

THE UNCHANGING NATURE OF HIGH SCHOOLS: AN ACTION RESEARCH
STUDY OF ONE DISTRICT'S ATTEMPT TO ALTER THE TIME STRUCTURE
OF HIGH SCHOOLS

By

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Abstract

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The purpose of this action research study was to improve communication pathways and feedback loops used by one school district in its attempt to create a common use of time in high schools to maximize resources and improve student learning. Part of this study's intent was to solicit and protect the voices of institutional entrepreneurs in their efforts to challenge the traditional modes of doing business. In doing so, it was anticipated that our high schools would be better situated to respond to the adaptive challenges with which they are faced today.

A major outcome of the study was a better understanding of the necessity for inclusion of stakeholders on the frontend of a change initiative. Resistance, while substantial during the first change attempt, was much more muted the second go around. Secondly, this study confirmed that being part of the same financial system tied to the state plays a role in the isomorphic nature of organizations as evidenced by the eventual directive by the superintendent for one school to change to become more like other schools in the district.

TABLE OF CONTENTS

| | |
|---|-----|
| ACKNOWLEDGEMENTS | i |
| ABSTRACT | iii |
| LIST OF TABLES | vi |
| CHAPTER ONE | |
| 1. INTRODUCTION..... | 1 |
| 2. BACKGROUND..... | 1 |
| 3. ACTION RESEARCH..... | 2 |
| 4. THE STUDY..... | 6 |
| 5. POSITIONALITY..... | 19 |
| 6. RESEARCH ETHICS | 20 |
| CHAPTER TWO: LITERATURE REVIEW | |
| 1. INTRODUCTION..... | 23 |
| 2. INSTITUTIONALISM | 24 |
| 3. HIGH SCHOOL SCHEDULING | 28 |
| Teacher Practices and Strategies | 29 |
| Student Achievement..... | 32 |
| School Climate | 34 |
| The Use of Time | 35 |
| 4. SUMMARY | 37 |
| CHAPTER THREE: REPORT OF THE STUDY | |
| 1. INTRODUCTION..... | 40 |
| 2. GOOD, BUT NOT GREAT | 41 |
| 3. OPTIMAL HIGH SCHOOL EXPERIENCE..... | 47 |
| 4. OPENING UP ACCESS | 52 |
| 5. THE HIGH SCHOOL SCHEDULE COMMITTEE | 58 |
| Charter and Creation of Committee..... | 59 |

| | |
|--|-----|
| Foundational Work of the Committee | 61 |
| Quantitative Analysis on Contact Time and Math Achievement | 69 |
| The Emergence of Themes and the Creation of Criteria | 76 |
| Schedule Proposals and Final Vote | 79 |
| Contact Time | 85 |
| Opportunity..... | 88 |
| Extended Time Periods..... | 88 |
| Connectivity/Advisory..... | 89 |
| Teacher Planning/Class Size/Caseload..... | 89 |
| 6. THE RESPONSE | 90 |
| 7. PRINCIPAL RESPONSE TO THE SUPERINTENDENT’S DIRECTIVES | 97 |
| CHAPTER FOUR: OUTCOMES AND CONCLUSIONS | |
| 1. INTRODUCTION | 106 |
| 2. OUTCOMES OF THE STUDY | 106 |
| The Entrepreneurial Force of Teaching and Learning and Parents | 106 |
| External Pressure Responses | 109 |
| Isomorphic Change..... | 110 |
| 3. RECOMMENDATIONS AND IMPLICATIONS | 112 |
| 4. STUDY SIGNIFICANCE | 113 |
| 5. ORGANIZATIONAL LEARNING AND SELF REFLECTION | 114 |
| REFERENCES | 116 |
| APPENDIX | |
| A. PRINCIPAL INTERVIEW QUERY GUIDE | 120 |
| B. DISTRICT SCHEDULE COMMITTEE CHARTER | 121 |
| C. SCHOOL COMPARISON DATA TABLE | 122 |

LIST OF TABLES

| | |
|--|-----|
| 1. Table 1.1: School Comparison Data 2010 | 14 |
| 2. Table 1.2: The Principals | 15 |
| 3. Table 1.3: The High School Schedule Committee..... | 19 |
| 4. Table 2.1: PSAT Descriptive Statistics by School..... | 83 |
| 5. Table 2.2: ANOVA of PSAT Scores in Geometry by School..... | 84 |
| 6. Table 2.3: ANOVA of PSAT Score in Algebra by School..... | 84 |
| 7. Table 2.4: Mean Differences in Geometry PSAT Scores Between Schools | 86 |
| 8. Table 2.5: 2011 EOC 1- Algebra | 100 |
| 9. Table 2.6: 2011 EOC 2- Geometry | 101 |

CHAPTER ONE

INTRODUCTION

This is an action research study intended to improve communication pathways and feedback loops used by one school district in its attempt to create a common use of time in high schools to maximize resources and improve student learning. Part of this study's intent was to solicit and protect the voices of institutional entrepreneurs in their efforts to challenge the traditional modes of doing business. In doing so, it was anticipated that our high schools would be better situated to respond to the adaptive challenges with which they are faced today. As the executive director of high schools, I supervised the principals of all the schools involved in this initiative.

Background

Former Education Secretary Richard Riley once called the American high school "one of the most enduring and unchanging institutions in American society." With the enacting of legislative acts like *Race to the Top* coupled with the efforts of influential organizations like the Gates Foundation; public schools, and high schools specifically, have become targets for organizational change efforts. Constituents are demanding innovation and how educational leaders answer this challenge is being closely scrutinized.

Historically, the loose coupling of the public school system has allowed high schools to withstand various external pressures without undertaking significant change. The independence exercised by school districts, principals, teachers, and parents has made it difficult for any one group to cause change to occur (Weick, 1976). The similarities between today's high schools and those of fifty years ago are readily evident. Most high schools start and end at

approximately the same time and have about six classes a day that are roughly one hour in length. The school day is broken into discrete areas of study and the schools use a credit based system with seat time requirements. Students are still grouped, for the most part, with about thirty (30) of their age equivalent peers in a content-centered classroom. A bell rings, and the students inevitably have about five minutes to find another room where a similar experience awaits them.

Because high schools, as institutions, have been so unchanging, it is rational to surmise that high school staffs find it difficult to prepare students for the “adaptive expertise” required to be adequately prepared and confident to pursue the challenges of the 21st century (Bransford, 2005).

Schools are socially constructed organizations bounded by certain missions and goals. Researchers have found that Darwin’s theory of ecological evolution is applicable in a school setting; thus school systems, too, go through an evolutionary process that results in either change, adaptability, retention, or even extinction (Aldrich & Ruef, 2006).

Given the evolutionary nature of organizations, stakeholders wonder how high schools have remained so unchanging through the decades. More importantly, given the immense pressure of reform-minded powerful organizations and government leaders, interested parties doubt that such a static existence can be maintained for much longer by the institution known as the American High School.

Action Research

Action Research purports that generalizable solutions to local problems are not necessarily reliable, nor effective. According to proponents of action research, the purpose of research should be to find a viable resolution that meets the needs of the native stakeholders

faced with the identified difficulty. In addition, those who were traditionally passive subjects should be active participants in the research. By engaging members of an organization directly in inquiry, the result is improved understanding that can result in an improved quality and/or efficiency in both the organization and the lives of the community members (Stringer, 2007). Stringer uses a “basic action research routine” that involves three distinct parts: look, think and act.

Looking involves gathering data and information that should allow the researchers to create an accurate picture of the present situation that is easily definable by stakeholders and can be shared and described. The thinking phase focuses upon analysis and interpretation. Inquiry should result in an accurate portrayal of what is currently happening that results in the generation of a theory as to why the phenomenon is occurring. Lastly, an action plan should be the result, where community members agree on a plan moving forward to successfully address the problem that was the focus of the study.

The intent of this action research was to improve participation and collaboration of stakeholders in one school district’s process for implementing organizational change via the creation of a common schedule for the use of time in all of the district’s high schools. How district leaders tried to cultivate the high school landscape in order to successfully grow a strategic change initiative was another focus of this study. Areas of study such as organizational change and how people frame and make meaning of change initiatives are well served through a qualitative approach like action research as it allows for story and narrative which provide the contextual understanding of the more nuanced aspects of organizations.

Action research is based on the assumption that “all people affected by or having an effect on an issue should be involved in the process of inquiry” (Stringer, 2007, p. xvi). By using

the action research methodology, not only does the process serve the researcher and those that might benefit from the findings, but those being researched become co-researchers and active agents in the attempt to improve their school and their district (Calhoun, 2002).

In the spring of 2008, the Superintendent of the Independence School District, Dr. Steve Ralston, who was in his first year in the position, decided to change Liberation High School's schedule. Dr. Ralston gave three points for his justification for change at that time.

1. Due to lower academic performance when compared to other district high schools, instructional time needed to be increased in classes, particularly the core academic areas of math, science, English, social studies, and world languages.
2. Aligning Liberation's schedule with the other schools could potentially allow all of the district's students to access courses and programs that did not exist in a student's home school.
3. Common instructional minutes would allow for staff to experience similar professional development with similar expectations around pacing and instruction.

According to the superintendent, Liberation High School was a school with excellent students and teachers but the schedule, and its resulting lack of instructional minutes was placing students and staff at a disadvantage and therefore preventing the school from becoming "great". The superintendent's decision to change Liberation's schedule was made almost exclusively at the district level with little to no input from Liberation staff, students, and parents.

Subsequently, there was significant opposition to his directive. This resistance manifested itself in loud and boisterous community meetings, letters and speeches to the school board, and staff defiance. Realizing that the move would not be readily accepted by his school board or the community in general, the superintendent elected to postpone any change. He

replaced his executive director of high schools, and instructed the new director, the author of this study, to “re-sequence” the work, by creating a process to look at all high school schedules in the district to see what was working and what was not. In addition, this time around, he wanted to ensure that there would be ample opportunity for parent, staff, and community input, before any change would occur. A committee of stakeholders was created to explore a schedule change.

The second attempt to create a common, district-wide, high school schedule was a more inclusive and distributed process. This action research study influenced this second attempt and intended to make use of it as a platform for creating a new paradigm for how district leadership makes and implements strategic decisions moving forward.

Seeking to understand how constituents, including parents, the school board and school leaders, responded to the superintendent’s more collaborative process this time around made action research a sensible approach. Stakeholders in an organization, in this instance; principals, parents, teachers, and students, are integral collaborators in action research who shape and mold the inquiry journey. Herr and Anderson (2005) assert that “inquiry is done *by* or *with* insiders to an organization or community but never *to* or *on* them” (p.3).

The High School Schedule Committee referenced in this study, was the key step in this process. The committee members came with their own unique backgrounds and experiences and their own roles within the organization, they took part in a committee that had an impact on the entire organization and therefore on individuals outside of their own particular sphere or field. Thus, it was deemed necessary for all committee members to have a deeper understanding of all aspects of the organization. Kurt Lewin, considered by many as the father of action research stated that “if you want to truly understand something, try to change it” (Neill, 2004, p. 1).

Much of the committee's work was about gleaning a deeper understanding of the scheduling of all of the district's high schools before recommending any change.

According to the charter and agreed upon rules of the committee, the principals were simply one voice and one vote in a group of twenty people. However, at certain times in the process, their voice proved to be more persuasive. Teachers and students, particularly, looked to the principals during committee meetings for guidance. Parents, however, acted more independently from the field of influence of the principals.

Leadership is a critical factor in successfully implementing any organizational change. Supporting the principals in their efforts to build a community of understanding around the issues explored by this committee was another emphasis of this action research.

The Study

The purpose of this action research study was to improve the communication pathways and feedback loops used by one school district in its attempt to create a common use of time in high schools for the purpose of maximizing resources and improving student learning. I expected to contribute to the creation of a more inclusive culture of decision making that protected the voice of the entrepreneur and those who questioned the status quo. As a researcher, I examined more closely the participation in and response to the work of a chartered committee. Lastly, I used an institutional theoretical frame to gauge and better understand the resistance that occurred as a result of the superintendent's action steps based on the work of this committee. My research questions that guided my study included: Why do organizations change? How do leaders effectively distribute leadership during a change initiative? How do they identify, recruit, and then protect the voices of innovation? What are the roots and motives for resistance, if any, within an organization when its leaders attempt to change it? How does leadership define

and allow for individual autonomy while ensuring that such autonomy does not detract from organizational goals? How does the external environment influence the internal entrepreneurs during a time of change?

For the purposes of this study, individual staff and parents along with the district and school names have been given pseudonyms. The Independence School District is located in an affluent suburb in the Pacific Northwest where academic preparation and rigor permeate the culture. The entire region is heavily influenced by the high technology industry, software specifically, and the aerospace sector. Subsequently there is a highly educated parent base with high expectations around schooling. Approximately 90% of Independence School District graduates go on to some form of college and 68% of those to four-year university. There are three relatively large, comprehensive high schools in the Independence School District; Independence High School, Liberation High School, and Sovereignty High School. In addition there is one small alternative high school called Lion Hill Community High School.

Academic preparation and rigor are key parts of the school district’s mission. Relative to the state averages, the school district performs at very high levels academically. The ethnic makeup of the school district is predominantly white and Asian (See table 1.1).

Table 1.1

School Comparison Data 2010

| | Independence | Sovereignty | Liberation |
|-------------------------------|--------------|-------------|------------|
| Enrollment | 1793 | 1812 | 1166 |
| Free and reduced lunch rate | 6.7% | 2.3% | 13.2% |
| Students in special education | 8% | 4.7% | 10.1% |
| Students White/Asian | 94% | 95.1% | 89.8% |

| | | | |
|-------------------------------------|-------|-------|-------|
| 10 th Grade Reading Pass | 93.8% | 95.5% | 88.3% |
| Algebra Pass | 88.8% | 89% | 82.6% |
| On-time graduation rate | 96.6% | 96.8% | 97.7% |
| Student/teacher ratio | 22 | 23 | 21 |
| Hours per class per semester | 80.7 | 82.5 | 63.3 |

Much of the context for this study was related to the work of the Independence School District High School Schedule Committee. As stated, this committee was the result of a three year process that began in the spring of 2008 when Dr. Ralston initially attempted to change the schedule at Liberation High School. When I was hired as the new executive director of high schools, the superintendent declared that a review of all high school schedules should be conducted and that a recommendation for a common high school schedule for all should be the result.

A portion of this study is an analysis of the responses to and the resulting support or lack thereof for the action steps implemented by the superintendent by different stakeholders. The superintendent's directives were based upon the recommendations passed along by the District Schedule Committee that consisted of principals, teachers, parents, and students.

Principals played an important role in the committee's work. Principals were interviewed regarding not just their participation in the committee meetings, but their input was solicited on whether the committee's work was effective in terms of building a community of understanding. Interviews were approximately one hour in length and conducted at the school building in the spring of 2012.

It was hypothesized that because of the more collaborative process exercised this time, that if the principals' future work were to involve implementing some sort of a schedule change, it would be more readily accepted and embraced by the greater school community this go around.

As an executive director, I directly supervised all of the principals in this study. All were in their current positions in 2008 when Dr. Ralston initially attempted to change Liberation High School's schedule. I met with the principals monthly both as a group and individually. The individual meetings were at the school site and the group meetings were at the district office. Much of the time we spent at these meetings over the last year was spent discussing how to navigate the upcoming schedule conversation and how to bring about desired change. This study aligned closely to the work our principal group was already doing over the last three years.

