as a means of support. Whether the communication was organized by regularly planned meeting opportunities or by random moments of conversation about kids, the act of discussing students’ issues was mentioned as a support mechanism by all nine participants. Some schools created common preparation periods for freshman teachers to allow them to meet
and discuss kids as needed. One participant referred to administrators and counselors joining the sessions. “For that weekly core meeting, I feel like we are really providing support to the teachers with the counselor and the Admin team and being able to not have them feel like all of the interventions and calls home don’t rely solely on their backs.” One assistant principal lamented the loss of weekly freshman core teacher meetings due to the loss of funding:

Teachers had a common prep that was their own prep. They were in teams of three with 90 kids. And we had it set up so that the freshman counselor and the freshman teacher or the freshman special education teacher did most of the IEPs. They could meet with that team every week on the common prep. We saw our greatest jump, you know, kids passing classes. All classes jumped 20%. As soon as we got rid of the program, we went right back to where we were.

Building that culture of collaboration among teachers was a valued means of support along with teachers collaborating with administrators. Just the act of listening and being responsive to teachers’ concerns around freshmen was deemed as a support mechanism. Assistant principals who manage discipline had much to say on this topic of support. “We all have an open door. So, you know, if they (teachers) are struggling and they need information, or they need some background, then they can always come in. We are constantly communicating. So if there is a struggle, then it’s an email talking about the kiddos.” Another added, “You know, I think the biggest thing is being responsive to them (teachers). If somebody emails you or has a concern about something, don’t let it go. I mean, just being responsive and taking time to go up and have a one on one conversation and ‘How can I help you out with that?’”

One method of communication as a means of support for freshman teachers was consistent in all four schools. Schools hold weekly meetings with administrators, counselors,
AGIS’s, and sometimes teachers to have discussions around interventions for students performing poorly in behavior, attendance, and academics. While not exclusive to just freshman students, this teaming was considered an integral part of supporting teachers by having office staff playing an intervention role so teachers can teach. One assistant principal summarized:

We meet once a week where we get together and identify those kids who are struggling in grades and attendance. We target them and we make sure we connect with them in that week. So if they are struggling, they get on the list and we make sure that they are not only talked about in our group, and, you know, we also share information. A lot of times there are a lot of different people pieces, different pieces of the puzzle. And when we speak, we get a full picture of what is going on or how to best support the student.

**Professional development.** Besides communication as a means of support for teachers, it was briefly mentioned that professional development would be valuable for freshman teachers. Four participants broached the topic but there was little clarity on what the professional development should be about. Two ideas surfaced around how to talk to parents and how to co-teach although neither topic was discussed in detail.

**Programs.** Finally, 7 of the 9 participants talked about having organized programs for freshman teachers as a strong means of support. Programs previously stated in this report like Success First, Bridges, and coring teachers were viewed as helpful. One principal expressed the value of the co-teaching model for his teachers although he admitted they didn’t “have a lot of support” to adequately train the teachers. An assistant principal discussed in detail a program they had implemented that was considered highly successful in another high school across the state that was having comparable success in his own school. “We call it Extended ROW, which is just an extended time that is attached to lunch time where students get pulled out of part of
their 3rd period class before lunch.” The intent of the program was to allow time for students to complete missing assignments as a proactive approach and a somewhat punitive approach in a sense that students could lose their freedom during lunch as a requirement to complete homework or missed tests and quizzes. The assistant principal further explained in detail:

  We have our freshman teachers. They are referring kids if they have missing assignments. And what we’re saying is that you don’t get to have zeros in the gradebook. If you have a zero in the gradebook, then you’re coming down here and you’ll have the assignment down here. We have two rooms set aside for teachers to use their ROW time to have prep or their period to facilitate this. And what happens is that they (students) go on in to their lunch time if they are not done. So they lose their lunch time. And we’re bringing down brown bag lunches for them.

The administrators rationalized that organized programs where teams of staff, besides just teachers, were needed as a means for supporting teachers.

  Throughout the interview process, in regard to meeting the needs of freshmen and the teachers who serve them, there was a prevalent concern about lack of resources, especially as it applied to programs and professional development. Statements like, “Tough to keep going because there aren’t resources specifically tied to that,” and “I don’t have a lot of resources or time, or it’s my lack of creativity,” were verbalized in a business-as-usual tone implying that lack of adequate educational funding is the norm, not the exception. In reference to the likelihood of discontinued grant funding with one successful program, the participant stated, “If we lose our extended day, we’re going to have to figure out a different way to do this.” An assistant principal sighed when adding, “And we have Bridges which is going away sadly. But that Bridges program made a huge difference. It’s just that it was really expensive. So hopefully,
maybe someday, right?” Another administrator in that school referred to Bridges saying, “We’ve found great success with that, particularly with those kids who have attendance issues and just weren’t engaged in coming to school. It has been phenomenal. A great success.” This year, the program was discontinued due to lack of funding.

**Early Warning System**

In the second phase of the interview process, I approached the subject of an early warning system. After thoroughly discovering my participants’ experiences with supporting freshmen in the transition from middle to high school, I was curious to check my assumptions in regard to their use of an early warning system to support that transition process. I considered the focus of my second research question regarding how an early warning system is used to support students. Paying careful attention not to lead my participants to specific answers, the interview questions were broad starting with the opportunity to explain the early warning system.

The participants offered a detailed account of the tool as a subset of the broader data dashboard. Several asked if I wanted an explanation of both indicating their explicit understanding that they were not one in the same as a principal clarified, “The early warning system is embedded in our data tools.” Their discussion of the tool became more of an explanation about the purpose of the tool. The purpose of the early warning system was characterized in two ways: (a) a technical explanation of what the tool does and, (b) an overview of how the tool is intended to be used.

Administrators explained the technical aspects of the early warning system as, “A comprehensive tool and data base that generates the students who have strong indicators of dropping out of school,” and “It is a data tool that gives me in-time information around a kid’s
attendance, their behavior, interventions with and interactions with the office as well as their current testing.” Another added:

The early warning system in real time is attached to PowerSchool and in real time it is constantly updating. So, as grades are entered into the gradebook, the early warning system is updating the grades that it reports for each student. Every day that a student is marked present or absent, it is updating the attendance data in there. If we do a discipline entry into incident management, it’s pulling that and it’s recording another discipline entry for that student. There’s a formula that’s plugged into the system that ranks them whether they are 100% at risk or 0% at risk based on how many unexcused absences they’ve had and how many D’s or F’s they have.

Along with technical explanations of the early warning system, comments ensued regarding how the tool should be used. Five of the participants shared a purpose for using the tool to identify students showing warning signs of poor attendance, behavior, and academics in order to provide immediate interventions. Using a system of “filtering by attributes of a specific group of kids and then to sort that data and be able to ask and answer questions about our students,” was the nature of their collective responses. One assistant principal cautioned that, “This is a great tool, but that’s all it is. Because this shows you the symptom, it doesn’t show you the cause.”