Table 1.2

The Principals

| Principal | School | Age | Gender | Experience |
|-----------|--------------|-----|--------|------------|
| Polly | Independence | 54 | Female | 7 |
| Linda | Sovereignty | 42 | Female | 11 |
| Mitch | Liberation | 43 | Male | 9 |
| Earl | Lion Hill | 62 | Male | 24 |

Within a month of taking the executive director of high schools position in 2008, I met with the principals to get a better understanding of what they believed were the most pressing issues facing our district's high schools and how best I could support them in addressing these problems. What became clear very quickly was that the principals felt overwhelmed by the

number of change initiatives and programs that they were being asked to implement in their buildings. They conveyed that even when the reform efforts were good in their opinion, that as building leaders, they were lacking a filter to use in gauging the importance and priority of each initiative. Citing the finite amount of time and the capacity of their staffs, they asked if there was a way to sift through the demands of stakeholders in order to prioritize their work which would help them more effectively bring about meaningful change in their schools. For the next three years, our efforts at creating and implementing this “filter” became known as the “Optimal High School Experience” work. Through shared professional development, book studies, and hundreds of hours of collaborative work, common belief statements were created and a mission statement was crafted that states:

Our students live in a dynamic global community. We believe it is our ethical responsibility to prepare ALL our students for the challenges and opportunities of this world. Therefore, we commit to lead a close examination of our students’ current high school experience with the goal of investigating, creating, and implementing the optimal high school experience for ALL students in the Independence School District. (Optimal High School Experience Website Homepage)

By creating a common understanding as to what constitutes an optimal high school experience for our students, we felt more empowered to conduct our work of educational leadership in more meaningful ways. A common set of beliefs allowed us to make changes across the district at the high school level to create more access to quality learning experiences for all students. For example, an on-line learning coordinator position was established in 2009, which allowed us to increase access to on-line courses for students with schedule conflicts and other compelling reasons that necessitated an on-line delivery model. Another step taken was

the elimination of course pre-requisites during the registration process which allowed students greater flexibility when choosing classes. In addition, certain graduation requirements were moved to the middle school level providing more freedom for high school students to choose preferred electives. Most of these measures were enacted to provide more access and flexibility within the current schedule to students at Independence and Sovereignty high schools where the school day is structured in a traditional six period format. There was less demand for these reforms at Liberation due to their four by four block schedule that already provided ample flexibility with eight classes per student per semester. Instead, the question of adequate instructional minutes was the central issue at Liberation High School. That question has still not been answered by these reform measures and that is the major reason why the High School Schedule Committee was created.

The bulk of the work around creating a common high school schedule was performed by the Independence School District High School Schedule Committee. Along with the high school principals, I received a charter from the superintendent directing that a committee be created to investigate a common high school schedule for all district high schools. The charter stated that the charge of the committee was: “To study and design a plan for the common use of the resource of time to effectively improve learning for all high school students, specifically to design a common district-wide schedule for the high school educational program.”

Membership on the committee was set as follows: One principal from each high school for a total of four (4); three certificated staff from each comprehensive high school and one certificated staff from the alternative high school for a total of ten (10); one parent representing each comprehensive high school for a total of three (3); and one student representing each comprehensive high school for a total of three (3). The total number of adult committee

members was seventeen (17) (See table 1.3). Parent members were solicited using a similar format to one that was used during a recent district bond committee which consisted of an application process at the school level. Facilitation of the committee work was the responsibility of the executive director of high schools.

Table 1.3

The High School Schedule Committee

| Name | School | Position | Gender |
|-----------|--------------|------------------------|--------|
| Polly | Independence | Principal | Female |
| Linda | Sovereignty | Principal | Female |
| Mitch | Liberation | Principal | Male |
| Earl | Lion Hill | Principal | Male |
| Elisabeth | Sovereignty | Librarian | Female |
| Bill | Independence | Social Studies Teacher | Male |
| Jodi | Independence | Math Teacher | Female |
| Andi | Sovereignty | English Teacher | Female |
| Kathy | Liberation | English Teacher | Female |
| Lance | Lion Hill | English Teacher | Male |
| Bill | Liberation | Music Teacher | Male |
| Brandon | Independence | PE Teacher | Male |
| Ginger | Sovereignty | Science Teacher | Female |
| Marc | Liberation | Science Teacher | Male |
| Lana | Liberation | Parent | Female |
| Shelly | Sovereignty | Parent | Female |
| Kathy | Independence | Parent | Female |

The charter stipulated that the committee should approach the task of creating a common schedule by considering the following:

- The provision of time for instruction should be consistent with how high school students learn.
- The committee should look at data regarding student learning for the Independence School District.
- A schedule should ensure educational compatibility across Independence, Liberation, Sovereignty, and Lion Hill high schools.
- A schedule should allow for creative and flexible uses of time.
- The schedule should be cost neutral.
- Any schedule must comply with district policies, as well as state and federal laws.

A calendar of meetings was set with five, firm scheduled meetings and two additional meetings, if needed. All seven dates were used. The Committee met on September 21; October 5, 19; November 2, 16, 30; and December 14 of 2011. Meetings lasted two and one half hours from 6:00 pm to 8:30 pm. Agendas, mini-summaries, official minutes, and materials for all meetings were posted to a webpage created for and hosted on the district website. The information gathered at these public meetings provides much of the context for this study in the form of agendas, meeting minutes, transcripts, e-mails, and newspaper articles, among other document archives.

The committee incorporated a qualitative approach to their work by identifying emerging themes and creating criteria to use as a tool in filtering possible schedule proposals. The similarities and the contrasts between the district's high school schedules became clearer through this process. For example:

- Sovereignty and Independence High School have significantly more contact time per class per semester than Liberation (IHS- 80.7 hrs.; SHS- 82.5 hrs.; LHS – 63.3 hrs.).

- Liberation has extended class periods (89 minutes), which none of the other high schools have. The Liberation block schedule allows for more contact time overall in all classes combined, due to fewer transitions between classes during the school day.
- The Liberation schedule provides significantly more opportunity to take more courses over four years than the other high schools. (LHS-32; IHS & SHS – 24)

These points were significant because they highlighted some of the reasons why the committee members believed that our current schedules in our schools could be better.

Conversely, these points also highlight some of the reasons why the committee was unable, in the end, to recommend a common schedule given the parameters of the charter.

While the committee was unable to reach consensus on a common high school schedule recommendation, they did determine that an official statement to the superintendent should be made regarding the inability to recommend a common schedule in the form of a report out of the committee's findings.

A slate of major points/issues was voted on and approved by committee members to be included in the report. It was agreed that I would develop the report based on the generated bullet points. Those final points that received at least 15 votes of the committee of 20 included items such as:

- We can do better than our current schedules in our schools and we should explain why we did not reach a common schedule
- A 7 period schedule may be a plausible option if teachers teach 5 of 7 for the three comprehensive high schools.
- Should the schedule change, then graduation requirements should be reconsidered, and aligned to the new schedule.

- Lion Hill should be able to create a schedule that best meets the needs of students served by alternative education.
- Since the best option does not appear to be cost neutral, and may take multiple years for implementation, the conversation and action steps, if any, for now, should be taken to the building-level.
- It is likely that any schedule change will come at a cost. Some options would cost more than others. The district should strongly consider the trade-offs across the district before implementing something that might be too costly to other parts of the system (K-8, Maintenance, Transportation, Food Service, etc.). (High School Schedule Committee Final Report, January 2012)

As the facilitator of this group, I kept a journal on my reflections of how the process transpired. The journal allowed me to capture my experience at not just an organizational level, but also the emotions and feelings that inevitably ebbed and flowed during such a process. Field notes were taken after each meeting. Minutes from weekly planning meetings with the principals were also taken.

I give this background to build credibility on the legitimacy of the committee's work as being worthy of the foundation of this study. Due to the rigorous, often strenuous nature of the committee's work, it makes sense that it carried much weight in influencing the superintendent's eventual action steps.

In the end, largely due to financial constraints placed on the committee by the charter, no common schedule was recommended. Instead, they suggested to the superintendent that he should have the local school communities apply the learnings of the committee to their local context. When that happened, then that work fell primarily on the principals and me.

I interviewed three of the four principals to gather their perspectives on the committee's work and the subsequent charges that were placed upon them as a result of the superintendent's response to the committee's work. While the committee meetings and my principal meetings were public in nature, principals may not have always felt free to share their true feelings about an issue in a public setting. Interviews are sometimes necessary to better understand people's interpretations of what they see, observe, and participate in (Merriam, 2009). And, while I facilitated the High School Schedule Committee's work and led our monthly principal meetings, that does not mean I truly understood how the district's change efforts were being perceived by the principals or any other person for that matter. As Stake (2010) suggests, interviews help a researcher to unearth that "thing" that might not have been present through simple observation.

All interviews were audio taped. Each interview was approximately sixty (60) minutes in length. Transcripts and notes of the interviews were given to the interviewees for corrections and adjustments. The interviews were conducted at the principal's school. The questions used are found in the principal query guide (Appendix A).

When the superintendent elected to reverse course and not to change Liberation's schedule in the spring of 2008, I noted a sense of relief from the principals, particularly from Mitch at Liberation High. When I took over in the office of Secondary Education in the fall of 2008, Mitch shared with me that he appreciated the decision of the superintendent and the accompanying gift of time it provided so he could more thoughtfully consider the high school schedule rather than manage a solution that was thrust upon him and his staff. But with the announcement by Dr. Ralston in the spring of 2011, that the matter of the schedule was resurfacing and that it was now time to make a decision, I sensed a renewed tension from the principals, and myself. My first question of the principals was an attempt to test that intuitive

sense that the principals were feeling a renewed pressure in the spring of 2011. I wanted to know if my perceptions were true, or if the stress of the situation had at all diminished due to our collaborative work with the committee.

The second and third questions were an attempt to better understand the perceived readiness level of the principals now that a change initiative was being placed upon them. Again, I was curious to know if the more inclusive decision making work of the committee increased a sense of readiness on the principals' part.

Question four was intended to probe the idea of innovation and entrepreneurship and whether the principals felt that historically unheard voices were heard this time and whether they believed that out of the box solutions were truly being considered.

The last two questions were meant to gather feedback on my own facilitation skills and use that feedback to tune and adjust future undertakings and initiatives that the district might launch. By knowing how to better include stakeholder voices prior to a decision being implemented and supporting the principals as they actualize the solutions of those committees, it was hypothesized that that will help the Independence School District avoid the anger and divisiveness that the first effort to change Liberation's schedule created.

All interviewed principals were familiar to me, the interviewer, as I supervised them and had worked with them for several years. All were given an assurance of confidentiality; to the extent it is possible through a signed consent form. As mentioned, district and school names, as well as personal names have been changed to pseudonyms.

Using Creswell's (2009) six-step process, all data were: (a) organized and prepared b) thoroughly read, (c) analyzed and coded, (d) utilized for generation of setting description and categories or themes for analysis, (e) evaluated for actual utilization in the study, and (f) used to

create the basis for interpretations and findings. Creswell describes ways of categorizing data including categories on themes one expects to find, and themes that emerge that are out of the ordinary or not expected. Much of the work done by the high school schedule committee mimicked this process as they developed criteria to use as a filter for schedule proposals. The criteria evolved from themes generated by the committee.

In addition to the analysis of qualitative data, I conducted a quantitative analysis of math achievement data in our high schools. Specifically, I examined the amount of minutes spent receiving math instruction and its effect on mathematics achievement of Geometry and Algebra 2 students as measured by the Preliminary Scholastic Aptitude Test (PSAT).

A one way analysis of variance was conducted to evaluate the relationship between instructional time and PSAT scores. The independent variable was the school of attendance, consisting of the three Independence School District comprehensive high schools, two of which (Independence and Sovereignty) had similar amounts of contact time in mathematics and one (Liberation) that was considerably less. The dependent variable was the score on the Preliminary Scholastic Aptitude Test in Mathematics (score range is between 20-80).

Follow up tests were conducted to evaluate pairing differences among the means of the three schools. I later determined that post hoc comparisons were in order using a Bonferroni correction. Effect size was determined using a Cohen's *d* coefficient. The results of that quantitative analysis are found in the reporting out of this study in Chapter 3.

One limitation for this study was that the demographics of the school district are such that one may question the transferability of my findings to districts with greater socio-economic disparities and challenges. Likewise the participants on the committee were predominantly white and middle to upper class. Our principals all match that description. So again, researchers

may question the ability to transfer the findings of this study to another situation, particularly one with a more diverse community. I suspect that future researchers may want to look for similar demographics in searching for a setting to test the findings of this study.

In addition, action research itself is a method that has built-in constraints. The entangled relationship between the researcher and the subjects of research has the potential to impact reliability and validity (Muncey, 2010).

Positionality

Given my positionality, this process was uncomfortable and difficult at times. Although the work of the committee was public and thus the bulk of the data used in this study was not confidential in nature, as the executive director of high schools and the person who supervises all four principals, I consistently reassured them that participation in this study had no impact on the principals' performance evaluations. Signed consent forms were obtained by the researcher. I was thoughtful of how any information gathered could be distributed by utilizing existing ethical practices of qualitative researchers.

It was no secret that I had raised concerns about the inequities in allotted instructional time at our high schools. And, while I had acknowledged the frustration of some students and families around the constraints on opportunity created by a six period schedule, I had publicly stated that the two issues were not equal in importance or urgency. On a related note, it was also well known, that I was the former principal of the middle school that exclusively feeds Liberation High School. Over the years I had established strong relationships with many of the students and families that attended that high school. I needed to be aware of that connection when facilitating committee meetings and discussions as there could have been a perceived favoritism toward the Liberation community on my part.

Acknowledging my leanings on this topic, I attempted to strictly adhere to the parameters of action research participation as outlined by Stringer (2007). Principals were aware and stated that they were comfortable with taking part in the committee's work knowing it would be the context for the subject of this dissertation. I gave assurances that all data gathered would be available to them, and sensitive information was safely stored. Nothing gathered in non-public meetings was personally identifiable (Stringer, 2007).

Research Ethics

Ethical considerations are a critical component of all research. Over the years, universities and other institutions of higher learning have agreed to minimal protections of research participants in large part because such protections did not exist in the past. The more personal nature of action research has concerned Institutional Review Boards (IRB's) in the past (Stringer, 2007). Therefore researchers need to be very intentional in their processes to protect participants from harm.

While all research should have safeguards in place to protect participants, given the unique character of action research and its participatory nature, it is incumbent upon the researcher to be as transparent as possible around the conduct of the study.

Because action research is collaborative, there is an increased likelihood of enthusiastic and passionate participation and even displays of advocacy during the work. Enthusiasm and passion can result in candid exchanges that when taken out of context can be hurtful and/or damaging. This, too, is a strong cause for researchers to provide adequate protections to participants to keep them from harm, both intentional and unintentional.

Given the public nature of the committee's meetings, confidentiality around those exchanges is less of an issue. The public was aware of all participants on the committee and

their names and schools of affiliation. All were made aware that verbatim transcripts of the meeting were taken. However, the non-public conversations, e-mails, phone calls, and other communications that are incorporated into this study were not public in nature. Many of those conversations were in confidence and as a researcher I needed to protect the confidentiality of those participants.

The reaction to the superintendent's response to the committee's report took many forms. There were public meetings, but, inevitably, much of the work was done in private conversations, phone calls, e-mails and meetings.

Students participated on the committee so the Family Education Right to Privacy Act (FERPA) was adhered to. Parents were consulted before student names were ever published. In addition, as the facilitator I paid special attention to the student participants on the committee to ensure that student voices were given proportional attention during group conversations. While the principals may have been concerned that their supervisor was conducting this research, the committee's student participants were sitting side by side with their actual classroom teachers. Ensuring that frank and open conversation could be had without fear of retribution in the classroom was another point of focus for me as a facilitator.

While student voice is critical to school improvement efforts (Cook-Sather, 2003; Cushman, 2003; Levin 1994), it is not the focus of this action research study so there was no follow up interviews with the student participants on the committee.

While there are unique ethical challenges that come with action research, given the superintendent's commitment to a more communal approach to this particular change initiative, it seems that the method was embraced by the principals. The committee launched its work with no forgone conclusion; no "springboard" proposal. It was an authentic attempt to involve all

stakeholders in the task of solving a complex problem. Any ethical concerns that came with studying such a process through action research, appears to have been managed appropriately and to the satisfaction of the principals.

CHAPTER TWO

REVIEW OF THE LITERATURE

In order to provide a contextual background and perspective for this study, this literature review includes a brief history of institutional theory and its evolution over the last few decades. In addition, it includes some key studies around alternative scheduling options for schools and their impacts on student learning.