Continued commentary on use of an early warning system revealed three themes: prevention and intervention along with a final theme regarding barriers to using the early warning system. The participants clarified who actually used the early warning system for prevention and intervention purposes. Administrators, counselors, and AGISs were the primary stakeholders although teachers, Gear-Up consultants, and principal assistants were also
identified. These groups were frequently referenced as part of the weekly student support team meetings held at each high school. One assistant principal referenced general staff use of the early warning system data saying, “It’s a key part of interacting with students and families in providing the support that they need.”

This strategy to support students with teams of staff collaborating around student data was emphasized by seven of the participants in terms of understanding students and their behavior. Several descriptors were used to indicate the early warning system data as useful information for knowing and understanding kids in order to apply appropriate interventions and supports. “It gives us an opportunity to look at a snapshot of where the kids are.” In reference to freshman teachers, an assistant principal added, “What they can do is they can pull up their class and they can get a risk assessment of their class, just the kids. So they’ll rank their class and they’ll know which kids are struggling.” And use of the data as a means of knowing and understanding students was passionately stated by one principal:

It is a rich, rich resource of learning about our kids. Not just our high flyers, but every kid. And it’s the kind of work we’re able to do with them, if we just pay attention to that data and respond to it. Because behind every data point is a real person. It’s a kid. And if we take a look at that when we look at the data, because when we click on that little bubble, you see a name and you know, you know that kid because you’re talking to that kid every day. That changes my relationship with the data for me.

Finally, one assistant principal clarified that, “Whether it’s a discipline interaction or an academic intervention conversation, I always pull up the early warning system to help me get a better picture of what the student is coming in with, what’s in their backpack.”
The participants’ responses showed a deep working knowledge of what the early warning system is and how it is used. While they did not speak in terms of clearly defined patterns for prevention and intervention, the coding for analysis revealed these two distinct purposes along with the barriers associated with both.

**Prevention.** In a preventative state, data were used to help identify students for specialized programs before students experienced a lack of success. Whether the preventative step was implemented before or after the student arrived at the high school or before or after high school staff built a strong relationship with the student, it was considered a proactive step in keeping the student on track regarding attendance, behavior, and academics. As stated by one assistant principal, “That’s the biggest thing about the early warning system is that it allows us to be proactive and get ahead of something rather than being very reactive. We see very clear and immediate data here and we can jump in and get to the bottom of the issue.” Another referenced the transition from middle to high school adding, “But then also I suggest looking at those kids, if we’re taking about incoming kids, kind of who are my at risk kids? Use that incoming data. We’ve already started looking at the incoming data.”

Early warning system data was used to identify incoming freshman students with attendance and behaviors issues in middle school. The data was used to take proactive steps to support the student before intervention steps were necessary. One participant used the attendance information to initiate early conversations with the students and parents:

Because one of the main things I wanted to do with those freshmen is, I want to talk about the elephant in the room. They want to act like it didn’t exist. So if we have problems with attendance, let’s talk about it. The minute we get it out there and start talking about it, we can actually start talking about supports.
The same held true with being proactive students with behavior issues in middle school. For one school, the team of administrators held “freshman interviews” through the course of the summer to personalize the student’s and family’s transition to the high school. As the principal stated in regard to special considerations for at-risk students:

"We’re pretty strategic about which principal or counselor they meet with. But if a kid is at risk, you know, like last year a kid was at risk and we thought he would be a candidate for Bridges, we could make sure that (assistant principal of curriculum) was part of that conversation. If the kid is at risk because of discipline issues we want to make sure that (assistant principal of student services) is the person doing it because that way the parents have a positive interaction with him the first time."

For another assistant principal in a different high school, middle school data on kids with prevalent behavior issues was used to help “balance those classes” in the 9th grade so that one teacher didn’t have an overload of misbehaving students. He explained that:

"I noticed the district has the…they can put in the capability and they have the desire for us as APs to go in and look at our classes because we can do a report of all of the classes and see which ones are really heavy with kids that are tripping the early warning system criteria. So if you have fourteen sections of 9th grade English, you can see if they are out of balance where this teacher has a whole bunch of them and this teacher doesn’t and we can balance that.

A consistent practice for the participants at all four high schools was to use the early warning system data to identify students with academic deficiencies in order to take preventive measures for placement into specific classes. Especially in regard to math, students were placed in math courses determined to be their ability level based on past grades earned in math classes.
and based on a variety of state and local assessments. Often times, math teachers were part of the placement process. One assistant principal spoke in reference to one teacher assisting in this process by stating, “She knows all the test scores to figure out and early warning system and just the data tool. Lots of them use it for math to try and get placement. Lots and lots use it for math placement.” In addition, support classes like math and literacy labs were another preventative step implemented to be proactive on academic achievement instead of waiting for the student to show lack of progress and then provide an intervention. A participant clarified that process saying:

So for the first two years we’ve put those math support classes in place. We have a reading specialist and we’re going to have her do a reading support class as well. Again, we’re able to go in and look at their math scores and their 8th grade MSP scores and figure out if that’s the case.

And finally, another assistant principal from a different high school summarized her use of the early warning system:

And I would use it a couple of different ways. I use it out front to look at kids and find out academically where they’re at and are they meeting standard on their testing coming in. At (school) we had both the math and the literacy labs and so, well, I did all the coring and scheduled every kid. I used that information in that way to help place kids in proper classes.

**Intervention.** Not only was the early warning system used for preventative measures, but the data were used to provide interventions for students demonstrating poor performance in attendance and academics in the high school setting. The early warning system was not used as often for intervention practices with behavior which is explained in detail in the early warning
system concern section. As all participants had a student support team system to come together to identify students struggling, one principal provided a snapshot of what the process of identification looks like:

With live data, you can watch a kid and see how they’re doing and see, ok, this kid is dipping. What do we need to do? What’s going on with this kid? Is it attendance? Is it an academic issue? Is it a little bit of both? And then, how do we build an intervention system around that? So, what that looks like here is every Thursday, fourteen of us do get together and we’ll go through each and every warning indicator system. And so we’ll take a look at the data for each grade level and we’ll break out the most at risk looking kids, just kids whose trends have changed. And then we’ll target those.

Interventions with attendance was discussed more frequently with participants in comparison to academics. The assistant principals of student services who oversee discipline discussed this in depth with statements like, “The at-risk (report) has been huge in terms of something we look at because this guides our weekly work as well. Now if there’s a change, specifically in attendance, we have warning systems that will kick in.” And another from a different high school added that the data were useful to:

Find out why this kid doesn’t come to school and see if there’s something you can do to make them want to come to school. Be that person that they don’t want to let down and come and see every day. And be there so they don’t want to miss out.

And finally, interventions were put in place in regard to student data showing a lack of success academically. Interventions were referenced across the grade levels including failing seniors in jeopardy of graduating. One participant again referenced the need for teachers to use the data strategically to support students who are performing poorly:
So love it because when teachers are using it they’re looking for interventions. Not only what do we do next, but what’s been done. Because no one is interested in doing something that hasn’t been successful. So teachers are saying, ‘OK, what’s been done so I can try something new and different?’