Organizational adaptation and change are key foci of this study. Institutional theorists have wrestled with questions around bureaucratization and organizational change for decades and have formed hypotheses to explain the phenomenon. Institutional researchers have provided explanations as to why organizations in similar fields appear to become more similar over time even when such assimilation, at least outwardly, does not appear to contribute to an organization's efficiency. Related to that, institutionalists have also theorized about who has the power to cause change within an organization and why.

An analysis of the attempt to change the high school schedules in the Independence School District is well served by utilizing an institutional lens because both bureaucratic forces and change agents played important roles in the events that transpired. For that reason, I begin the literature review with key, broad institutional theory citations and then drill down into those more contemporary studies most relevant to change agency and its role in this study.

Lastly, the key task given to the major stakeholders in this study was to develop and recommend an optimal high school schedule. With Liberation High School using a block schedule and Independence and Sovereignty on a more traditional schedule, it was not surprising that the High School Schedule Committee members asked for research to help them decide what

high school schedule might be best for the students of the Independence School District. Some important literature related to scheduling, that was also given to the committee, is therefore included in this literature review.

Institutionalism

Definitions of institutionalization have changed over time as the framework has evolved. Selznick (1957) suggests it is the process of instilling values. Berger and Luckmann (1966) expanded this definition by including the process by which leaders in an organization create an external reality that is accepted by internal actors. Something that is “institutionalized” is objectified and non-personal in character. It is agreed to by all as the “rule” and accepted as social fact (Zucker, 1987).

For many years, the prevailing beliefs around an institution’s ability to change were embedded in the “open systems” theory. It was posited that the external environment would influence and pressure an institution influencing output. Likewise, the internal environment of the institution would respond to the external pressures resulting in either change or resistance (Katz & Kahn, 1996). Certainly, today’s high schools have an abundance of external pressure sources to manage. From parent organizations to the business community, to colleges and universities; high school leaders must consistently determine how to respond to outside forces and demands for change.

Meyer and Rowan challenged this view of organizations when they suggested that institutions are constrained from implementing change due to the nature of their *internal* environments. Organizations implement rules that become “myths” that acquire legitimacy resulting in the acquisition of resources and the accumulation of power. These rules can hinder adaptability and the capacity for change.

Organizations in the same field inevitably adopt these same rules to promote their own legitimacy resulting in the phenomenon known as *Isomorphism*, in which organizations begin to look alike, not for rational or technical reasons, but rather due to non-rational attempts at legitimacy (Meyer and Rowan, 1977).

Complimentary to this belief is the idea of “organizational fields” as offered by DiMaggio and Powell (1991). The surrounding field of high schools is inhabited by state educational boards, parent/teacher associations, unions, and other groups who have vested interests in influencing the high school culture for their own perceived gains. Each one of these stakeholders has different expectations and internal rules of their own that they expect schools to understand and honor. By entering into formal and informal agreements, sometimes even legal contracts, with these groups, schools become more tightly structured and thus homogenous and dependent. As a result, change is more difficult to achieve (Scott, 2000). If change does occur, it is often so frequent and shallow in response to these various external pressures that any changes tend to be more like surface level modifications that quickly disappear, rather than sustained second order change (Watzlawick, 1974). Hanson (2001) noted, “New change (occurs) every year and ultimately nothing of significance really changes.” (p. 653).

Oliver (1997) suggests that these external stakeholders are capable of exerting three types of pressure; functional, political, and social. Functional pressure results when a norm or practice within an organization is no longer perceived as adequate. Rather, the new perception is that the old function of the organization under review is resulting in or causing low performance.

This perception is sometimes predicated on the arrival of new leadership or a shift in power that no longer supplies legitimacy to the old way of doing things. This type of change in power is a type of political pressure that was evident in the Independence School District.

Lastly, and related to political pressure, social pressure results when there is a pivotal change in the balance of actors within an organization and a new culture with new values becomes established (Oliver, 1997). This, too, was somewhat at play during this study.

When an “innovation” is suggested in the high school culture, implementation is commonly delayed until certain questions can be answered. Leaders must consider how the suggested innovation will be interpreted by such diverse stakeholders as labor unions, parent organizations, and colleges and universities. Until such questions can be answered in the affirmative by the influential, external stakeholders, change is highly unlikely to take place. However, if the proposed change is similar to one already being used by a recognized and legitimized organization, the likelihood of adopting that practice becomes magnified (Zucker, 1987). The likelihood of selection becomes even greater if individuals within the organization who have social standing and access to resources initiate the proposed variation. These “entrepreneurs” are key decision makers in the adoption of innovation in an organization.

Individual leaders as “change agents” and as members of a “community of practice” have the ability to bring about meaningful change in an organization. DiMaggio calls these agents of change, “institutional entrepreneurs”. Institutional entrepreneurs are those who have an interest in particular aspects of the institution and who utilize resources to create new institutions or possibly adjust the existing ones (DiMaggio, 1988). According to Battalina (2006), “Only individuals who somehow break with the rules and practices associated with the dominant institutional logic(s) and thereby develop alternative rules and practices can be regarded as institutional entrepreneurs” (p. 657).

Battalina (2006) goes on to suggest that it is the “social position” of the institutional member that determines whether entrepreneurship occurs. This concept is based on the

understanding that while an individual may have an interest and desire to bring about divergent thinking and change within an organization, such change will be improbable, if not impossible, without access to resources. Thus, one's social standing is a strong indicator of availability of resources to an individual.

Like all organizations, high schools, too, have institutional constraints built into the structures of the organization. In Scott's (1995) definition of institutional structures he lists cognitive, normative and regulative structures. Regulations or rules determine the work of the institution while norms are established formally or informally that set parameters about how to accomplish that work. Members of the institution form filters in which to view the value of their daily tasks. Once established, institutions are "transported" by culture and routines.

Many questions about how change occurs litter the theoretical history of organizational change. The concept of "agency" has played an integral role in understanding who initiates change in an organization. Caldwell, in his selective disciplinary history discussed four discourses on agency; *rationalist*, *contextualist*, *dispersalist* and *constructionist*. Based on the underpinnings of Western thought, the rationalist discourse is grounded in traditional thinking in which organizations have leaders who manage and control the environment. Workers are instructed and the work itself directed (Caldwell, 2005).

Contextualist discourse, conversely, centers on "emergent" change and highlights the limitations of centric leadership and its ability to see the entire landscape. Dispersalist, likewise, acknowledges the complexity of an organization and that in a decentralized environment, it is the system that generates change, not an individual. Gronn (2002) and Weick (2001) agree that "learning" organizations develop over time and that leadership is "distributed" to any and all members of the organization.

These different concepts of “agency” were considered in this action research study. In contrast to an initial attempt at change four years ago, the school district engaged in a more distributed and possibly even “dispersalist” attempt at change this time around. How that approach was received by the greater community was a focal point of this study.

High School Scheduling

For decades, high schools have been scrutinized, analyzed, and criticized for their perceived inability to ensure adequate preparation of our nation’s youth for the occupational, personal, and practical challenges of life. Attempts have been made over the years to alter the structure of the school day to address these perceived inadequacies. At the turn of the 20th century, the Carnegie unit was established as a “mechanical and bookkeeping device on which the school day....is organized” (Zepeda, 2006 p. 147). To this day, it is still the predominant means of organizing the delivery of curriculum in high school programs.

Zepeda (2006) further noted that in the late 1980’s and early 1990’s, alternative scheduling was seriously considered and widely adopted to address many issues around high school reform. Sizer (1984) argued that a major problem in our high schools is “the clock is king” causing a “frenetic quality to the school day” in which students “rush from class to class to collect knowledge” (p.71). Goodlad (1984) commented that he “would always choose fewer hours well-used over more hours of engagement with sterile activities. Increasing time will in fact be counterproductive unless there is, simultaneously, marked improvement in how time is used” (p. 283).

It was in this environment that people began to seriously examine the traditional schedule and question whether or not altering it in some way might help address student learning issues and thus societal concerns. Zepeda (2006) conducted an analysis of 58 empirical studies of

block scheduling. He chose to categorize his findings in 6 categories: teacher's instructional practices, change and block scheduling, effects of implementing block scheduling; effects of block scheduling on student learning; and student's perception of block scheduling (climate).

Terms such as "block", "flexible", and "alternative", while having different meanings in different places, for the purposes of this review, will share the common characteristic of being non-traditional. That is, most models reviewed in these documented studies vary significantly from the traditional six to seven period day with fixed 45-55 minute class periods. This review focuses on three of the categories Zepeda (2006) considered: the effect of alternative scheduling on teacher practice; the effect on student achievement; the effect on school climate, all of which were important to the Independence Schedule Committee.

Teacher Practices and Instructional Strategies

Educational leaders often examine the degree of change in teacher's classroom practices when determining whether a school reform effort may be having an impact on student learning. The single greatest factor influencing student achievement in the school setting is the classroom teacher (Wright, Horn, & Sander, 1997). To make system change, like altering a school's schedule, but to see no change in teacher behavior in the classroom, will most likely result in little to no effect on student learning.

Neubig (2006) suggests that "flexible blocks are needed for a multitude of teaching strategies without interfering with the rest of the student day....It allows teachers to vary the lengths of periods in courses such as science or English, where extended lab times may be needed" (p. 57). Extended time best serves large, integrated projects and allows teachers to more fully challenge students thinking through more meaningful activities. Extended time was a large discussion point for the Schedule Committee, particularly among the teachers.

Hackmann (2004) proposed that block schedules are more conducive to constructivist curriculum and instructional practices. He noted that constructivist strategies are more difficult to implement within “rigid, discrete, time frames”. Constructivist strategies call for a change in teacher behavior from the traditional, lecturing “sage on the stage”, to more of a coaching model as a “guide on the side”. Noting that many school districts adopt constructivist curriculum and provide training to their staff to implement it, he suggests districts should seriously consider flexible scheduling for their high schools.

An impediment to school-wide change in teacher practice when implementing a block schedule is the assertion that the schedule works for some content area classes and not others. These claims surfaced during the Independence High School Committee work. Keinholtz (2003) cited faculty members being “divided” on the block schedule at schools that made the switch. History, English and science teachers had favorable comments about the longer periods while the art, music, and world language teachers did not. Interestingly, the music teacher at Liberation High School supported keeping the block schedule not because it was conducive to a better learning environment in the classroom, but rather due to the increase in elective class opportunities it provided resulting in larger enrollment in his program than at the other district high schools. On the contrary, he voiced the opinion that he would prefer to see his students everyday which the current Liberation schedule did not allow for.

Dugan (2005) found that such discrepancies applied not only to teacher attitudes, but also to student performance. Impressive gains in reading and significant gains in math were evident in the schools analyzed with block schedules. However, that was not the case in the other content areas. The question remains whether a teacher’s negative perception of block scheduling

was a contributor to the poor student performance more so than the conduciveness of the content area to extended class periods.

Former principal Gary Childers (2005) of Watauga High School in Boone, North Carolina described in his study an attempt to create a hybrid high school that had elements of a block schedule and traditional 50 minute classes. Students had the flexibility to choose a pathway in this “composite” model that best met a student’s individual needs or desires. His high school is not alone in seeing value in both types of schedules. Members of the Independence School District Schedule Committee discussed and explored this same concept.

In Michael Rettig’s (2003) study of high schools in the state of Virginia, he found the effect on teacher practice to be the most important element. He commented, “Doing nothing more than extending the time variable may not do anything but double the misery for both teachers and students. What teachers do with the extra time is the critical factor” (p. 29). He goes on to say that allowing more time for teacher flexibility and innovation is particularly necessary in order to provide the proper instructional support for those students most vulnerable to academic failure.

In a policy brief called *Making Time Count* from WestEd, a subsidiary of the US Department of Education, the authors break down the school day by stating that there are three discrete types of time in a school day; allocated time, engaged time, and academic learning/thinking time.

Allocated time is the entire time students are in school, the time they are required to be there. This time involves lunch, passing periods, etc. Engaged time is the time students are engaged in learning activities, as opposed to the time when teachers are taking attendance and other clerical tasks. Academic learning/thinking time is the time during class periods when

students are actually thinking and learning. Learning happens when the material is neither too easy nor too hard, and when instructional activities are challenging, new and allow for success. According to the paper, there is little correlation between allocated time and student learning. Just having students in school doesn't mean they learn. There is a small relationship between engaged time and student achievement. However, the authors report a high correlation between academic learning/thinking time and student achievement. Some representatives of Liberation High School on the district committee suggested that although Liberation had less time per class, it was not as significant because they believed that Liberation teachers utilized that time well, perhaps even better than other schools.

In a study of one Mid-western high school that actually had three different scheduling options occurring simultaneously, Veal (2001) discovered that block scheduling did indeed have an impact on teacher instructional practice. In addition to teachers having more time for reflection, and opportunities for increased teacher/student interaction and subsequent better rapport, teacher's changed the way that they delivered curriculum. Almost half (45%) of students in the block classes reported changes in teacher's instructional methods compared to only 24% in the traditional classrooms. Teaching methodologies were significantly varied from previous years in block classrooms. How varied the instruction was depended on the amount of time available in class according to the study.

Student Achievement

School reform efforts are launched for various reasons, but most often to increase student academic achievement. Undoubtedly, with the wide acceptance and implementation of alternative and block schedules in our nation's high schools, researchers are looking for connections and correlations between alternative scheduling and student achievement.

Nichols (2005) looked specifically at the content areas of English or Language Arts. In his study of five urban high schools, he put an emphasis on GPA's and test scores pre and post block scheduling. What he found was a significant increase in GPA's but not in standardized testing results. But more impressive to Nichols was the increase in the number of language arts credits being earned. While he acknowledged that one likely cause in the increase in credits being earned was a change in state graduation requirements, he also concluded that "the conversion to block scheduling....allowed students to complete more courses than they would have in a traditional six-course-per-year schedule" (p. 308).

The conflict between allowing more credit bearing course options for students at the expense of student/teacher contact time was *the* key issue faced by the Independence School District's High School Schedule Committee and the driving factor behind a schedule change.

Wronkovich (1998) examined a high school using an alternative schedule known as the "Copernican Model". This model doubled class periods thus allowing students to complete a year-long course in half a year. He noted that certain content areas showed greater potential for increased student achievement than others under this model. Of particular note, he found that students in block math classes (algebra, geometry, and algebra 2) performed slightly lower than their counterparts in traditional math classes. Math achievement data played a major role in the schedule conversation in the Independence School District.

Zepeda (2006) found mixed results when looking at the impact of block scheduling on standardized test scores. While one study showed a decrease in AP test scores from a block scheduled school, another study found increases. The same inconsistencies were found when trying to determine if one content area was more conducive to block scheduling and therefore more likely to produce higher student achievement. Some found students performing better in

block schedules, others in traditional schedules, and still others found no difference. AP and IB scores were one data point gathered by the Independence School District High School Schedule Committee during their exploratory work.

School Climate

In my review of the literature, I found that after academic achievement, the second biggest catalyst for school reform that involves altering the schedule at the high school level is to improve school climate. High schools, particularly large comprehensive high schools, can have a reputation for being cold, impersonal, machine-like institutions. Absences, seat time, Carnegie-units, credits, and other quantitative measures dominate the assessment of a student's overall high school experience. There was hope in the late 1980's and early 1990's, with the wide adoption of alternative scheduling, that high schools might chip away at that reputation.

Shortt (1999) specifically looked at the impact of block scheduling on school climate and student and staff perceptions about school. Naturally, the belief is that students who felt more comfortable in school will be more inclined to take academic risks. Likewise, teachers, who are less stressed, should make better teachers. Shortt surveyed 168 schools using the block schedule in the state of Virginia. Seventy-one percent of teachers reported a preference for block scheduling and the survey suggested that "teachers and administrators are generally satisfied with the change to block scheduling, which seems to enhance indicators of positive school climate."

At one point in the work of the Independence School District Schedule Committee, it was noted that Liberation teachers have 15% more students and 35% more planning time than their counterparts at the other district high schools (see Appendix C; school comparison data table). Some teachers on the committee from the other high schools voiced their opinion that that an

increase in planning time could make for a much less stressful and more satisfying work environment.