One principal talked about using the early warning system as a means of positive intervention through recognition of students who had improved academically or in attendance:

You see the trend improving either academically, attendance or both, and we engage them in rewards. Take the time to meet with them individually and say, “Listen, here’s this tool that we use to look at kids and talk about kids and understand how to do a better job with kids.” And then we come up with a reward. We walk them through some detail as to where they’ve made improvements and then ask them why? What’s going on? Tell me about that. About 8 out of 10 times the kid has made some sort of commitment to the homework center, or homework intervention, or they’ve really made a commitment to improving their learning and performance in school.

**Barriers.** As stated previously, two related themes emerged around early warning systems: prevention and intervention. However, another prevalent theme emerged regarding overarching concerns with use of the data tool for prevention or intervention practices that was voiced by 8 of the 9 participants. The areas of concern about technology usage surrounded two barriers: technology usage and students with perpetual “at-risk” status.

**Technology usage.** Eight participants acknowledged there were barriers around use of technology as a tool along with misuse of the data for purposes unrelated to student achievement. Several administrators admitted they were unclear in some cases to what degree the staff were even using the data tool and at what level. They rationalized that the tool was so full of
information that it was “cumbersome” and “time intensive” to use with one administrator relying on the old system of using PowerSchool because it was “faster right now.” One assistant principal lamented:

I have so much information. This is the, I shouldn’t say gaps, is the challenge with EWS. There’s so much information the question is, what is valuable for me? Or do I access it? How do I navigate through stuff that I don’t need this minute? Because it’s very full. So, in order for the teacher who is teaching five classes a day, 30 (students) after 30 after 30, how do I provide time for them to sit down and look at the system to see how they can use it efficiently in their classroom? And that, in our building, is the gap. Our teachers are not using it.

Another principal added that teachers “don’t know where to start.” Coupled with that was the concern that once teachers got the data, there was a risk of misuse where a student’s best interests were not the teachers’ focal point. An assistant principal clarified that:

I have other teachers who have used it to come down and make a case for so and so, because it’s the only way they can see how many kids they have in their classes. So they’ll come down and say, “Well, I have 30 (students) and so and so has 27 and will you transfer 3 kids?” But that is not the purpose of the early warning system.

Another acknowledged that even when teachers attempted to use the technology for appropriate purposes, there was a risk for poor decisions made about students. “And of course there’s a danger. The more information you give to a teacher, there’s a risk that they are going to make judgments based on a risk indicator.”
For one principal, this topic was discussed at length indicating his degree of concern around technology usage. He primarily referenced the counselors who are expected to use the data dashboard regularly due to the nature of their job. He first voiced his concern that:

They are simply just not technologically adept in understanding what they are looking for, understanding what they are seeing, understanding how to filter, how to sort, how to export out into an Excel, just basically understanding what they’re looking at and how to respond to it. And a second, or at least another big thing that we talked about is grappling with the level of responsibility that you expect by knowing things. Knowing something carries with it a sense that, I think I’m supposed to be doing something with this but I don’t know exactly what.

He also stated his concern regarding his counselors not using the data tool because they didn’t necessarily trust the data inside of it due to “exposures to human errors” referencing the fact that, “The data is only as accurate as the people who put it in,” a point that was voiced by another administrator as well. He added that, “One or two errors in the data really brings down trust,” especially for counselors who rely heavily on accurate data to assure that students graduate on time. And finally, he closed his thoughts around the sheer magnitude of the task to expect one, especially counselors, to work with so much data:

And these are great people, hardworking people. But, the work, that data profile on an individual kid, on the graduation requirements, and the state testing, and credit earning, and the distribution of credits; it’s just mind numbing with 400 kids. You could do that just about all day, every day, and never get to, “Why did I want to be a school counselor? I don’t think this is it.”
Perpetual “at-risk” status. In addition to concerns about use of technology, over half of the participants discussed a concern about how students’ poor performance was recorded in the early warning system. For example, students receive an at-risk percentage rating based on their performance in attendance, academics, and behavior. Once the students receive an at-risk percentage, that designation of being “at-risk” never changes in the data tool and the percentage can only increase if the students accrue more infractions. The data in the early warning system is based on researched performance benchmarks that are known indicators or warning signs of students dropping out of school. Whether or not the student improves his performance, he has already reached an at-risk benchmark that is statistically valid as a warning indicator for dropping out. Participants state that this renders the at-risk report inside the early warning system as almost useless. When the student support teams rank students by at-risk behaviors in order to provide interventions, they say the data is misleading. A student who initially demonstrates a pattern of poor performance at the beginning of the year but shows no sign of poor performance for the remaining year continues to come up on the at-risk report as a student who needs support. One assistant principal explained it as, “The only frustration I have with the early warning system, and I understand the philosophy behind it, but once kids fail a class or two classes as a freshman, they are now in the 80% mourning zone even if they are a 4.0 from there on out. They are still in 80%.”

While the three themes of prevention, intervention, and their associated barriers emerged from the interview process, I also asked specifically what the participants liked and disliked about the early warning system with some of the results having already been stated throughout this section. Navigating the data tool was viewed both positively and negatively. Attractive attributes stated were “instantaneous data” that is “all in one place,” while others acknowledged
that it’s “a little clunky” because it is “so big” and one might “get lost in the system.” In addition, there were conflicting attitudes about the actual data with some stating the information was “accurate” and incredibly “informative,” while others stated the data was sometimes inaccurate especially in regard to how it portrayed students as being at risk. In yet another contradictory perception, two administrators talked favorably about having data to “intervene with kids,” but on the other side, administrators talked about having all this data and being not quite sure how to use it. One assistant principal stated, “I think the frustration is, it’s not the data, it’s the, ‘What next?’” And a principal added, “What I dislike is, how do we use such a tool in the most effective way? I haven’t wrapped my head around it.” Regardless, there was an overwhelming satisfaction for having access to the data dashboard.

An Early Warning System Informs Transition Practices

The findings presented thus far focused on participant interviews and documentation for administrator logins to a data dashboard. These methods highlighted the “Look” and “Think” phases of action research for the purpose of addressing the first two research questions: (a) What are the perceptions of high school administrators regarding the transition processes occurring for freshmen? and (b) How is the early warning system used to support students? This section of the findings explains how a focus group meeting specifically served to address my assumptions regarding the third research question: In what ways does an early warning system inform the intervention and support practices for transitioning freshmen? Assumptions were based on interview responses from the participants in the “Look” and “Think” stages, but now my participants would participate in the full cycle of “look, think, act” as a recursive process for checking my assumptions and to progressively seek actions to use an early warning system to improve the transition of students from middle to high school.
I facilitated discussion protocols for participants to actively engage in the “look, think, act” cycles. This democratic process served to clarify my interview findings with the participants, draw direct connections between Cauley and Jovanovich’s (2006) freshman transition framework and an early warning system, and prepare the administrators to actively participate in the “Act” stage as a community of active problem solvers on using an early warning system to support students in the transition from middle to high school.