Veal (2001) also noted positive impacts not only on instructional practices, but also in the area of teacher/student relationships and even student anxiety levels. In a parent survey, “53% of parents with students in the block schedule agreed that their child seems to have less anxiety as a result of his/her schedule”.

Gullatt (2006) studied the implications of block scheduling on student productivity. He observed, “Research has indicated that block scheduling may have important non-academic advantages, including a calmer school atmosphere, better discipline, and improved student attitudes” (p. 255) Even without empirical data to show a strong probability for increased student achievement with the block schedule, studies like these have encouraged educational leaders to at least consider alternative schedules for non-academic purposes. The Schedule Committee looked at climate data in the form of Healthy Youth Survey results as part of its work to better understand the current state in the district’s high schools. Students were asked whether they enjoyed being at school. Interestingly, the three comprehensive high schools were virtually identical in percentage of positive responses with Liberation having the lowest percentage. (see Appendix C; school comparison data table)

The Use of Time

In Malcolm Gladwell’s bestselling book, *Outliers*, he refers to the “10,000 Hour Rule”. In an attempt to answer the question as to whether or not “innate talent” is the true determining factor in a person’s success, Gladwell and his team examined and dissected the histories of people and groups that would universally be considered “successes” in their respective fields. Two of his subjects were prominent names in the technology sector; Bill Gates, co-founder of

Microsoft, and Bill Joy, founder of Sun Microsystems and the author of the computer language, Java (Gladwell, 2008). Another famous subject of his study was the band, the Beatles. Gladwell wondered how these individuals came to achieve at such a high level in their respective fields. “Achievement is talent plus preparation. The problem with this view is that the closer psychologists look at the careers of the gifted, the smaller the role innate talent seems to play and the bigger the role preparation seems to play” (p. 38). He concluded that it was the drastically larger amount of time that these individuals dedicated to practicing their craft that proved to be the critical factor in determining their success. Just how much time does it take to be the premier expert in your field? According to neurologists, it requires approximately 10,000 hours (Gladwell, 2008).

In September of 2010, President Obama spoke of the importance of time in school when he suggested that one of the reasons that other countries, particularly those in Asia, like China and India, are “leaving U.S. Students in the dust”, is that they are in school for approximately one month longer than American Students. “That month makes a difference” he said.

How important is time when considering how to increase student achievement? Lewis and Seidman (1994) commented on the importance of engagement in math learning activities in the school setting but also at home. When considering homework, along with in-class mathematics instruction, it was found that Japanese 8th graders had logged 1,370 hours of math learning time compared to 1,054 for their average American counterpart (Lewis and Seidman, 1994). This advantage was cited as a major factor in Japan’s better performance on such international measures as the TIMMS (Trends in International Mathematics and Science Study).

By increasing the school year in Japan, they also shorten the amount of summer vacation thus lessening the likelihood of summer “learning loss”. In addition to increasing the school

year, Lewis and Seidman suggest that schools should require summer school work in math, thus diminishing summer learning loss. In my own quantitative study on math achievement in the Independence School District, increased time exposed to mathematics correlated to increased mathematics achievement.

According to Zeith and Cool (1992), it is not as important that students be physically present in a mathematics classroom, but more so that they be engaged in active learning. This idea that what happens in a classroom is more important than how much time is spent in one is an important one that was discussed by the schedule committee. This idea is supported in the policy brief of WestEd cited earlier.

Lastly, in a comprehensive study of over 8000 elementary students, Gilby, Link and Mulligan (1993) discovered that extra hours of mathematics instruction each week correlated with modest gains in mathematics achievement.

Chapter Summary

Historically, high schools have played a critical role in the life preparation of our nations' youth. In the 20th century, educators had confidence that regardless of a student's course of study and subsequent achievement, most students would find viable employment opportunities due to the predictable nature of the workforce. With the employment landscape unpredictable and constantly evolving, the challenges facing our nation's youth today are far different from those faced by the youth of the past. The Organization for Economic Cooperation and Development (OECD) put it this way on the homepage of their website (2012): "Today, because of rapid economic and social change, schools have to prepare students for jobs that have not yet been created, technologies that have not yet been invented and problems that we don't yet know will arise."

The reputation of high schools as a static and unchanging environment is counter to the expectations our students will face upon leaving our institutions. Inertia sets in when movement ceases. The agents of change in our schools are the ones whom leaders must rely upon and support in order to counter institutional apathy. School leaders will benefit from a deeper understanding of how to recruit and support entrepreneurs for change.

Overall, the research on institutions explains that change often occurs or is resisted for non-rational reasons. Change is resisted because it is thought of as diametrically opposed to the image or identity of the organization (Dutton & Dukerich, 1991). If one's identity is threatened by change, then it will be resisted in an attempt to retain that identity (Elsbach & Kramer, 1996). Undoubtedly, this phenomenon was at play in the Independence School District. A student at a school board meeting in the spring of 2011 said as much when she claimed that by changing Liberation High School's schedule, you would be destroying the "uniqueness" of the school. Statements like this were echoed by parents and staff in the Liberation High School community.

Fox-Wolfgramm and Boal (1998) suggest that organizations can change without necessarily altering their identities only if their identity is flexible. For instance, an organization may need to become more specialized within a field and less generalized. Secondly, organizations are more likely to grow and change by satisfying stakeholders. As noted previously, high schools have multiple stakeholders who make multiple demands. The superintendent's response to the committee's work considered the demands and expectations of multiple stakeholders in the Independence School District.

It is hoped that educational leaders will benefit from understanding how one school district intentionally included all stakeholders on the front end of this strategic change initiative.

More importantly, the implications for this study will hopefully provide direction for school and district leaders on how to sustain and foster meaningful participation among stakeholders or to stave off the inevitable torpor that is attached to the American High School.

CHAPTER THREE

REPORT OF THE STUDY

The Independence High School Schedule Committee utilized a collaborative and proactive decision making approach (Hammond, Keeney, & Raiffa, 1999). This approach entailed distinct phases beginning with a clear understanding of the problem being addressed and the charge of the committee. Secondly, the committee set agreed upon decision making criteria that matched with the group's approved objectives. After considering alternative solutions and the tradeoffs and consequences of those alternatives, a decision could be rendered. This decision making process was in stark contrast to the previous method used by the superintendent years earlier.

Reflecting these phases, this study is broken into three distinct chronological periods. The first is an account of the events that occurred prior to the creation of the Independence School District High School Schedule Committee in the fall of 2011. Starting in the spring of 2007, this recap of key actions that preceded the formation of the committee provides the context for better understanding the climate of the district, particularly at Liberation High School, at the time the committee began its work.

Phase two of the study is a reporting of the actual work of the High School Schedule Committee. The twenty person committee consisting of principals, teachers, parents and students met between September and December of 2011. In addition to capturing the eighteen hours of formal committee meetings, this section is also informed by my personal reflections kept in a journal during that time along with e-mail correspondence from various constituents that were archived during the committee process.

Finally, the third phase of the study is a description of the superintendent's decision around the issue of schedules at the district high schools and the reaction to his decision by key members of the Independence School District, with special attention given to the principals and school board. While the pathway to executing the superintendent's directives is fairly clear by the end of this study, it is worth noting that the full implementation of the superintendent's directives will not be completed until the 2013-14 school year.

Good, But Not Great

In the spring of 2007, the Independence School District hired Dr. Steve Ralston as the new superintendent. He replaced Dr. Jane Barrett who was his predecessor and had been very successful in leading the district through a time of massive student growth while maintaining strong academic achievement. However, the district did endure a teacher's strike during her tenure. Emotions were still raw among district stakeholders in Dr. Ralston's first year in the position when he made the decision to alter Liberation High School's schedule.

On April 24, 2008, a letter was sent to members of the Liberation High School community stating that an "important change was coming" and that Liberation would be moving to a 6 period schedule in September of 2009. In his letter, Superintendent Ralston listed three major benefits of this change:

1. Increasing instructional time in core academic subjects such as English, mathematics science, social studies, and world languages.
2. Aligning the Liberation schedule with Independence and Sovereignty High School, enabling all District high-school students to take advantage of academic opportunities that may not exist at each individual school, such as Culinary Arts or AP Physics.

3. Allowing staff the most opportunity for consistent and focused district-wide collaboration, training, and professional development, hence enhancing classroom instruction. (Superintendent's Letter April 24, 2008)

Later on in the letter, he noted that Liberation was a strong performing high school and that students were achieving at high levels. However, Dr. Ralston told the community that while that was satisfactory, he wanted Liberation to “move from *good* to great”.

This decision was made almost exclusively at the district level, with the principal being the only building level staff member aware of this impending change. In my interview with Liberation principal, Mitch, he shared that unbeknownst to Liberation staff, students and families, Mike Gunderson, the former executive director of high schools for the Independence School District, had made secret visits to other school districts to explore the impact of contracting Liberation's schedule and reducing class offerings per semester from eight courses to six. Mitch, who was in his second year, had accompanied Mike Gunderson on some of those trips to other schools. It was based on the recommendation of Gunderson that Dr. Ralston decided to implement the change to Liberation's schedule. Other members of the superintendent's cabinet were not consulted nor sought out for advice before the announcement.

The reaction of the Liberation community was swift and forceful. In the May 7, 2008 edition of the local newspaper, both teachers and parents voiced their disapproval. Kris Donaldson, an English teacher at Liberation, speaking for many staff members was quoted as calling it: “A top down decision and it made us feel really shocked and disrespected as professionals, not being able to voice our concern or identify alternative schedule opportunities.”

Parent Jayne Benson, who had two students at Liberation High School, voiced similar dissatisfaction not only due to the lack of collaboration with the community, but because she disagreed with the rationale. She stated in the same article:

I am offended and genuinely shocked that a decision of this magnitude has been apparently adopted, despite an almost nonexistent support base, and without the advice or consent of those who stand to lose the most. The reasons the district has given regarding student achievement, I've read all the studies they've read and when I looked through them, there is no conclusive evidence that the AB schedule is a contributing factor to lower student achievement.

Other staff, like Kris Donaldson, championed the block schedule and appealed to parents and students to make their voices heard hoping that by voicing their dissatisfaction that the change directive from Dr. Ralston might be reversed. Jayne Benson received an e-mail from a Liberation teacher in early May of 2008 with talking points which she was encouraged to use. The teacher suggested that Jayne use the points as persuasive arguments with district leaders in hopes of preserving the Liberation block schedule. Among the twelve points listed by the teacher was one that stated that the eight period block schedule at Liberation High School: “allows kids to build college or career resumes which leads to scholarships or admission to competitive schools; colleges want kids who have skills but who also have substantial experiences” (parent e-mail of 2008 received November 16, 2011).

During this same time, parents sent letters with similar sentiments to the school board, and the local newspaper. In one letter to the editor in the May 7, 2008 issue, parent Cindy Ponder wrote:

I'm appalled. (The) Superintendent has decided to do away with Liberation High School's block schedule in favor of a six period day. This decision involved no stakeholders – no staff, no parents, and no students. A decision this significant, with such a far reaching impact on our community, being decided by three men, all looking at the issue from the same point of view, makes me feel afraid. Is this going to be the decision making model from now on? If this is the case, all families in the Independence School district should be nervous, very nervous. After all, anything could be next.

Parents began attending school board meetings and demanded that the superintendent appear at a community meeting to justify not only the change, but the lack of any collaboration with or input from Liberation staff, students, and parents prior to his announcement.

Superintendent Ralston, Executive Director Gunderson, and Principal Mitch Drew appeared together in the Liberation gymnasium on May 5, 2008, to give their rationale. Parents and students filled the gym and microphones were set up so the audience could ask questions. Cindy Ponder, in a follow up letter to the editor of the local newspaper in the May 14, 2008 issue described the meeting this way:

The Liberation High School Community came together.....It was a marvelous outpouring of concern by a community that cares passionately about what's best for kids and I felt proud. The gym was packed to the rafters with students, staff, and parents. The line at the mic was 15 deep – so long that many folks didn't get a turn....I'm still outraged two days later. The tone was condescending and rude. Questions were brushed aside and unanswered....I believe (the) superintendent went into this process with a closed mind and was unwilling to collaborate because he knew the decision would go against him. They have lost my support and my trust, and I'm mad.

A second parent that I interviewed, Jan Lowery, who was in attendance that night, said that audience members questioned the validity of the superintendent's decision and its basis. She said the audience mainly consisted of the parents of high performing students. They were seeking to understand the superintendent's reasoning for the decision but were unsatisfied, like Jayne Benson, when told the main reason was due to lower test scores. Most of these parents had students that were doing very well in school. She reported that one upset mother challenged Superintendent Ralston to "show me how my student is being harmed by this schedule".

On the other end of the academic spectrum, the parent of a Down's syndrome student in the same May 14, 2008 issue of the local paper described the decision to change the schedule at Liberation as a "disservice to special education students." The block schedule, she argued provided more elective opportunities for her son. She said:

Electives are my son's opportunity to be enrolled in classes with typically developing students, providing invaluable modeling of appropriate student behavior.Eliminating the classes in which he can interact with the general population does not foster the least restrictive environment, and...it does not meet his needs.

Many of the parents and students who spoke that evening shared how they were particularly offended by Dr. Ralston's characterization of Liberation High School as good, but not great. Since the proposed schedule change would have Liberation become more like Sovereignty and Independence high schools, the presumption was that he considered Liberation good, but not as "great" as the district's other two comprehensive high schools.

In a letter to the editor in the May 21, 2008 issue of the local newspaper, parent Kirsten Smith took issue with the superintendent's assertion that Liberation was not great:

At the Liberation community meeting to discuss the new-implemented six period schedule, (the) superintendent spoke of ‘greatness’. I am not sure the administration grasps the concept.Greatness is rarely achieved by following the status quo, by not daring to seek what can make our school district unique. The great schools offer more than the rest and provide unique opportunities and real experiences that inspire students to find their passion.

Community members, including staff, pointed out how Liberation’s demographic differed from the other high schools in the district and that their students did not have the same advantages as the students in the more affluent schools. They said that Liberation had twice as many poor kids as Independence and three times as many as Sovereignty.

Mimicking the talking points e-mailed out by the Liberation teacher, some parents talked about how the purpose of high school is not just to produce high test scores, but rather to provide students with multiple opportunities to explore elective course offerings so that they may discover their passions and strengths that will pay dividends for them in the future.

Elective courses were the key to keeping students engaged and in school, some claimed. Having eight periods, they argued, allowed struggling students to take remedial, support classes and still have the opportunity for fun, and appealing elective offerings. Eight courses allowed prospective college bound students to diversify their transcripts, which, they maintained, would be attractive to admissions offices and enhance their chances of getting into university. All of these positive attributes of the schedule, they believed, outweighed any negative characteristics of the schedule that the superintendent had identified as justification for making the change.

Soon thereafter, according to an interview with Ron Thames, the Associate Superintendent, the lobbying efforts from Liberation community members were having an effect

on the school board who began to question not only Dr. Ralston's decision, but also his decision making process. Realizing that he was only in his first year in the position and potentially losing the confidence of his board of directors, Superintendent Ralston made the decision to reverse course. On May 12, 2008, in a conciliatory letter, Dr. Ralston stated to the Liberation High School community:

As I reflect on the many messages I've received and the conversations I've had with students, staff, parents, and colleagues regarding the block schedule change at Liberation High School, I want to first acknowledge that I misstepped in the process and delivery of my message. I will do better..... I am making a leadership decision to re-sequence our work. By allowing ourselves the time to thoroughly and comprehensively study our high schools, we will make sure we arrive at the right solutions to improve learning for all students. This process includes a high school schedule conversation and appropriate opportunities for staff, parent and student input. (Superintendent's Letter May 12, 2008)

The Liberation schedule remained unchanged in the 2008-09 school year. The underlying issues that were the cause for the superintendent's concern, however, were left unaddressed and continued to fester in ways that would ultimately require re-examination of Liberation's schedule.

Optimal High School Experience

In August of 2008, Superintendent Ralston replaced Mike Gunderson, his executive director of high schools with the author of this study. Taking my lead from the superintendent's letter to the Liberation community, as the new director, I convened the high school principals in the fall of 2008 to map out a plan to broadly study the district's high schools to get a better understanding of the current state. The high school leadership team, consisting of the principals

and me, decided an important first step in the process was to determine what beliefs we shared as educational leaders about what makes a school optimal.

After several days of meetings over a few months, the leadership team settled on five fundamental beliefs as to what makes a high school optimal for students. They were:

1. **ACCESS:** Students must have maximum academic access to courses, faculty, programs, and instruction that best meet the needs of those students. Wherever possible, roadblocks and impediments need to be removed to increase accessibility.
2. **CONNECTIVITY:** Students must feel connected to their school. Students must have positive relationships with staff and feel strongly connected to at least one adult in the school setting at all times during their 9th- through 12th-grade school years.
3. **CITIZENSHIP:** Students must have learning opportunities for service allowing students to think beyond themselves while building compassion, understanding, and respect for others.
4. **RESILENCY:** Students need to be provided with a safe and structured environment which allows them to move out of their comfort zones, to take informed reasonable risks. From these opportunities, students may experience successes and failures while building resiliency and humility.
5. **EXPRESSION:** Students must have multiple opportunities for self-expression.

These became known as the Optimal High School Experience Guiding Belief Statements, and they served as a filter or lens with which the leadership team could inspect the current high school environments.

In February of 2009, the high school leadership team decided that each high school would conduct focus groups in which intentional samples of students, parents, and staff were

gathered and asked to share with the principals how they perceived the schools were doing in their efforts to actualize the five belief statements. The principals issued personal invitations to ensure a diversity of voices in the focus groups (i.e. high-performing, middle performing, low-performing students and their parents and various content areas of instruction for teachers).

The focus groups, coupled with an open invitation to all interested community members to a public conversation in March of that school year, generated large amounts of qualitative data that were sorted and summarized by the leadership team. After careful consideration, the group of principals and I determined that of all the belief statements, it was in the area of “access” that the most energy was elicited in the form of concerns and comments. Subsequently, the principals decided to thoroughly investigate the idea of “flexible scheduling” during the 2009-10 school year. Flexible scheduling was defined and discussed in the following way,

...a broad topic that touches a myriad of factors of organizing a school day including: class offerings, on-line learning, time of day learning, experiential learning, flexibility in staffing and sharing staff, providing balance for students, access to teachers and courses, access to facilities, access to transportation, support for struggling learners, etc. The team has scheduled follow up meetings to shape and plan our investigatory work for the year in this critical area. (Optimal High School Experience Webpage Update in October, 2009)

This decision was in alignment with Superintendent Ralston’s promise in his letter to the Liberation community the previous spring in which he assured staff, students, and parents that he would look more closely at schedules and the use of time in all of the district’s high schools before implementing any change to Liberation’s schedule.

The leadership team spent the next few months trying to answer various questions. They looked into state requirements for students regarding seat time and credit acquisition. Surrounding high schools that were currently exempt from the state requirements were contacted. The principals tried to determine if those schools were offering learning opportunities and delivery models that met the needs of all students and met the quality standards of the Independence School District. In addition, the leadership team considered the role technology played in those learning opportunities and delivery models and what role it could play in the Independence School District. While these questions were explored, the leadership team was always cognizant of the funding, budget, and resource implications that might come into play should a change be made to the historical way of rewarding credit, that included minimum amounts of teacher/student contact time.

A second spring conversation was held in April of 2010, but this time it was exclusively for current high school students. Again, the leadership team used an intentional sampling model in which a variety of students were represented including academically successful students, struggling students, and those in the middle. Approximately 50 students attended from all four high schools. The leadership team continued to use the Optimal High School Experience Belief Statements as a filter for a student conversation about flexible scheduling. Specifically, students were asked how technology could increase flexibility in learning; how the schools might create times for students to focus on one subject area for an extended period of time to explore a particular topic and not worry about transitioning to six or eight classes. Students were asked to share what they wished they could learn in school and what obstacles, if any, were hindering their ability to learn and succeed. Lastly, students were asked about how the schools could better contribute to overall citizenship and civic-mindedness in the student body.

The conversation lasted for two hours and student comments were gathered by the leadership team, coded and put into categories and patterns were identified. Two key ideas continued to surface. First, many Independence and Sovereignty students, particularly those who were headed to four year university, expressed frustration about a perceived inability to fit all of the classes they wished to take within the existing schedule at their schools. A six period schedule combined with district graduation requirements that exceed state requirements, made for little wiggle room to explore other course offerings besides the minimums needed for college entrance. This was particularly true for music students who desired to take elective classes outside of music. And while much smaller in number, this was also echoed by International Baccalaureate candidates at Sovereignty High School.

Secondly, it was evident that Liberation High School students who participated in the focus group discussions and community conversations wanted the district and anyone else who was listening to know their favorable opinions of the current block schedule. The superintendent's decision to change the schedule and eventual reversal on that decision was still fresh in the minds of students and families. Written comments like "The block schedule is amazing" or "8 period schedule = WIN" were commonly submitted, no matter what the topic being discussed. For instance, at the table discussing civic-mindedness and citizenship, a seemingly unrelated written comment was left by a student that said, "the 8 period schedule is the best ever of all time."

Because students were mixed across high schools in focus groups and table conversations, Sovereignty and Independence students were exposed to the idea of a block schedule by their Liberation counterparts. They were intrigued by the idea of eight classes versus six and some even voiced a desire to explore the block schedule at the other high schools

in the district as it might allay frustrations related to the perceived inflexibility in the schedules at Sovereignty and Independence. The leadership team entered the 2010-11 school year with a determination to address these frustrations, but also to take action on the inequity of teacher/student contact time across high schools.

Opening Up Access

Four key decisions were made during the 2010-11 school year in order to address the perceived inflexibility in the six period high schools in the district. These decisions would later impact the eventual work of the District High School Schedule Committee. The first was in the area of course pre-requisites.

Like many secondary and post-secondary learning institutions, Independence School District high schools mandated that students meet certain requirements prior to enrolling in many classes. For example, according to the Independence High School 2009-10 Course Selection Guide, a student could not take an Honors level English class in 9th grade unless he or she had a “B+” or higher in their 8th grade English class. Another example was that students could not take Biology without first having passed Physical Science, or met a certain cut score on a physical science competency exam. Teachers and departments created the pre-requisites which appeared in the course selection guide that families used when signing up for classes each spring.

Some Sovereignty and Independence students and families expressed frustration with the pre-requisites because they felt it slowed down their schooling and did not allow them to accelerate. If a student was forced to take Physical Science as a 9th grader, even though they felt prepared to enter Biology, then the student and family felt they had to waste a precious spot in their already constrained schedule on an unnecessary physical science class. Many felt that would preclude them from taking potential higher level science courses later in their junior and

senior years. And while the physical science competency exam was supposed to allow for this, the pass rate on the exam was around one percent per year. Parents of very high performing math and science students claimed the test was nearly impossible to pass and not a good indicator as to whether or not their student would be successful in Biology and other higher level science courses. Not surprisingly, Liberation students and families rarely echoed this concern. Having eight periods allowed students to easily double up and take more sciences, or any other classes of interest to them in their junior and senior years.

After hearing student and parent complaints, along with counselor concerns about the constrictive nature of pre-requisites, the principals considered eliminating them altogether. They filtered the question of whether to eliminate pre-requisites in the course guide for the 2010-11 school year through the Optimal High School Experience Belief Statements. After concluding that the prerequisites were in contradiction to the “Access” belief statement, the principals unanimously agreed to do away with them. Soon thereafter, some teaching staff raised concerns about opening up access to higher level courses to any and all students claiming it would result in some students overreaching and subsequently placing themselves in classes that were too difficult for them. An Independence High School science teacher, Linda Simpson, who was upset by the idea that younger students could potentially sign up for science classes in the 8th and 9th grades that were traditionally taught in the 10th grade, sent an e-mail to Associate Superintendent Thames in which she said:

It appears the move is well on its way and no matter what data I provide that says our students who skip two years of preparation fail in upper level science courses, it is going to be met with “it was their choice so be it”. It is a sorry response but true. I wanted to bring up one more topic.....We need lower level courses for the ever increasing number

of students who need accommodations. Please consider courses for these folks as you work over the Independence School District science scope and sequence.

Teacher Simpson argued at a district level meeting that the change would force teachers to slow down the pace of instruction to meet the needs of the unqualified students who, in the past were rightfully screened from participating in the advanced classes. The higher performing students would suffer now, she argued.

Despite concerns from staff like Linda's, the pre-requisites were changed to "learning recommendations" that were meant to inform parents and students in making decisions but were not binding or exclusionary in any way. Counseling staff and administration, for the most part, would not check up on course selections by students to make sure that they indeed met or were at least close to meeting the learning recommendations. Any and all competency exams were placed on-line as a tool for families to use as they wished, along with recommended scores on those exams for parents and students to consider for placement. Past pre-requisites, like previous grades in sequential classes along with standardized test scores, likewise, became recommendations, not requirements. Parents and students were encouraged to make their own informed decision as to the best selection of courses.

The second impactful decision of the 2010-11 school year was the creation of a district On-line Learning Department and On-line Learning Coordinator position. The office and position were created to guide and assist students and families who desired access to learning opportunities through state-approved on-line course providers. According to the district's policy, "online learning provides tremendous opportunities for students to access curriculum and specialized courses in a flexible learning environment that might not otherwise be available." Theoretically, the accessibility to on-line courses was meant to provide access to classes that

were not offered in an Independence School District high school. However, the policy also stated that students would have access to “courses which may already be offered in the student’s school but are inaccessible to the student due to scheduling or other factors.” It was the “other factors” that caused unease for some school staff.

The Independence School District has a history of fiercely protecting the integrity of a district high school diploma. High schools in the Independence School District have a strong reputation with regional colleges and it was argued that allowing credits to be acquired outside of the system and counted toward graduation would dilute the quality of the diploma in the eyes of college admission offices. Policies were in place that prevented students from taking courses outside of the district that could be applied toward graduation.

Slowly, due to parental and school board pressure, in the year 2000, the district acquiesced and allowed one credit out of twenty-two (22) required for graduation, to be from outside the district. This was later increased to two credits in 2004. Some of that early demand came from special education parents who claimed that health concerns and disabilities necessitated that some students, on occasion, complete courses outside of the regular comprehensive school setting. Outside course/credit providers could provide more individualized support and students could work at their own pace. Often, the outside agency that parents preferred was an on-line learning provider. Once the district began to allow outside credit, albeit only a very small amount, staff were faced with the dilemma of determining which courses and providers would be accepted, and which would not.

The Independence School District, while serving a very affluent community, is actually resource poor in many respects. According to the business office, the district is in the bottom ten percent in the state when it comes to per pupil state funding. Subsequently, the district did not

have staff to investigate and vet on-line providers to determine which ones not only met state standards but also the expectations of quality and rigor that matched the Independence School District. In the summer of 2010, the state legislature created a Digital Learning Department that would do that vetting work and provide an approved list of providers and classes to school districts and parents. With the selection process handled by the state, the district was able to now provide guidance and support in accessing those on-line classes for students and families that elected to do so. The two credit limit on classes taken outside the district remained in effect with one caveat; the principal could approve an exception to the two credit limit for good cause.

There was fear by some staff that families would flee to the on-line learning offerings in large numbers to circumvent the perceived, overly difficult classes in the district's high schools. And while the numbers of students pursuing on-line learning options has increased substantially, according to the spring 2012 status report submitted by the district on-line learning coordinator, it was still less than two percent of high school student's district wide.

The third impactful decision made by the leadership team in the area of flexible scheduling was the pronouncement that summer school offerings would no longer be exclusively for remediation and credit retrieval. In the spring of 2011, the High School Leadership Team opened up summer school for more acceleration and enrichment opportunities. Through a creative use of time, students can now complete a .5 credit of PE in a 2-week period by attending for several hours a day and participating in a wide range of physical fitness activities on and off campus. The class quickly met its enrollment capacity and a waiting list was created. The summer of 2012 version of this class was increased to three sections of over 80 students and a waiting list was still needed. Almost one hundred percent of the enrollees were from Independence and Sovereignty high schools.

E-mails and phone calls from parents provided some explanation for the obvious desirability of this course. Those same students and families who complained at the focus groups about the constriction and inflexibility of the six period schedule, praised the summer PE class for its quick time frame (2 weeks) and its subsequent ability to free up their student's schedule during the regular school year for course offerings other than PE, particularly more academic core classes in the sciences and math.

Unlike the elimination of pre-requisites, there was little to no push back from staff on this unique summer offering. Instead, it was embraced by some, particularly Physical Education teachers, who volunteered to teach the course and used it as a way to augment income in the summer.

Lastly, the Leadership team worked closely with Associate Superintendent Thames and middle school principals to move some high school graduation requirements to the middle level beginning with the course that meets the district's technology requirement. This move freed up more space in the high school schedule for more elective options. The middle school technology course began in the 2011-12 school year. In the interim, for those students who did not have access to this new middle school offering and did not yet meet the technology graduation requirement, the district is offering more opportunities to take a technology proficiency exam to meet the requirement. An on-line tutorial that greatly increased the likelihood of success on the exam was made more accessible. In addition, the ability to acquire a biology credit in middle school will begin in 2014.

These moves were even more fervently applauded by the parents of college-bound, high performing students; the same parents who had the ear of the school board. The required technology course had long been considered a pointless, unnecessary class. Many of these

parents are employed in the high tech sector, and they and their students have strong technology skills. While technology literacy is a huge expectation of the community, a required technology course in high school was not the solution these parents wanted as it, too, further filled up a schedule that they already considered too restricted.

Even with these four key changes to the course selection and credit acquisition process, there was still a lingering and nagging issue hanging over the district. Liberation High School's schedule was dramatically different than the other two comprehensive high schools. Perceived inequities existed. While he had reversed his decision from year's earlier to change the schedule, the superintendent had promised to return to the issue in the future.

The High School Schedule Committee

In June of 2011, Superintendent Ralston notified the Independence School District staff and community of his intention to:

...look closely at the precious resource of time in our high schools in an effort to design a common schedule for the high school program. We believe such a schedule will allow us to better share resources, consolidate our professional support for staff, and capitalize on our learnings of the last three years. (E-mail to staff in June 2011)

In a subsequent e-mail to the Independence School District community on June 25, 2011, he went on to say that this work would begin in August of 2011 "by engaging our staff in conversations that will be the foundation for a community process that will include a committee of principals, teachers, staff, students, and parents."

All four of the Independence School District's high schools; Independence High School, Liberation High School, Sovereignty High School, and Lion Hill Alternative High School, dedicated staff time during August professional development days to explore ideas around a

common high school schedule. Staffs were polled, comments were gathered and conversations were had.

More specifically, staffs were asked to consider the importance of time when planning high quality lessons and how the use of time is influenced by the following variables: discipline area, ability of students, age or grade level of students, size of classes/case load, number of 504/IEP students/ELL students, etc. Likewise, staffs were asked to reflect on the use of non-instructional time, like planning time, state required work time, etc., and the importance of that time when creating meaningful lessons. Finally, teachers were asked about what might be the optimal length of daily class periods and the frequency of student/teacher contact. The results of those staff discussions were placed on the High School Schedule Committee website.

The Charter and Creation of the Committee

At about the same time as the superintendent's announcement to district families of his intent to re-visit the high school schedule question during the 2011-12 school year, the high school principals received a charter from the superintendent (appendix B). The charter directed that a committee be created. The charter stipulated the work to be done by the committee and its composition. The charter stated that the charge of the committee was: "To study and design a plan for the common use of the resource of time to effectively improve learning for all high school students, specifically to design a common district-wide schedule for the high school educational program."

Membership on the committee totaled twenty (20) with six members from each comprehensive high school and two of those members coming from Lion Hill. There was one

Principal from each HS for a total of four. There were three certificated staff from each comprehensive HS; and one certificated staff from the alternative high school for a total of ten teachers.

There was one parent representing each comprehensive school for a total of three. Lastly, there was one student representing each comprehensive high school bringing the total number of committee members to twenty (20). Parent members were solicited using a similar format as a recent bond committee in the district that involved an application process and a written paragraph or two explaining why the parent believed they would be a strong contributor to such a committee. The application process was at the school level.