Seven of the 9 participants attended the two hour focus group meeting along with the district’s Director of Assessment who was not a member of the study but is directly responsible for management of the data in the early warning system. The first hour involved discussion protocols designed for the “look, think, act” stage and the second hour was designed with discussion protocols for the “Act” stage. The Director of Assessment was allowed to only observe in the first hour and could participate in the second hour.

The focus group meeting started with a review of my research questions followed by an explanation of Stringer’s (2007) “look, think, act” action research cycle. The conference room was surrounded by my thematically color-coded, interview transcription posters where names were removed and kept confidential. I shared my findings and allowed participants to clarify any misunderstandings as a member-checking opportunity and to allow them to consider the thinking of their peers. As they looked and thought about my initial findings from the data, administrators were able to provide feedback and clarifications as a reflective step of the “Act” phase.

In preparation for the next activity, I introduced my participants to the Cauley and Jovanovich framework identifying and explaining the procedural, academic, and social constructs as it applied to student transition from middle to high school. Participants were asked to consider their current freshman support practices through this lens and their best practices
were recorded on posters where they were discussed as a group. Participants shared a wide variety of support strategies with a heavier emphasis noted in the procedural and academic categories.

In the next hour, we drew connections between two entirely different topics in my study: freshman transition and an early warning system. As this study served to address if and how an early warning system was used to support freshman transition, the interview questions were specifically designed to be open-ended without explicit connections from one topic to the other. As the findings indicated, their use of an early warning system was discussed in a variety of ways to support all students, not just freshmen. However, at this stage of my study, I brought both topics together for the participants, both to check my assumptions and to collaboratively create an action plan on improving the transition of freshmen using an early warning system as part of the “Act” stage.

**Cross classification matrix.** I used a cross classification matrix (see Appendix C) to draw the connections between freshman transition and use of an early warning system. As a practice in logic, it involved “creating potential categories by crossing one dimension or typology with another, and then working back and forth between the data and one’s logical constructions, filling in the resulting matrix,” (Patton, 2002, p. 468). The matrix was presented on large posters. The transition framework was the typology placed at the top of the matrix using the specific categories: academic, procedural, and social. Those three categories were broken down further to discover the strengths and weaknesses within each category of working within the transition framework as described in their interviews. Uses of the early warning system served as the other typology using the categories: prevention and intervention based on my findings of how the administrators used the early warning system. I had already worked
back and forth within the matrix to generate a full descriptive analysis (Patton, 2002) of the participants’ interview data. My findings were explicitly stated on the posters. After presenting my findings on how the administrators were using the early warning system specifically to support freshmen academically, socially, and procedurally, the participants not only clarified my thinking, but engaged in the thinking and acting process through a large group discussion to fill out the matrix further.

My findings indicated that administrators were not using the early warning system to meet the procedural needs of freshmen during transition. This was affirmed by the participants. As procedural events are vital activities to help new students acclimate to the high school, they are often large scale events not designed for personalization. The early warning system was not viewed as a tool to help students in the procedural aspects of the transition process.

In regard to the academic category of the transitional framework, my findings showed that the early warning system was considered a strength for prevention and intervention programs as it specifically applied to freshmen. Both the prevention and intervention categories shared the following positive attributes: (1) data are accurate, (2) student analysis is easier having academic, attendance, and behavior history, (3) communication with and around the student is easier, and (4) placement in remedial or support classes is better. Unlike the prevention category, intervention included additional positive attributes: (5) attendance in real time, (6) grades in real time, and (7) assigning support activities like homework center. After discussion, participants agreed this was accurate in how the early warning system was being used to support freshmen academically and they did not add information to the matrix.

In addition, there were weaknesses identified for both prevention and intervention that were identical. My findings indicated the following results regarding the weaknesses associated
with using an early warning system so support freshmen academically through a prevention and intervention lens: (1) not trusting the data, (2) not understanding the data, (3) navigating in the early warning system, (4) cumbersome tool, (5) too much data, (6) good data but “Now what?” and (7) student is always “at-risk.” The group discussion exposed another weakness prompted by clarifications on #7 about a student always being “at-risk.” The Director of Assessment shared the statistical rationale with the group previously stated in this report. While administrators understood the rationale that the early warning data was created to highlight students who met certain benchmarks making them statistically at risk of graduating despite their improvement, there was still a request to create data that demonstrated a student’s “growth over time” when he improved his performance in grades, attendance, and behavior. The group determined that the current at-risk data in the early warning system could be misinterpreted by staff with the potential for students to be misplaced in prevention or intervention programs. In conclusion, another weakness was added as, (8) misevaluating kids on data for placement in programs.

In regard to using the early warning system to support the social transition of freshmen, there was much more discrepancy in the interpretation of the interview data that was clarified through discussion. This particular section of work was the most reminiscent of the “look, think, act” cycle. Initially, my findings indicated that there was only one strength for using the early warning system to socially support freshmen for prevention and intervention: the communication with and around the student was easier. This referenced the interview data where administrators talked about using the data to “know” kids in order to support them. However, the members of the focus group enhanced the findings by clarifying that using the data tool also supported freshmen socially for prevention and intervention in this way: (1) higher
needs freshmen are assigned to an AGIS leader or a Link Crew student to build relationships, (2) attendance in real time allowed staff to see kids disengaged with school with plans to find connections for them, (3) connecting students to community based programs based on data showing troubled or disengaged kids, and (4) safety considerations; the data allowed them to see freshmen exhibiting harmful behaviors so staff could intervene, provide supports, and track student improvement. The evolution of our answers continued to change as we used the matrix to look and think carefully at the problem before acting and recording the solutions needed.

Considering the weaknesses of using the early warning system for social support of freshmen prevention and intervention, the group referenced strength #1 regarding the ease of communication with and around the student based on data. The participants noted that some data were limited due to confidentiality and not being available to all staff, particularly with teachers who don’t have access to counselor reflections or administrator discipline notes housed within the early warning system. In other words, ease of communication with a student due to access to data in the early warning system could only be “owned by people who engage in the conversation.” It implied that social support was limited to only those who could engage in a conversation with and around a student’s background because they had access to data that allowed them to “know the story” behind each kid.

This rich discussion using all three stages of action research allowed us to come to some common understandings of how the early warning system was being used to support freshmen through a research-based transition framework; a lens that was new for all participants in the group. It should be noted that throughout this hour of discussion, use of the data in the early warning system was not solely focused on freshman students. Participants spoke generally about use of the tool with all students although this analysis process created a foundation for the group
to narrow the student focus and consider actionable steps to improve the transition of freshmen. In the second hour of the focus group meeting, we focused more specifically on the “Act” stage of action research for immediate and future purposes.