Principals often had difficulty finding parent volunteers for significant time commitments such as this committee. Linda, the Sovereignty principal, was able to convince Leann Stokely, her former PTSA president to apply. Leann was considered a smart, effective collaborator and Linda was relieved to find someone who had a strong affinity to the school. At the last minute, however, another powerful parent, Shelly Munson, who was also a friend of Leann's, chose to apply and convinced Leann to back out. Shelly, unlike Leann, had a history of criticism of the school and staff. Shelly was a high standing member of non-profit organizations that advocated for school reform and had been publicly critical of the teacher evaluation system. Linda's enthusiasm heading into the committee work was dampened by this last minute change.

From the very beginning there was another concern, this time raised by both Linda and Polly, the two largest high school principals, about the proportionality of the committee. Lion Hill had less than 100 students out of 5000 high school students, district-wide. "They make up two percent of the high schools and yet occupy ten percent of the committee and that's not right", said Polly. After receiving assurances from Earl that he and his lone staff member on the

committee would vote for whatever was best for all high schools, the concern was abated but never went away altogether.

Facilitation of the committee work was my responsibility and co-facilitated by Josh Alston, the principal of a middle school that fed Sovereignty. Other members of the facilitation team included: Jane Lansford, my Administrative Assistant for Secondary Education, Bob Johnson, the Director of Career and Counseling Services, and Uma Caldwell, a special services secretary.

The charter stipulated that the committee should approach the task of creating a common schedule by considering the following:

- The provision of time for instruction should be consistent with how high school students learn.
- The committee should look at data regarding student learning for the Independence School District.
- A schedule should ensure educational compatibility across all schools.
- A schedule should allow for creative and flexible uses of time.
- The schedule should be cost neutral.
- Any schedule must comply with district policies, as well as state and federal laws.

The Foundational Work of the Committee

A calendar of meetings was set with five firm scheduled meetings and two additional meetings, if needed. All seven dates were used. The Committee met in the fall of 2011 on September 21; October 5, 19; November 2, 16, 30; and December 14. Meetings lasted two and one half hours from 6:00 pm to 8:30 pm. Agendas, mini-summaries, official minutes, and materials for all meetings were posted to the High School Schedule Committee website.

A work map was created to guide the work of the committee that included eight distinct phases:

- Form a cohesive team beginning with the establishment of group norms.
- Understand the charge of the committee and the charter.
- Understand the parameters and scope of the work to be done and the laws and contract language that the work must not violate.
- Understand the history and the archival record.
- Do the research and determine what more the committee needs to know or understand.
- Create criteria or a filter for schedule proposals.
- Develop and present schedule proposal(s).
- Choose one common schedule for recommendation to the superintendent.

Part one of the work map was the establishment of working group norms and determining voting procedures. After lengthy discussion, it was proposed and approved by majority vote that the quorum for the committee would be 80 percent (16), no proxy or absentee votes were permitted, and approval from fifteen (15) members was the threshold needed to move forward on issues that required a vote.

The voting procedures conversation took over half the time of the first meeting. It was obvious when establishing the number for approval of a proposal that members were looking around the room and counting in their heads how many votes each school controlled. One member even said, “Fourteen is too low because one high school could all vote one way and be completely overruled.”

There was an extended conversation about whether to allow members to vote if they were absent or to allow proxy votes. One parent representative with experience on previous

committee's said "if proxy votes are accepted, people tend to believe they don't have to attend. They need to be here."

In reviewing my journal notes after the first meeting, I noted that as the facilitator, I was concerned about the level of distrust that I perceived among members. I was beginning to think that we might not be able to work together for a common solution to the high school schedule question. I was thinking that if we were barely able to agree on voting procedures then it was not very likely that we would agree on a common schedule. The debate lasted for almost an hour. It was obvious to me that we were not going to reach consensus on items like what constituted a quorum and what percentage of members had to vote yes for a recommendation to move forward. I reluctantly called for a majority vote on two alternatives and only then were the voting procedures for the committee established.

Parts two and three of the work map revolved around the group acquiring an understanding not only of the charter of the committee, but also the scope of the committee's work and parameters. Discussions were had about such things as state law, labor agreements, and the financial constraints of any schedule proposal. Jack Cooper, the district Chief Financial Officer (CFO) addressed the committee at the October 19 meeting to answer questions around financial considerations. He answered questions from the group concerning potential costs involved in adopting a common high school schedule including start-up costs, ongoing costs, staff development and training. Cooper touched on transportation and budget concerns along with state mandated hours of instruction per week. He reiterated to the committee that they must consider the teachers' contract and not violate any terms of that agreement including language on class sizes; use of partial schedules and waivers. Lastly, he touched briefly on neighboring school district's schedules.

There was one comment made by Cooper that had a reverberating impact on the committee. Without being asked his opinion, he shared his preference for a high school schedule. Cooper said, "School Schedules are very important to the business office. I actually prefer five 60 minute periods." He qualified his opinion by stating that such a schedule matched perfectly to the state's funding formula and thus would make his and his staff's work much easier in terms of payroll and staffing allocations. This comment re-surfaced at various times. Some committee members, like Shelly Munson, felt that his off the cuff comment was the true desire of the superintendent and thus all schools would end up with a standard six period schedule. Shelly spoke to me after the October 19 meeting. She shared her concern that it was obvious from Cooper's comments that the district had a pre-conceived outcome in mind and that with no additional monies, Sovereignty, her child's high school, would be forced to keep its traditional six period schedule. She expressed her belief that the committee itself was an exercise in futility and a waste of everyone's time. I told her that I disagreed and that I was not prepared to concede that no alternative was possible other than a traditional six period day. I expressed my faith in the people in the room and their creativity and that we should let the committee do its work and see if another viable alternative might surface.

Parts four and five of the work plan took up a large percentage of the committee's overall work. In an attempt to better comprehend the district's current state, committee members sought out a deeper understanding of the history of the scheduling of high schools in the district. An e-mail depository was established to solicit input from the community at-large in hopes of gleaning the community's perspective around the current high school schedules. In total, 56 e-mails were received and reviewed by all committee members. Authors included students, former students, parents, and staff.

Data requests from committee members and community members resulted in the gathering of various amounts of data for consideration including:

- Staff survey data
- School comparison data
- College entrance expectations
- State assessment data by school
- College destination data by school
- College remediation rates
- An updated school comparison data table
- Surrounding districts' schedules and student achievement data
- ISD students' elective choices and advance course choices
- Characteristics of improving schools and districts around professional development
- Financial impact of current schedule and a potential new schedule
- Percentage of electives by school
- Graduation requirements
- Liberation class waiver data
- Percentages of students who take a full load of classes every year over four years
- AP/IB results and offerings by school
- Research on time's impact on learning
- CTE offerings, diversity of offerings and participation rates by school
- Music enrollment by school
- Enrollment turnover by school
- College admissions policies

Based on the data requests, there was an obvious tension building within the committee. Committee members were interested in gathering data on course enrollments in college preparation classes on the one hand, but at the same time they wanted to know about elective offerings in courses that were not necessary for admission to four year university like music and career and technical education (CTE).

It was Bill, a music teacher at Liberation, who requested the music enrollment numbers. He wanted the committee to know that it was the schedule, in his opinion, that played a large role in his music program prospering. More students per capita took music classes at Liberation than at the other two larger comprehensive high schools. He expressed his fear that some of the higher academically performing students who were in leadership, and who took college preparatory classes like world language and upper level science and math classes would not be able to fit band in their schedule if the schedule were contracted to fewer periods. At one point Bill said, "I have to be honest, I am worried about my livelihood, and my job could be at stake."

In one exchange, Andi, a language arts teacher from Sovereignty on the committee, asked if it was really necessary to collect data on non-academic courses that don't prepare students for college level course work. She characterized one course offering as "*just* an art class." Bill, the lone traditional elective teacher on the committee, took exception to that characterization and challenged the language arts teacher. He asked if she would consider a music class "significant" if a student intended to study music at university, or enter a conservatory of music or a college of the performing arts. The two teachers were sitting right next to one another and after a long pause the language arts teacher agreed it would be significant.

As facilitator, I moved the conversation on to how we might define an elective. It was obvious that many students were filling elective slots in their schedules with what would be

considered traditional elective offerings like music, however, it was equally evident, as Bill suggested, that many chose to fill those slots with additional core academic classes like math, science and world languages. Whether or not a student who was choosing to take a surplus of core academic classes for college entrance reasons could or should have room in their schedule to take more traditional elective offerings, like music became *the* point of contention throughout the committee process.

A depository of research articles was created and added to throughout the three and half months of committee meetings. Topic areas covered in the research articles included: (a) advisory, (b) block scheduling, (c) college admissions, (d) flexible scheduling, (e) schedules and achievement, (f) small school schedules, (g) schedules and teaching, (h) schedules and the arts, and (i) time's impact on learning. In total, 55 articles were compiled to help inform the work of the committee.

The largest collection of articles, twenty of the 55 articles, was in the "Schedules and the Arts" category. The choir teacher at Liberation, Robin Porter, made an appointment to see me at the beginning of October. She was not a member of the schedule committee, but was a close colleague of Bill's. At our meeting she gave me a large three ring notebook full of twenty articles that were later placed in our depository. She passionately stressed to me the importance of the performing arts in schools and expressed her fear, like Bill, that a reduction in number of classes that a student could take in a school year would have a catastrophic impact on enrollment in her program.

Robin also taught choir at Gemini Elementary and Mayfield Middle Schools, both of which fed Liberation. She traveled from school to school during the week. Earlier in September, Robin had asked and gotten permission from her elementary principal to send out an

e-mail via the school's official e-mail system to parents of that elementary school. In the e-mail message she made a plea to parents to petition the district and the members of the Schedule Committee to leave Liberation's schedule intact so as not to adversely impact the performing arts program.

Kathy, the parent representative on the committee from Independence High School, was forwarded the e-mail by a friend. She sent it on to me as the facilitator of the committee. She was upset. She asked if Robin's point of view was the same position as the district since it was sent as an official Gemini Elementary School e-mail. She asked if Independence High School could send a counter point e-mail arguing the need to maintain contact time in classes for academic preparation. I told Kathy that the e-mail was erroneously sent on the school e-news system and that I would be talking to the principal of the elementary school.

My colleague Jodi Buchanan, the executive director of elementary schools, and I contacted the principal at Gemini Elementary school and inquired about the e-mail. She expressed regret and said she had not read it carefully before giving the okay to send it. While no retraction was sent, we directed the principal to get prior approval from me before sending out any future e-mails around the high school schedule.

I also called Robin Porter. She was initially defensive when I told her that the e-mail was inappropriate for an official school informational item. The phone call lasted about 30 minutes. I told her that her opinion was important and the committee needed to hear it. I told her I would put her articles in the depository and forward her email to all members from her as an individual teacher, not as an official position of Gemini Elementary School. She attended some of the later committee meetings and observed.

In the depository, under the category “Schedules and Achievement”, I included a copy of a quantitative research study I had conducted in the spring of 2011 to better understand the nature of student performance in math. I selected math because of its sequential nature and the tendency for it to often be an ability grouped class.

Quantitative Analysis on Contact Time and Math Achievement

The purpose of the analysis of contact time and math achievement was to determine the impact of instructional minutes on high school mathematics achievement in the district. Specifically, the analysis performed investigated the relationship between the amount of minutes spent receiving math instruction in a classroom and their mathematics achievement of Geometry and Algebra 2 as measured by the Preliminary Scholastic Aptitude Test (PSAT). It was posited that by determining the correlation between time and achievement, school leaders and decision makers could be better informed when making master schedules, determining the length of class times, and deciding how frequently classes should meet.

Independence, Liberation, and Sovereignty high school students were the subject of the study. Students were segregated by the current math course in which they were enrolled to better ensure comparisons of similar student populations across schools. Mathematics, unlike some other content areas, is predominantly a sequential subject area of study. Students in the Independence School District are enrolled based on previous successes in math classes. As a result there is a much stronger probability of the comparison of similarly capable students based on their currently enrolled math class as opposed to just randomly selecting any student. To further strengthen the likelihood of comparable samples, all special education and free and reduced lunch qualifying students were pulled from all three school’s samples.

The two math classes that were chosen for selection in the sample were Geometry and Algebra 2. Geometry and Algebra 2 students made up the largest number of 10th graders who took the PSAT which strengthened the likelihood of adequate sample size. In addition only 10th graders were selected as to better ensure similar age and maturity levels. The district average was 85% of all 10th and 11th graders taking the exam or 2047 out of 2470 possible test takers. Liberation high school had the lowest participation rate of the three at 73%.

Scores on the PSAT in Mathematics can range between 20-80. The College Board, who manages the PSAT, has administered the PSAT for decades. Reliability coefficient as reported by the College Board was .89 in mathematics with a standard error of 3.7. In the year 2010 roughly 1.1 million students participated in the 10th grade assessment and were found to score on average 44.3 (SD=10.9). The means and standard deviations for the two classes assessed in the study for each school are presented in table 2.1.

A one way analysis of variance was conducted to evaluate the relationship between instructional time and PSAT scores. The independent variable, the school of attendance, consisted of the three Independence School district comprehensive high schools, two of which (Independence and Sovereignty) had similar amounts of contact time in mathematics and one (Liberation) that was considerably less (see tables 2.2 and 2.3).

Table 2.1
PSAT Descriptive Statistics by School

| <i>N</i> | <i>M</i> | <i>SD</i> |
|----------|----------|-----------|
|----------|----------|-----------|

| | | | |
|--------------|-----|-------|-------|
| Independence | | | |
| Geometry | 188 | 45.82 | 7.02 |
| Algebra 2 | 139 | 56.24 | 5.62 |
| Sovereignty | | | |
| Geometry | 247 | 46.66 | 6.86 |
| Algebra 2 | 119 | 58.1 | 5.81 |
| Liberation | | | |
| Geometry | 94 | 43.29 | 6.042 |
| Algebra 2 | 58 | 51.45 | 5.42 |

A one way ANOVA was performed and indicated that the null hypothesis of equal population means should be rejected as two or more of the population means differed significantly. Students from all three high schools were represented in the samples, which consisted of 10th grade Geometry (n=529) and Algebra 2 students (n=316) . Based on a one way analysis of variance (ANOVA), school differences on PSAT performance were found to be statistically significant in both Geometry, $F(2,526) = 8.45, p < .01$, and Algebra 2, $F(2, 313) = 27.10, p < .01$.

Table 2.2
ANOVA of PSAT Scores in Geometry by School

| Source | Sum of Squares | <i>df</i> | MS | <i>F</i> | <i>p</i> |
|--------|----------------|-----------|----|----------|----------|
|--------|----------------|-----------|----|----------|----------|

| | | | | | |
|----------------|---------|-----|-------|-----|------|
| Between Groups | 777.2 | 2 | 388.6 | 8.5 | <.01 |
| Within Groups | 24180.2 | 526 | 45.9 | | |
| Total | 24957.4 | 528 | | | |

Table 2.3

ANOVA of PSAT Scores in Algebra 2 by School

| Source | Sum of Squares | <i>df</i> | MS | <i>F</i> | <i>p</i> |
|----------------|----------------|-----------|-------|----------|----------|
| Between Groups | 1733.6 | 2 | 866.6 | 7 | <.01 |
| Within Groups | 10012.3 | 313 | 31.9 | | |
| Total | 24957.5 | 315 | | | |

Follow up tests were conducted to evaluate pairing differences among the means of the three schools. Because the variances (standard deviations squared) among the three schools ranged from 29.3 to 49.2, it was determined that post hoc comparisons were in order using a Bonferroni correction, a test that does not assume equal variance among the three schools. In both Geometry and Algebra 2, there was a significant difference between the means of Independence High School and Liberation High School, as well as a significant difference between Sovereignty High School and Liberation High School with an alpha of $p < .01$ in both instances. A significant difference also was shown between the means of Independence High School and Sovereignty High School in Algebra 2 with a $p = .026$. The 95% confidence intervals for the paired mean differences, along with means and standard deviations can be found in tables 2.4 and 2.5. While the a-priori alpha was set at .05, a Bonferroni correction was conducted or $.05/4 = .0125$ for each content area, Geometry and Algebra 2. With this new alpha, the null hypothesis would be rejected for the mean comparisons of Liberation High School to both

Independence and Sovereignty high schools in both Geometry and Algebra 2; however, one would fail to reject the null hypothesis for the comparisons between Independence and Sovereignty high schools in Algebra 2.