Community of active problem solvers. In the third and final stage of Stringer’s (2007) “look, think, act” cycle, the “Act” phase is intended to follow several stages of action planning where “participants will work creatively to formulate actions that lead to a resolution of the problem(s)” (p. 125). Stringer adds that the framework of action includes three phases: (1) planning, (2) implementing, and (3) reviewing. He also notes that at some point an action plan should go through a process of evaluation. For this part of the focus group meeting, I only attended to a portion of the planning phase with my focus group participants. The purpose of planning is to have these stakeholders “devise a course of action that ‘makes sense’ to them” where they would “engage in activities that they see as purposeful and productive” and are “likely to invest considerable time and energy in research activities, developing a sense of ownership that maximizes the likelihood of success” (p. 127). The planning phase includes identifying priorities for action, creating an action plan of tasks and activities with outcome statements, and conducting a quality check where “these activities are checked against a set of principles” to “ensure that each of the participants is aware of the need to perform” (Stringer, 2007, p. 132). Having only an hour with my participants, I started the prioritizing process by first identifying the major issues that needed to be addressed regarding use of an early warning system to support the transition of freshmen.

As a community of active problem solvers, a phrase borrowed from the innovative high school CAPS program I observed in my early years of teaching where teachers and students came together to engage in critical thinking strategies to solve problems, we engaged in the
planning process by listing strategies or recommendations for improving the use of an early warning system as a means to provide supports and interventions for struggling freshmen. While the discussion also created more questions for the team to answer, we initiated the groundwork for an action plan.

The group identified nine topics to be addressed in an action plan that were intended for all school staff, and in some cases, specific staff members. (1) Provide professional development for teachers to learn more about the early warning system to foster ownership of their data where they can put a “face to the data” in terms of seeing the student behind the numbers. (2) Offer question and answer sessions as a strategy to have conversation around transition and the early warning system. (3) Learn more about setting student growth goals. (4) Provide opportunities for colleagues to share best practices on the most useful data. (5) Provide professional development to clarify the philosophical underpinnings of the early warning system in order to make sense of the data. (6) Consider ways to look at our kids more broadly to meet the needs of all incoming students, not just our low achievers. (7) Train staff to understand “at-risk” data as a predictive tool. And the final topics broached questions to be addressed in an action plan. (8) How do we evaluate programs (like Bridges)? And finally, (9) how do we build a culture towards disposition to our data? Do alerts work? We can do alerts, but should we?

The start of the planning stage in the “Act” process allowed us to come together as a community of active problem solvers to share our diverse knowledge and expertise in order to plan for solutions to the specific problems in our school community as it applied to using an early warning system to help students transition from middle to high school. At the close of the focus group meeting, I thanked the participants for their full participation in an action research process that was closing for them in terms of meeting the requirements of participating in this
action research study. However, I shared that after the completion of my study, the action plan we had started would be completed with an intent of implementation.

Summary

In summary, the high school administrators participating in this study were highly engaged in processes to assist freshmen in the transition from middle to high school. While they were not necessarily thinking of transition in terms of Cauley and Jovanovich’s (2006) academic, social, and procedural framework, it was clear that they offered a variety of events and programs to meet the needs of incoming freshmen. Their high schools offered a wide variety of large scale, impersonal events to meet the procedural needs of their students. Registration of 8th graders in the spring along with freshman orientation in the late summer were examples of freshman events that served to acclimate students to high school life. Specific freshman programs, most often driven by the academic needs of freshmen based on middle school grades and test scores, were also implemented to target certain populations of students for specialized classes or experiences. Rarely discussed were events and programs specifically designed and implemented to meet the social needs of freshmen.

The participants acknowledged that special freshman events and programs were necessary due to the high degree of poor performance with freshmen; academically, behaviorally, and in regard to attendance. Freshman teachers were noted as needing a great deal of support to help their students experience success although participants admitted not enough support was provided. Resources were considered to be very limited which hampered attempts to provide the supports teachers wanted and needed.

The early warning system was viewed as a very beneficial tool to assist in the prevention and intervention efforts of all students, not just freshmen. Administrators largely used the data
tool as a preventative measure by identifying incoming freshmen who were struggling academically or behaviorally and placing them in certain programs to increase the likelihood of their success. The early warning system was also used to provide immediate interventions to freshmen who exhibited signs of academic failure or non-compliance to school rules. Both prevention and intervention measures were viewed as key strategies to support freshmen and decrease their chances of dropping out of school.

Use of the early warning system also came with some concerns especially as it related to the people who used it. High school staff did not necessarily have the technology skills to navigate through the early warning system. The sheer magnitude of the data prompted comments like “cumbersome” with “little time” to delve into the mass amount of information. Worries about staff’s ability to appropriately analyze the data were voiced too. Despite the concerns, satisfaction with the early warning system was evident with suggestions for professional development and more time to better understand and utilize the data tool.
CHAPTER FOUR

OUTCOMES OF THE STUDY

Discussion

The purpose of this action research study was to examine the role of an early warning system as a technological tool used by administrators to support high school freshmen in a district. The research questions guiding this study were: (a) What are the perceptions of high school administrators regarding the transition processes occurring for freshmen? (b) How is the early warning system used to support students? and (c) In what ways does an early warning system inform the intervention and support practices for transitioning freshmen?

In this chapter I present a discussion of the research questions based on the findings of my participants’ procedural use of a newly adopted early warning system to support students in the transition from middle to high school. I use the Cauley and Jovanovich transition framework as a lens to frame that discussion through each research question. The limitations of the study are provided with considerations for transferability of findings. The conclusions of the study are offered based on my findings of the data from the interviews with my participants. I present recommendations for the school district to improve practice considering the genesis of the participants’ action plan created in the “Act” phase of the study. Finally, implications for practice are stated regarding use of an early warning system as a technological tool to help administrators provide meaningful interventions for freshman transition.

This report shared research stating that students who successfully transition to high school stay in school longer and increase their opportunity to graduate from high school. Understanding the unique and difficult socialization process of teenagers from middle to high school is a critical step in supporting that successful transition. While the review of the literature
suggests that a dropout crisis remains across the nation, educators continue to seek strategies and best practices that keep students actively engaged in school through graduation. Administrators now have access to early warning systems for early identification of struggling students who can be specifically targeted for support and intervention, especially during the transition from middle to high school, a particularly difficult time for students. Coupling the use of an early warning system through the Cauley and Jovanovich transition framework is a strategy that acknowledges the unique socialization process of students by intentionally identifying the individual needs of incoming freshmen. The findings of this study may have significant long-term implications for increasing the freshman retention rate and decreasing the high school dropout rate with short-term outcomes for discovering how an early warning system can be used to support struggling freshmen.

The high school administrators in this study were all actively engaged in activities and programs that served to assist freshmen in the transition from middle to high school. The participants were also users of the district’s data dashboard that houses the early warning system. The data were clear that the participants in this study were frequent users of the data dashboard based on the average number of logins to the data tool in comparison to the high school administrators who chose not to participate in the study. Their involvement in both constructs of how an early warning system is used within a freshman transition framework is considered in context of the following sections.