Effect size was determined using a Cohen’s *d* coefficient. The mean difference between Independence and Liberation for Geometry was 2.53 and had an effect size of .36. The 3.38 mean differences between Liberation and Sovereignty in Geometry had an effect size of .51. The mean difference comparisons between Liberation and Independence and Sovereignty high schools in the Algebra 2 group were 4.79 with an effect size of .84 and 6.65 with an effect size of 1.14 respectively.

I argued that the results of this analysis should give educators reason to look more closely at the amount of instructional minutes allocated in schools for mathematics instruction. Liberation High School has approximately 22% fewer minutes of math instructional time than the other two schools in this study. This is the equivalent of one fewer class period of instruction per week. But like Zeith and Cool (1992) highlight in their study, it is important to not just consider the minutes of instruction, but rather give greater attention to the quality of instruction. A limitation in this analysis was the lack of information, research and data around the professional development and training of the teaching staffs in each of the schools. A skeptic could suggest that the differences in means may be more attributable to a lack of training on how to teach in the extended block schedule that Liberation High School utilizes, rather than any correlation to the amount of instructional minutes.

Table 2.4

Mean Differences in Geometry PSAT Scores Between Schools

| School | <i>M</i> | <i>SD</i> | Independence | Sovereignty | <i>p</i> |
|--------|----------|-----------|--------------|-------------|----------|
|--------|----------|-----------|--------------|-------------|----------|

| | | | | | |
|--------------|------|-----|------|------|-----|
| Independence | 45.8 | 7.0 | | | |
| Sovereignty | 46.6 | 6.8 | - .8 | | |
| Liberation | 43.3 | 6.0 | 2.5* | 3.4* | .00 |

Table 2.5

Mean Differences in Algebra 2 PSAT Scores Between Schools

| School | <i>M</i> | <i>SD</i> | Independence | Sovereignty | p |
|--------------|----------|-----------|--------------|-------------|-----|
| Independence | 56.2 | 5.6 | | | |
| Sovereignty | 58.1 | 5.8 | -1.8* | | .02 |
| Liberation | 51.4 | 5.4 | 4.7* | -6.6* | .00 |

Another factor that I argued was worth noting was related to the school demographical data. While this analysis intentionally removed all special education and low socio-economic students from this study in an effort to make similar comparisons of students across schools, the fact is not all students above the poverty line are in the same circumstance. Sovereignty High School is located in the second wealthiest zip code in the state according to state property tax records. Independence High School likewise has a very affluent population that it serves as noted in the school data table 1.1. For a researcher to eliminate all free and reduced lunch students and assume that all students above that line have equal income levels in the home, like levels of parent education, and the same access to resources is naïve.

These results appear to support the assertion that the amount of instructional time has a relationship with mathematics achievement. It is worth noting that there was a significant difference between Independence and Sovereignty High School in the Algebra 2 analysis at the $p < .05$ level. These two schools have very similar amounts of instructional minutes in

mathematics. The mean difference was not as pronounced as that when comparing Liberation to Sovereignty High School and the confidence (or alpha level) was not as great ($p < .01$ versus $p = .026$) but was not likely a difference due to chance nonetheless. While Sovereignty has the greatest amount of minutes of mathematics instruction, I contended that this may be cause for further investigation into what exactly is happening in Sovereignty's math classrooms that is resulting in the higher results.

PSAT raw scores are converted to national percentile rankings by the College Board to better help students, parents, and prospective colleges understand how test takers compare to their peers nationally. In Geometry, the mean average national percentile ranking for each school's sample was, for Independence High School the 56th percentile, for Sovereignty High School the 60th percentile, and for Liberation High School the 44th percentile. In Algebra 2, the mean average national percentile ranking for each school's sample was, for Independence High School the 84th percentile, for Sovereignty High School the 89th percentile, and for Liberation High School, the 73rd percentile. In both instances, Liberation shows a lower score: 12 percentile points lower than Independence and 16 percentile point difference between Liberation and Sovereignty. If math placement is indeed a reflection of math ability, then these student scoring differences should not exist or at minimum be much less pronounced. The effect size analysis suggests that Liberation High School students on average score approximately one third to over one whole standard deviation below their math equivalent peers at the other high schools in the Independence School District. I argued that zip code should not be a factor when predicting math achievement levels for high school students and that it would be advantageous for school leaders to look long and thoughtfully at the amount of instructional minutes dedicated to mathematics when constructing schedules for their schools.

By conducting this quantitative analysis, I developed a much keener sense of the inequities of academic performance at our district's high schools that from the outside did not seem explainable. I became more convinced that the schedule at Liberation if not causal was relational to the differences in academic achievement. Marc, the science teacher from Liberation on the schedule committee put it in more stark terms when he said at the October 19 meeting: "The schedule at Liberation High School is intellectually damaging students. There is a huge impact on student learning when a student misses a class during a "B" week. In those instances I only see that student once in five school days. That is irresponsible."

Secondly, I gained a deeper understanding of the differences between the three high schools as it related to teacher/student contact time. Jodi, a teacher representative from Independence, was the only math teacher on the schedule committee. I was able to better identify with a key point Jodi brought up during committee discussions due to my quantitative analysis. At one meeting, she spoke of district level meetings of math department heads and how Liberation math teachers would express frustration about their inability to cover material due to the difference in class time. At the same October 19 High School Schedule Committee meeting, she said, "There is an issue regarding enough time for math teachers at Liberation High School. I have heard them say that they do not have enough time to cover all the material at the depth they would like. They either go real fast or don't cover it at all."

Observations and comments such as this math teacher's added to the assertion that the schedule at Liberation High School was having a negative impact on teaching and learning, at least in some content areas.

The Emergence of Themes and the Creation of Criteria

Once the foundational work was established, part six of the work map was the creation of criteria that would serve as a filter for vetting any and all common schedule proposals. Prior to the creation of the criteria, themes were identified that had surfaced during the foundational research work done by the committee. Josh, the co-facilitator, and I went through all of the data requests and looked for similarities and placed them under a subject or theme that we created. We ran our initial list of themes by the committee and encouraged them to edit, delete or add to the list. The themes that eventually emerged were:

- College Preparation
- Access to Electives
- Student Teacher Contact Time
- Connectivity
- Finances
- Teacher Planning
- Alternative Education

Under each theme, the committee generated a list of considerations to be reflected upon prior to the creation of criteria. At the November 16 meeting, discussion centered on reviewing the previously established considerations and creating criteria to serve as a filter for future schedule proposals. Through whole group discussion, school groupings, and mixed small group discussion, and an eventual consensus check of the group, the committee agreed upon the following criteria for any schedule proposal:

- The amount of contact time per class per week needs to be the same for all students.
- Periods will be no less than 40 minutes and no more than 90 minutes.
- Students will see their teacher in class a minimum of 3 times a week.

- Student/teacher contact must be a minimum of 250 minutes per week in a class.
- Most students will have an opportunity to access more course options than they currently have/do (more than 6) within the existing school day.
- Each student will have at least one day per week with at least 80 minute periods.
- A minimum of 5 minute passing periods.
- A minimum of a 35 minute lunch period.
- Daily teacher planning.
- Teacher planning time should be at least 16.7 % of a teacher's schedule (1/6).
- Teachers should have a minimum of 20 minutes planning each day.

The criteria were completed and served as the filter for vetting all proposed schedules. An interesting revelation occurred at the end of the criteria conversation. Polly, the principal at Independence High, noted that none of the schools met all of the agreed upon criteria. She said, "I think we need to acknowledge that none of our schools meet all of these. We need to be courageous and realize that all of our school's schedules are going to change. Let's keep looking at all of it and not narrow our possibilities."

At the beginning, the conversation on the criteria centered almost exclusively on the impact of any schedule alteration on students. By the end, the discussion shifted dramatically to teacher-centered issues, particularly on planning time and case-load. At one point, when the merits of a seven period schedule were being discussed, Ginger, committee member and a science teacher at Sovereignty stated, "I will not endorse a seven period day unless I have a guarantee that I am teaching only five of seven. I'm overwhelmed as it is." Lance, the teacher representative from Lion Hill, added his support to that statement by saying:

I agree with Ginger. As a member of the union, I would fight the six out of seven. ... We are in a recession, at this time how can we ask a district to do “optimal”. Our budget restricts optimal. For parents who want their students to take seven periods, the parents need to find a way to pay for it.

As I reviewed my journal notes, I noted at the time of the above comments, that the other teachers and students on the committee nodded their heads in agreement, but the parents were noticeably silent and their body language suggested opposing feelings.

Lana, the Liberation parent representative, who was hoping to find a way to honor the teacher’s desire for adequate planning time, suggested “we could set X minutes of planning for teachers each week, but not necessarily every day.” Her suggestion was soundly rejected by teachers on the committee. Exasperated, she told the group that with the final agreed upon criteria, “I still think we are overly constraining ourselves.”

Lana, being from Liberation, was open with the committee from the start of her desire to preserve more course offerings. She told the committee that she attended high school back east and that her school offered seven periods. She brought copies of unique high school schedules to the committee in hopes of finding a seven period option. Anytime a proposal came up about seven periods however, the discussion promptly turned to a question of how many classes out of seven a full time teacher would teach with teachers set on only teaching five. As Mr. Cooper told the committee earlier, a seven period schedule with teachers teaching five periods would cost millions of dollars to implement.

Schedule Proposals and Final Vote

Part seven of the work plan consisted of the committee bringing or developing schedule proposals based upon the agreed upon criteria. It became evident, early in the process, that it was

going to be very difficult to find or create a schedule that met both the group's criteria and the cost neutral parameter set in the committee charter. Therefore it was agreed that a schedule could be considered even if it did not meet all of the established criteria. As a result, the criteria were used to help prioritize schedule proposals by seeing which ones met more of the criteria than others. This compromise later proved problematic since none of the criteria were weighted in importance by the committee.

At the November 30 meeting, the committee broke into three smaller groups with the charge of developing potential schedule options for consideration. Linda led one group, Polly another, and Mitch the third group. Each group was a mix of members from all schools.

After an hour, each group reported back to the full committee on their proposed schedule(s) followed by discussion and questions from the committee. The three proposals were posted to the district website for public consideration.

One of the three final proposals, from Linda's group, was an eight period schedule that required extending the school day. Bill was in this group and he was the one who proposed an eight period schedule that met every day. In order to meet minimum minutes of contact in the final criteria, his schedule would require extending the work day and this was a contract violation. Not unexpectedly, it was later rejected.

The other two proposals that came out of Polly and Mitch's groups were six-period hybrid schedules in which on some days teachers saw all six periods and on others they saw fewer periods but for longer blocks of time. Since Bill was not in either of these groups, there was no elective teacher represented and thus the concern about negatively impacting electives at Liberation was not as prominently explored.

Part eight of the work map stipulated that the committee would choose one final common schedule for recommendation to the superintendent. On December 14, the final meeting date, the committee was asked to come prepared to vote on schedule proposals.

Shortly after the meeting came to order, Marc, a science teacher at Liberation, commented that he would not support any of the three proposals generated at the previous November 30 meeting. He said,

I'm not happy with any of them. I have been mulling them over, but at end of the day - what are we about? Students who can compete globally. To me, as a teacher I'm passionate – the iron is hot – why don't we develop the best school schedule possible and not limit ourselves to the cost neutral. I remember going through the information – it said cost neutrality is a consideration, not a requirement.

He explained further that since the parameters in the charter stated that the committee need only “consider” that a schedule be cost neutral, then it was not required that it be so. Therefore, he proposed that the committee recommend a schedule that all schools were more likely to endorse; a seven period option with teachers teaching five of seven.

Over the three months that the committee had been meeting, seven period options had surfaced before, specifically by Lana and Marc. In each case, the committee eventually moved away from such an option as it seemed to be an insurmountable divergence from the charter's parameters, specifically the cost neutrality provision. Unless teachers agreed to teach six of seven courses, it would cost millions of dollars annually to adopt such a schedule. Marc was from Liberation High School. He argued that the district needed to better prioritize existing resources and that if the community wanted seven periods, then the district needed to find a way to fund it.

Linda, the Sovereignty principal, spoke up at this point and noted that if money were no option then perhaps a seven period option would be optimal. But given that resources were limited, she could not endorse a recommendation that asked the district to re-prioritize resources to make a seven period schedule a reality without considering the impact on other aspects of the district like elementary and middle level education. Polly, the Independence principal, expressed her support for Linda's position.

Along with the principals, each committee member was given an opportunity to comment on this new suggestion from Marc. While no specific seven period option was voted upon by the group, it was the consensus of the committee that a successful, affirmative vote on the schedule proposals from the November 30 meeting was not forthcoming. Given the parameters of the charter, the committee agreed that it could not reach consensus on a specific schedule to submit to the superintendent for consideration. Instead, the committee determined that an official statement to the superintendent should be made regarding the inability to recommend a common schedule in the form of a report out of the committee's findings.

A slate of major points/issues to be included in the report was generated in small groups and voted on and approved by committee members. It was agreed that I would develop the report based on the generated points. Those final points that received at least 15 votes of the committee were as follows:

1. We can do better than our current schedules in our schools and we should explain why we did not reach a common schedule
2. A 7 period schedule may be a plausible option if teachers teach 5 of 7 for the three comprehensive high schools.

3. If resources allowed, we should use the evidence gathered during this process for justification for suggesting a 7 period schedule
4. Should the schedule change, then graduation requirements may need to be reconsidered, and aligned to the new schedule
5. Lion Hill should be able to create a schedule that best meets the needs of students served by alternative education.
6. Since the best option does not appear to be cost neutral, and may take multiple years for implementation, the conversation and action steps, if any, for now, should be taken to the building-level.
7. Should resources allow for a new schedule to eventually be implemented, details should be considered at the building-level prior to implementation.
8. If resources allowed in the future, a 7 period schedule should be setup so that all students may access the additional opportunities without personal cost. The district may want to consider a student option for additional periods, but not a forced option.
9. When implementing a new schedule in the future, we should operate in collaboration with the teacher's association in order to:
 - a. Retain high quality teachers.
 - b. Provide sufficient planning time
 - c. Keep student loads reasonable
10. Have 4 out of 5 days of regular student contact
11. Obtain extended periods of learning time one day per week.

(High School Schedule Committee Website Posting- December 2012)

Because it is likely that any schedule change would come at a cost, the committee, at the prodding of the principals, asked that the district strongly consider the trade-offs across the district before implementing something that might be too costly to other parts of the system (i.e. K-8, maintenance, transportation, food service, etc.).

In the concluding report, the similarities and the contrasts between the district's high school schedules, which became much clearer over the three and half months of work, were highlighted.

- Sovereignty and Independence high schools have significantly more contact time per class per semester than Liberation (LHS – 63.3 hrs.; IHS- 80.7 hrs.; SHS- 82.5 hrs.).
- Liberation has extended class periods (89 minutes), which none of the other high schools have. The Liberation block schedule allows for more contact time overall in all classes combined, due to fewer transitions between classes during the school day.
- The Liberation schedule provides significantly more opportunity to take more courses over four years than the other high schools. (LHS-32; IHS & SHS – 24)
- The Sovereignty and Independence schedules have teachers and students seeing one another every day while at Liberation it is every other day. Lion Hill staff see students everyday every day except Fridays.
- Full time teachers at Liberation teach six total classes per semester, while Sovereignty and Independence teach five classes. Lion Hill teachers teach six.
- Liberation teachers teach three of four periods per day. Independence and Sovereignty teachers teach five of six classes every day. Lion Hill teachers teach six of six with no prep period except on Friday.

- Other than Lion Hill, all high schools have teacher planning every day. Liberation planning is one-fourth of instructional time and Independence and Sovereignty is one-sixth.
- Lion Hill has an advisory built into their schedule that the other schools do not.