**Freshman Transition**

The first research question of this study asked: What are the perceptions of high school administrators regarding their transition processes occurring for freshmen? I discovered that the administrators had a strong awareness around the need to support incoming freshmen. They
acknowledged that freshman students were “frequent flyers” in the student office due to poor behavior and attendance coupled with lack of academic progress. They recognized that freshmen had special needs in the transition process to support the acclimation to high school and they were implementing a variety of events and programs to aid in that process. However, the participants’ events and programs for freshmen were not mindfully crafted around Cauley and Jovanovich’s transition framework (2006) where considerations for students’ procedural, academic, and social needs are defined.

The introduction of the framework to the participants in the focus group meeting provided context in how their current practices aligned with the researched needs of freshmen. Their current practices were categorized within the framework and revealed that they were offering a variety of transition strategies that were, by chance and not by design, meeting the individual needs of freshmen. Large scale events like registration and freshman orientation were transition strategies used to support the procedural needs of students. Special programs and courses like, Bridges and math support classes were implemented to support the academic needs of students. And Link Crew students were an example of a strategy used to help freshmen build relationships with other students which served to address the social needs of students.

Analyzing transition practices through a procedural, social, and academic lens is an opportune way for administrators to look carefully for potential gaps in their freshman transition processes. It provides a critical lens that serves to intentionally meet the needs of individual students to support them in the transition from middle to high school. Knowing that Cauley and Jovanovich caution that the social lens is the category that garners the least amount of attention in transition, administrators can craft their school’s transition plan with that gap in mind.
Early Warning System

The second research question sought to answer: How is the early warning system used to support students? It became clear that the early warning system was being used as a tool to better understand a student’s background. Seen as a way to “know” the student better, the rich data on academic, attendance, and behavioral history along with the rich information of anecdotal notes from former counselors and administrators provided context for student support. Administrators felt they could “communicate” better with students and their parents based on the rich information in the data tool. Support to students was offered in two categories as a finding of this study: prevention and intervention. Programs for prevention used early warning system data to place students in specialized programs before the student experienced a lack of success. Programs or activities for intervention used early warning system data to place students in specialized programs or activities when the student demonstrated poor performance as an intervention step to get them back on track. There was no evidence that the administrators in this study were specifically using the early warning system through a student transition framework designed to support freshmen.

While the early warning system data can certainly provide rich data on a student’s academic, attendance, and behavioral history, much caution should be taken when that data are used to diagnose or predict the reasons behind a student’s lack of progress, especially when the results impact a student’s schedule or determines placement into a program. Administrators should take caution when using an early warning system for predictive analysis. Predictive analytics is a field of study new to educators with few administrators having formal training in the analysis of data for predictive purposes. There exists a potential for harm to students if early warning system data are used in detrimental ways unforeseen by administrators or high school
staff members due to lack of knowledge and experience on how to analyze the information. The study participants specifically voiced concerns that there were staff members who didn’t really understand the data. The comprehensive nature of the tool was one problem, but having the ability to appropriately interpret the data was an entirely different matter. Rethinam (2014, ¶ 16) suggests that:

   Districts need to put systems in place to train district and school leaders and staff on how to use the results. District leaders need to be trained on how to use their system’s data for policy implications, principals on best resource allocations, and teachers and other staff on instructional support, interventions and effectively addressing individualized student needs.

   When users of the data are not adequately trained in basic technology use and data analysis, particularly as it is applied to predictive analytics, there is a potential for harm to students. When users of the data are unaware of a freshman transition framework on how to specifically use an early warning system to meet the researched needs of freshmen, again, there is a potential for harm to students. If there is no evaluation of prevention or intervention programs crafted by administrators to support students, then there is no way to truly analyze whether or not the programs are beneficial to students. While tools of technology can provide a wealth of data to create support programs, school systems must heed the unintended consequences that may surface when implementation of a technology tool, like an early warning system, is not handled mindfully.

   **An Early Warning System Informs Transition Practices**

   And finally, the third research question asked: In what ways does an early warning system inform the intervention and support practices for transitioning freshmen? The cross
classification matrix activity during the focus group meeting played a role in mindfully combining the constructs of a district’s early warning system practices with the Cauley and Jovanovich transition framework to observe if and in what ways the data tool was being used to specifically inform transition practices.

Before discussing the findings as they pertain to how administrators use the system, the activity data archived by the system was examined. The analysis of data revealed that from September of 2012, the launch of the data dashboard, to June of 2014, the 9 study participants logged into the data dashboard 2.4 times more than the other 12 high school administrators who did not volunteer for this study (see Table 1). To provide context for a closer comparison, consider this login data over the two academic school years, or 360 days of school with students present. The 9 study participants averaged 3.5 logins each day in comparison to 1.5 logins each day for non-participants. All administrators had equal access to the data dashboard within the designated time frame and were held to the same expectations for use and access of data. To clarify, the data demonstrate logins to the broader data dashboard because it is the only means of accessing the early warning system. There is no single access point to the early warning system as it is comprised of numerous documents within it and would be too cumbersome and unnecessary to track for the scope of this study. For a more thorough investigation of data dashboard usage, I considered another comparison group to inform the analysis section of this study. For example, each of the three participating principals averaged 15% of logins compared to 6% for each of the six participating assistant principals. Again, to provide context for comparison, the principals averaged 4.8 logins each day over the two academic school years and 2.9 logins each day for assistant principals. Therefore, these participants are frequent users of
the data dashboard in comparison to other administrators in this district who chose not to participate in this study.

Table 1

*Data Dashboard Logins – September 2012 to June 2014*

<table>
<thead>
<tr>
<th>High School Administrator Groups</th>
<th>N</th>
<th>Total Logins</th>
<th>Average Logins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study participants</td>
<td>9</td>
<td>11,532</td>
<td>1281</td>
</tr>
<tr>
<td>Study non-participants</td>
<td>12</td>
<td>6428</td>
<td>537</td>
</tr>
<tr>
<td>Principal participants</td>
<td>3</td>
<td>5229</td>
<td>1743</td>
</tr>
<tr>
<td>Assistant principal participants</td>
<td>6</td>
<td>6303</td>
<td>1050</td>
</tr>
</tbody>
</table>

The participants were using early warning system data to support freshman transition through a prevention and intervention lens. Considering the academic, procedural, and social transition framework, the early warning system was primarily used for placement of students in specialized programs based on their poor academic performance. For a preventative approach, students were placed in programs before they arrived to high school. For the purpose of intervention, students in the course of the year who started showing signs of poor performance in behavior, attendance, or academics were referred to different programs or interventions to support the students and get them back on track academically. In this case, the administrators and counselors were using early warning system data as a predictive tool: both to make predictions about how a student’s past performance in middle school should determine
placement into programs and to make predictions about a student’s current performance as a tool for intervention that may involve placement into a program.

As for the social lens of the framework, the administrators voiced some use of the early warning system for prevention and intervention purposes to meet the social needs of students. As the data tool provided background information on the students’ middle school performance, the participants noted that this information helped them “know” the student better in a personalized sense which could have implications for program placement and even referrals to community-based agencies as a support mechanism. However, Cauley and Jovanovich’s social framework speaks more to freshman student anxiety around making friends, getting along with students, bullying, being liked by their teachers, and accessing sports and clubs. There was no evidence that the administrators were using the tool to meet those specific student anxieties. Cauley and Jovanovich identify the social lens of the transition framework to be the weakest area of focus for high schools. Helping students make friends, deal with bullies, and join clubs and sports are tasks that may or may not require the use of an early warning system. But as administrators consider a variety of tools and strategies to meet those social needs, taking a deeper look at the potential for varied uses of an early warning system may provide some answers.

Regarding the procedural lens of the framework, there was no evidence of school officials using the early warning system data to meet the procedural needs of students. There were many examples of large scale transition events, like 8th Grade Parent Night, but the early warning system did not play a role.

It is clear that an early warning system can play a significant role in meeting the academic transitioning needs of freshmen. With clear evidence of student performance based on
patterns in grades, attendance, and behavior data, the information can be used to support students in a variety of ways that are preventative steps and for purposes of intervention. While the information is there, as previously stated, there remains the need for school officials to be adequately trained in use of the technology and data analysis in order to provide the most appropriate supports for students that avoids any risk of harm.

An early warning system has not been conclusively shown to support the social or procedural needs of students in this study. As early warning systems are new to schools as may also be the case for high school administrators with the Cauley and Jovanovich transition framework, this is an area that needs more exploration. For Cauley and Jovanovich, the social lens was used more in reference to kids making friends and “fitting in” while the administrators of this study referred to the social lens more as a means of knowing students’ social and emotional history in order to connect them to appropriate programs or to provide support by merely understanding the student better. Use of an early warning system is more apropos to the latter than the former.

This process of combining the constructs of an early warning system with a transition framework lens was a valuable activity to not only analyze the current practices of the study participants in terms of supporting students in the transition process, but more importantly, it provided an opportunity to build an action plan for to improve the transition of students in the future.

Limitations

The findings of this study include several limitations. First, participants’ responses may be inhibited by my positionality in the dual role of central office administrator and researcher. Further, my interest in issues surrounding middle to high school transition presents a potential
bias in the analysis of this research study. I worked in the same high school for 22 years as a
teacher and assistant principal. As a teacher I was the chairperson for the 9th Grade Committee
which researched strategies to help freshmen be more academically and socially successful. As
an administrator, I was in charge of the Freshman Core Program for five years. I continue to
research methods and strategies to help freshman students be successful. This issue and its direct
relationship to the dropout rate have been a career focus; therefore, there exists the potential for
bias in my data analysis as I may be looking for solutions that aren’t apparent in the interview
data but are prevalent in my thinking from years of research and experience.

Furthermore, my sample of participants come from one large urban school district that is
using a data dashboard model that is garnering national attention for its design and wealth of
organized information. They are a unique sample in comparison to districts across the nation. In
addition, there exists another unique factor with this sample group. I initially wondered if my
participant volunteers were attracted to the study based on their comfort level with the early
warning system in comparison to all high school administrators within the district who did not
volunteer. In examining the collected data regarding my participants’ use of the tool as indicated
by login evidence supported the potential of this bias. The analysis of data revealed that from
September of 2012, the launch of the data dashboard, to June of 2014, my 9 participants logged
into the data dashboard 2.4 times more than the other 12 high school administrators who did not
volunteer for this study. Therefore, these participants were frequent users of the data dashboard
in comparison to other administrators in this district who chose not to participate in this study.
As a limitation, they are a unique sample of participants and this uniqueness may compromise
transferability of findings.
Finally, the use of an early warning system is new technology in the field of education. The participants, including myself, have limited to no formal training in predictive analytics, a field that is typically associated with the business world. Findings may be confounded due to the participants’ misinterpretations involving the use of an early warning system.

Conclusions

The high school administrators in this large, comprehensive school district are well aware of the struggles of freshmen in the transition from middle to high school and throughout the freshman year. They engage teams of fellow administrators, counselors, teachers, and Achievement Gap Intervention Specialists to identify freshmen who are struggling and find ways to support them. One of the tools they rely on is the district’s data dashboard that houses an early warning system that highlights students who are having academic, attendance, and behavior concerns. The findings of this study suggest the following considerations to meaningfully support freshmen:

1. The transition of freshmen from middle to high school is more clearly defined through the Cauley and Jovanovich (2006) transition framework based on the researched needs of freshmen. This framework should be used as a filter for a school’s planning around interventions and supports for students.

2. High school staff are not adequately trained in the area of freshman transition. Understanding the complex needs of freshman during this stage of their developmental teenage years requires professional development in order to provide adequate supports.

3. Use of the early warning system is a useful tool to identify freshmen struggling academically, behaviorally, and in attendance. The data are informative with limited
concerns of accuracy. This information is very helpful in assigning students to prevention and intervention programs for support.

4. High school staff are not adequately trained in use of an early warning system. The data are large and comprehensive with time needed to learn how to navigate around the data. Training in data interpretation and predictive analytics is also needed as critical for appropriate placement of students in specialized programs and intervention practices.

5. The transition from middle to high school requires adequate funding to support freshmen, transition programs and teacher training.

**Recommendations**

It is highly recommended that this school district reinstate freshman transition as a priority focus with adequate funding. It is clear that an early warning system is being used with the intention of supporting freshmen in the transition to high school and it is also clear that there exists the risk of students being misplaced in programs by a variety of staff members who are not adequately trained on data analysis within an early warning system. Establishing freshman transition as a priority focus coupled with the participants’ experiences through participation in this study could clarify best practices for supporting students in the transition to high school.

The participants’ engagement in the start of an action plan provide a guideline of recommendations based on their input and my added observations. This study revealed that high school staff need more professional development in navigating through an early warning system. This particular district data dashboard houses a comprehensive amount of information and expectations for use of that data need to be met with time and training indicating its level of importance. In addition, it is recommended that the school district require administrators to be
specifically trained in the area of predictive analytics in order to fully understand the nature of the early warning system data. This will also help them realize the power and influence they have to make programmatic decisions for students that can be helpful and potentially detrimental. There is also a need for college programs that train educators for administration to equally share the responsibility of training in this area. Once administrators appropriately assign prevention and interventions for transitioning freshmen, it is recommended that those programs or interventions be systematically evaluated for evidence of success.

I also recommend that each school in this district creates a comprehensive freshman transition program based on the Cauley and Jovanovich framework. This framework provides a lens for high school staff to meet the needs of transitioning freshmen based on student needs as voiced by students, not an adult’s perception of student needs. Filtering a school’s academic, social, and procedural transition practices will reveal strengths in one area and weaknesses in another area where balancing those practices offers the most meaningful support for all students. It is also recommended that use of this transition lens extend beyond students who are struggling, but instead serves to meet the transitional needs of all freshmen.

The participants in this study are fully engaged in the support of freshmen so it’s important to hear their voices when they share frustrations about barriers that keep them from supporting the students. For example, while they understood the statistical benchmarks of the “at-risk report,” they rendered it almost useless in some cases because it didn’t show “growth over time.” I recommend that the district consider creating a data viz that demonstrates a student’s improved performance, especially in regard to behavior. In addition, the administrators voiced concerns over not having enough resources to support the transitional needs of freshmen.
And finally, it is recommended that the participants re-engage in the “Act” process by continuing to build a solid action plan that becomes a guiding force on how to use an early warning system to support the academic, social, and procedural needs of students transitioning from middle to high school.

**Implications**

As school districts across the nation continue to confront the dropout problem, they will search for meaningful ways to keep students engaged in school with expectations for graduation and successful post-secondary pursuits. “Meaningful ways” carries a heavy burden of definition and implementation that are an integral part of an educator’s life. One meaningful way for increasing the likelihood of students graduating is the successful transition of students from middle to high school. This is a precarious time for significant changes in the life of a teenager still experiencing developmental changes both physically and psychologically. However, schools that choose to take this transition process to heart may reap the benefits of not only improved graduation rates, but positively impacting the lives of many students.

The findings of this study suggest that use of an early warning system within the context of a freshman transition framework may provide meaningful ways for students to smoothly transition to high school. The administrators in this study used an early warning system in their efforts to identify at-risk students to provide support through prevention and intervention programs. While those supports were not intentionally framed through Cauley and Jovanovich’s (2006) transition framework, they were applied in a focus group setting that clarified strengths and weaknesses in the implementation of those supports.

An early warning system is a key tool to assist administrators in identifying students at risk of graduating. But using this technology tool has larger implications than just freshman
transition. Using research-based at-risk benchmarks, students are identified as at risk as early as the elementary grades. Predictive analytics allows for intervention and support systems to take place well before the high school years. However, early warning systems can be a powerful and influential tool if placed in the hands of educators well-trained to use it. Without adequate training, there are risks to students where interventions and programs are more harmful than beneficial. Gatta (2014) reminds us that, “Many school system leaders describe their organization as data rich and information poor,” where “the key to leveraging analytics is asking the right questions.” It is unclear if administrators are currently asking the right questions for using an early warning system to support freshmen or any students. As schools rely more and more on technology, educators will need to reinvent teacher and administrator training programs to prepare for the complexity of using technological tools to solve complex educational issues. In short, the complexity, power, and influence of predictive analytics requires more than simply having access to an early warning system.

While professional development for educators is necessary in the field of early warning systems, the same is true for their training in contextualizing the middle to high school transition experience of freshmen. There is little doubt that schools are aware of the need for freshmen to be supported. They traditionally have the highest failure rates and often the most incidents of discipline with educators wondering, “What’s wrong with these students?” But educators also need to understand the broader context of transition through the eyes of the students. Students report procedural anxieties about acclimating to a new environment like finding their lockers and classrooms. They report academic anxieties about having more and harder homework coupled with the high expectations of high school teachers. And they report social concerns about fitting in with other students, making friends, fighting and bullying; a broad area with minimal
transition support. Supports and interventions should be strategically placed around this framework. As the early warning system plays a significant role in the context of academic support, more investigation is warranted to see if it plays a more vital role in the social and procedural constructs.

In this report, the early warning system and freshman transition framework focused unintentionally on the needs of struggling students. The nature of an early warning system is to identify “at-risk” students. However, there are implications for transition that include students who appear to be doing well at school, don’t show up on the early warning system, but drop out of school anyway. While comparatively those numbers may be small, there are still students who need systems of support where indicators of struggling and stress are not represented numerically in a data tool. School systems would be wise to think broadly in terms of how they gather data on students at risk of dropping out.

Finally, unlike the topic of freshman transition with ample research material, there is scarce research on how early warning systems are implemented in schools; even more so with the specificity of using the data tool in the context of freshman transition. The findings of this study hope to contribute to the growing body of knowledge surrounding the use of early warning systems by educators as a technological tool to improve student performance which will extend to the weak body of related research regarding predictive analytics in the field of education.

Personal Reflection

The topic of freshman transition has been a personal interest my entire career. From my first years as a teacher of 9th Grade English where I wondered aloud with my peers, “What’s wrong with these freshmen?” to my later years as an administrator leading a Freshman Transition Program, I have reached for solutions to help students transition smoothly and successfully to
their first year of high school. The amount of research I have done in this area has enlightened me immensely to the point of wishing I could go back to those early years of teaching where I could serve my failing freshmen so much better. I wonder how many other teachers and administrators struggle with the same question, same frustrations, and same lack of knowledge to appropriately support freshmen? To have the opportunity to address this topic with my peers and provide context and support to high school educators regarding this national problem that negatively impacts graduation rates has been rewarding.

Adding the use of an early warning system to the topic of freshman transition was also an attempt to answer the question, “What’s wrong with these freshmen?” As this is very new technology, my study only compounded the issues surrounding the overarching topic of transition. I uncovered a host of concerns around the early warning system regarding: general technology competency, data interpretation, and predictive analytics. However, through exposure of these concerns comes hope for people to come together and problem solve around it.

Hence the value of action research, an opportunity to bring stakeholders together who are experiencing the same problem with the added benefit of participating in a democratic process to “Think” about the problem and “Act” on it as well. I believe my positionality as an “insider” working with other “insiders” supported a trusting relationship with my participants, especially as we came together in the focus group setting to “get after it.” We were a determined group of administrators who were digging in to a problem, trying to understand it, and looking for solutions. I was never concerned about my positionality as a central office administrator to be a barrier in this democratic process. Many of the participants I have known and been close friends with for years so it felt comfortable and natural for me to interact with them. As I lead professional development for this group of administrators as a part of my job duties, it felt like a
smooth transition to have their engagement in this study. I hope my intentional efforts to follow
the guidelines of action research, with considerations for positionality, confidentiality, and
engagement in a democratic process, fostered the same mutual feelings of trust with my
participants.
REFERENCES


McIntosh, J., & White, S. (2006). Building for freshman success: High schools working as


APPENDIX A

Participants Aligned to Demographics by High School

Table 1

*Participants Aligned to Demographics by High School*

<table>
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APPENDIX B

Interview Guide

Topic: Description of job responsibilities
Question: Tell me about your work.
Question: How do you define your primary responsibilities?

Topic: Interactions with freshmen
Question: Tell me about your interactions with freshmen.
Question: What does the student transition to high school look like at your school?
Question: How are freshmen supported in your school?
Question: How do you support teachers in their work with freshmen?

Topic: The early warning system
Question: Tell me about the EWS. Can you explain it to me?
Question: How are you using it?
Question: How are other staff members using it?
Question: What do you like about it?
Question: What do you dislike about it?

Topic: Closing
Question: What questions or comments would you like to add?
Student Transition Framework (Cauley & Jovanovich, 2006)

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| | | | |
| Action Plan - Procedural | | | |

**Participant Use of an EWS**