These differences were significant because they highlighted some of the reasons why the committee members believed that the current schedules in the schools could be better.

Conversely, these points also emphasize the reasons why the committee was unable to recommend a common schedule given the parameters of the charter. Liberation staff, while fond of their increased planning time, were most reluctant to reduce course offerings because of the perceived impact on electives. Independence and Sovereignty staff, students and parents were intrigued with the idea of more course offerings but not at the expense of significant reductions to teacher/student contact time. Hence, it seemed like a seven period option was the only viable one that all might agree upon, but the cost-neutrality bullet of the charter made a seven period schedule impossible, if implemented with teachers teaching five of seven periods, which the teaching staff insisted upon.

On January 12, 2012, I submitted the final report of the committee's work to the school board. Four major areas were stressed in the presentation to the superintendent and the school board.

Contact Time

Much discussion was had by the committee around the importance of teacher/student contact time. After a particular discussion on End of Course (EOC) Assessments (see 2.8) as a graduation requirement, the committee acquired a greater awareness of the importance of students being adequately exposed to course content in order to better ensure success on state

exams. Liberation students were scoring significantly lower than their district counterparts on the Algebra and Geometry End of Course assessments in the 9th and 10th grades. This mirrored the achievement results of my quantitative study of PSAT scores.

Related to that topic, the committee sent a question to state level officials specific to time and grade level expectations and course standards. Specifically, the committee wanted to know if the state considered the 150 hour state requirement for credit when creating state content standards and grade level expectations. The State Superintendent’s Office informed the committee that no formal analysis was completed in any subject around the state learning standards and time; however the committee was told that state committees are mindful of the quantity of content in the standards and the time that most schools have to cover the content. Middle and high school test data in the Independence, along with teacher anecdotal data suggests that less contact time per class at Liberation was and is an issue. In addition to the EOC math data, as stated, my study on math PSAT scores was examined by the committee as part of its work also. That study, too, showed a significant difference in test scores among similarly placed mathematics students.

Table 2.8

2011 EOC 1- Algebra

| | 9 th Grade | | 10 th Grade | | 11 th Grade | | 12 th Grade | |
|----------|-----------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|
| | Tested | Passed | Tested | Passed | Tested | Passed | Tested | Passed |
| District | 644 | 85.8% | 708 | 85.3% | 143 | 83.0% | 48 | 62.5% |
| IHS | 231 | 87.4% | 263 | 90.4% | 55 | 83.6% | 11 | 72.7% |
| LHS | 164 | 82.2% | 176 | 78.9% | 43 | 90.7% | 22 | 63.6% |
| SHS | 244 | 88.5% | 249 | 87.8% | 34 | 90.6% | 8 | 87.5% |

Table 2.7

2011 EOC 2 - Geometry

| | 9 th Grade | | 10 th Grade | | 11 th Grade | | 12 th Grade | |
|----------|-----------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|
| | Tested | Passed | Tested | Passed | Tested | Passed | Tested | Passed |
| District | 571 | 97% | 609 | 85.1% | 67 | 59.1% | 4 | 50% |
| IHS | 210 | 99% | 211 | 87% | 30 | 56.7% | 2 | 0% |
| LHS | 122 | 89.3% | 129 | 69% | 19 | 52.6% | 1 | 100% |
| SHS | 239 | 99.2% | 261 | 92.7% | 15 | 71.4% | 1 | 100% |

A final criterion set by the committee was that student teacher contact must be a minimum of 250 minutes per week. That equates to 150 hours per school year. State law, at the time of the committee’s work had set the time minimum for high school credit acquisition at 150 hours. Over the last dozen years, Liberation has fallen further below that threshold due to built-in half days for teacher preparation. While it was possible for schools to offer and reward credit for courses that met for less than 150 hours, an exemption request was required to the state.

In its original selection criteria for a common schedule, the committee also stipulated that students and teachers should have contact at minimum, three times per week. In the final vote for this report, it was increased to four times a week. Either minimum is more than the current two days a week of contact at Liberation High School that is the reality for students and teachers every other week throughout the school year.

While Liberation committee members readily acknowledged concerns about less contact time per class and frequency of teacher/student contact, as stated, there was a reluctance to endorse a six period schedule due to its restrictive impact on elective offerings.

Opportunity

One of the greatest strengths attributed to the Liberation schedule by students, staff and parents is the ability for students to take an elective class, like music, and still have the capacity to take more academic classes required for college entrance like world language and upper level science courses. Likewise, it was expressed through focus groups and e-mails, that some Independence and Sovereignty students and families were interested in increasing the number of course opportunities. A final criterion, approved by the committee was that most students would have the opportunity to access more course options. As stated earlier, steps had been taken over the last few years to open up a student's high school schedule (i.e. technology graduation requirement moved to middle school, elimination of pre-requisites, expansion of on-line learning opportunities, acceleration opportunities in summer school, etc.)

While Sovereignty and Independence committee members readily acknowledged the desire by some in their community to have access to more course offerings during the school day, as stated earlier, there was a reluctance to endorse an 8 period option similar to Liberation High School due to the reduced time of instruction per class and legal requirements for acquiring high school credit. In addition, there was some discussion about wanting to know more about whether or not more class opportunities was even desired by most families and students in Independence and Sovereignty and whether that was educationally beneficial to all.

Extended Time Periods

The committee noted that not all classroom activities like higher level thinking projects, in-depth labs and comprehensive presentations and debates fit nicely into 55 minute blocks of time. The increased periods of learning at Liberation High School allow for an in-depth understanding of material without the feeling of being rushed when it is necessitated. A final criterion agreed upon by the committee was that all students should have an opportunity for extended learning time at least once a week. Independence and Sovereignty high schools do not currently have time in their schedule like this. In addition, they also have significantly abbreviated classes on Wednesdays. As shared anecdotally, these shortened periods can be problematic for classes that require a lot of set up or preparation (i.e. physical education, science, music, etc.).

Connectivity/Advisory

A significant conversation ensued during the creation of criteria around the idea of an advisory period. “Connectivity” is one of the Optimal High School Experience guiding beliefs and states that students must feel connected to their school in order to have a high quality educational experience. The importance of students being connected to peers and adults was stressed by the committee, particularly by the student representatives. While an advisory period was not made a part of the final criteria, it was seriously considered. Advisory does currently exist within the Lion Hill Alternative High School schedule.

Teacher Planning/Class Size/Caseload

All members of the committee agreed that the single most important factor in the school setting for a quality learning experience is the teacher in the classroom. It was voiced that adequate planning time is vital to the creation of engaging, high quality lessons. Any schedule needs to keep this at the forefront of consideration. A final agreed upon criterion was that

planning time should be at minimum one sixth of instructional time. This matched the existing proportion of the work day dedicated to planning time at Independence and Sovereignty high schools. Liberation teachers have 35% more planning time and approximately 15% more students on average per caseload. The committee noted in the final report that while it may be a cost savings to increase class sizes, the unfortunate side effect, at times, can be a decrease in the amount of attention an individual teacher can give to each individual student due to the inability of the teacher to get to all students in a class period due to larger numbers. Lastly, while increasing opportunity for students could be a benefit, the committee expressed a concern that if that is achieved by increasing caseloads and decreasing planning time, the net effect on student achievement and the overall quality of experience may be negligible. Any schedule proposal should strongly consider these factors prior to any implementation.

At the end of my presentation, board members asked questions and some expressed dissatisfaction with the outcome. However, they were more interested in hearing what action, if any, that the superintendent would be taking as a result of the committee's work and the report.

The Response

On January 25, 2012, at a regularly scheduled board meeting, the superintendent announced his official response to the work of the District Schedule Committee and put it in the form of a letter to the community. Reading from his letter, he acknowledged the work of the committee and his directives to staff moving forward:

After almost four months of intense work, committee members were unable to recommend a common schedule, but they developed key findings about the elements that make up a more optimal schedule for all students. With the committee's report in hand, I am announcing there will be no significant changes to the schedules at any of our high

schools for 2012-2013; however, I am declaring action steps that must be taken at our high schools between now and the beginning of the 2013-14 school year to address and rectify the problems that were affirmed, clarified, and unearthed during the committee's work. (Superintendent's Letter January 25, 2012)

There were a total of five required action steps in the superintendent's letter of which two were directed at Liberation High School, two impacted Independence and Sovereignty high schools, and the last one involved Lion Hill.

Beginning with Lion Hill, in his letter, the superintendent focused on an impending building bond ballot measure and the potential to build a new Lion Hill High School in the future that could offer new learning opportunities for students. He noted how the District High School Schedule Committee recognized the uniqueness of a school that serves students in an alternative education environment. He acknowledged how staff members at Lion Hill had played a critical role in helping to raise the district's extended graduation rate to one of the highest levels in the state. He noted that if the bond were to pass, which it eventually did, there was potential for a new facility in the future and thus the possibility of diversifying the course offerings at the school in the future. New course offerings not only could benefit the Lion Hill students, but could also provide options for other high school students in the district. Therefore he directed me to work with Dennis Wright, the district Director of Career and Counseling and principal Earl at Lion Hill and his staff to create a plan to be submitted to the superintendent by the end of the school year proposing new, future courses at Lion Hill.

Of all the action steps directed by the superintendent, this was the least controversial and in actuality, it drew the most enthusiasm from the board of directors. Board member Chad Maggard, particularly, stated at the January 25 board meeting how, while he was disappointed

over much of the superintendent's response to the High School Schedule Committee's report, he was excited about the potential to do new things at Lion Hill. He suggested that the district could make a school, similar to the Delta School, a school located in the eastern part of the state that focused on STEM (science, technology, engineering and math). Lion Hill principal, Earl, however, was not as keen on the idea. While he liked the idea of more hands-on, relevant course offerings for his school's students, he expressed to me his concern that Lion Hill, if re-purposed to become a STEM school, would no longer serve the at-risk students with significant out of school obstacles to overcome, who have historically been served by Lion Hill.

The next two directives in the superintendent's response were focused toward Independence and Sovereignty high schools. He recognized that because of their six-period schedules, the two schools have fewer opportunities to access more classes than at Liberation, with its eight-period block schedule. He spoke of steps that had been taken over the last three years to open up more opportunity and flexibility for all students, which have mainly benefited Independence and Sovereignty students. These steps include: elimination of pre-requisites during the registration process, allowing more students to accelerate; creation of an online learning department, allowing students to take courses that may not fit into a traditional schedule (the bulk of enrolled online students are from Independence and Sovereignty); expansion of the summer school program to include acceleration opportunities and access to electives; and increased opportunities to meet high-school graduation requirements while in middle school. While acknowledging these efforts, he wanted more work to be done. He went on to say in his letter to the district:

While these steps are a good start, I am directing the executive director of high schools to work with the Independence and Sovereignty principals and staff to take the following steps before the end of this school year:

- First, I want to know how much our efforts over the last few years have met the needs of our students and families who desire more opportunity. I want a survey conducted to find the answer to this question.
- Secondly, I want a plan submitted to me—informed by the results of that survey and aligned with the final criteria of the High School Schedule Committee—on what future steps need to be taken to increase opportunity at those two high schools while not falling below 150 hours of contact time per class. This...might include innovative ways to stretch coursework within the traditional school day using technology and staffing flexibility. (Superintendent’s Response Letter, January 25, 2012)

Three of the five school board members live within the boundaries of the Independence and Sovereignty high school attendance areas and have children attending those schools. Not surprisingly, they were more interested in the directives from the superintendent that could impact those two schools. Having pressed for more perception survey work from the district in the past, they seemed pleased with that component of the directive. Likewise, they were curious to see what steps, if any, the district and school administrators could take to open up opportunity for students at those two high schools.

Lastly, the superintendent declared his intended action steps for Liberation High School. This was the information that both the superintendent, his cabinet including myself, the school board and the community were more anxiously anticipating. Cabinet members expressed

concern about the potential for renewed, contentious school board meetings and a Liberation gymnasium packed with angry parents that was the result of a directive to change the Liberation schedule four years earlier. At the January 25 board meeting, Lana, the parent representative on the Schedule Committee from Liberation was in attendance as well as Kathy, who was a teacher representative from Liberation. Both had served on the district's High School Schedule Committee. Other than those two, there were no other members of the Liberation community at the meeting.

The superintendent began the last of his remarks by referencing the High School Schedule Committee's final report, which noted that state regulations require 150 hours of classroom instruction in order for a school to award one high school credit; or, if less than that, the school must ask for an exemption from the State Office of the Superintendent of Public Instruction. He noted that because of the configuration of Liberation's eight-period block schedule, it is currently approximately 24 hours under the state requirement and approximately 36 hours below Independence and Sovereignty high schools, which have six-period schedules.

He went on to say that more important than the legal hourly requirements, having a common amount of instructional minutes per class provides students with equivalent exposure to their teachers who play such a critical role in student's learning. The quantity of time that students spend with their teachers should "not be inequitable based on a student's zip code." He went on to say:

Significantly less time with well-trained teachers using quality instructional materials equates to an unfair disadvantage to students, staff and families at Liberation High School, and our schools' data suggests there is a correlation. Therefore:

- I am directing the Liberation High School principal to work with his staff to complete the exemption process. A copy of the exemption request will be submitted to my office prior to submission to the state which has a deadline of May 1.
- Along with the exemption request, I am directing the Executive Director of High Schools to work with the Liberation Principal to develop a plan for Liberation High School to transition to a new schedule that will take effect at the beginning of the 2013-14 school year. That plan should be created using a process similar to that of the district High School Schedule Committee and should include opportunities for community input and participation. Aligned with the final criteria of the High School Schedule Committee, the new Liberation schedule must have a minimum of 150 hours of contact time per class while balancing opportunities for students. This might include innovative ways to stretch coursework within the traditional school day using technology and staffing flexibility. A copy of the transition plan will be submitted to the Superintendent by the end of this school year. (Superintendent's Response Letter, January 25, 2012)

At the conclusion of Superintendent Ralston's remarks, Brian Furley, one of the board of directors representing the Sovereignty portion of the district, asked the superintendent the following, "If having 150 hours of instruction is so important, why are you waiting a year to implement this? Why not do it now?" The superintendent responded by asking me to address the question. On the podcast I stated that Liberation is a high performing school academically by all traditional state measures, however, a closer analysis revealed that not all students are performing at levels we would expect. I told the board that we believed the lack of contact time was a contributing factor and that it was a problem that needed to be fixed, but this was not a

crisis. “Imposing a schedule on Liberation without giving them an opportunity to problem solve the issue in a way similar to the district committee would be more detrimental than allowing the schedule to remain for another year” (Independence School Board Podcast, January 25, 2012).

Chad, whose board seat is in the Liberation area who also had a son at Liberation, thought that the superintendent’s decision to set an hourly parameter and then place the burden for creating a schedule on the shoulder of the Liberation community was the equivalent of “kicking the can down the road” and that he’d prefer the district continue to try to solve the issue.

The superintendent differed, indirectly referring to his experience of four years ago. “I respectfully disagree with you. For me to arbitrarily tell the Liberation community how to solve their problem is wrong. While I appreciate your concerns, the Liberation community and professionals can solve it. I am confident of that” (Independence School Board Podcast, January 25, 2012).

Board member Furley later asked about the required application for exemption to the 150 hour requirement from the state. Specifically, he wanted to know of any contingency plan in case the exemption request was denied. The superintendent expressed his confidence that no denial would occur. Rather, he suggested we would work closely with OSPI to meet any requirements that they had to ensure the request was accepted. Furley was not satisfied with this response. He told the superintendent: “Quite frankly, I am surprised that no contingency plan has been developed. Will Liberation staff be able to implement a six period schedule next year if the exemption is denied? I think that is a question that needs to be answered” (Independence School Board Podcast, January 25, 2012).

Superintendent Ralston directed me to submit the exemption request earlier than the May deadline so we could get an answer, which the superintendent was confident would be affirmative and allay any fears board members had.

Toward the end of the approximately hour long discussion, a few conversations ensued around the part in the superintendent's letter that referred to "innovative ways to stretch coursework within the traditional school day using technology and staffing flexibility." Some board members expressed an eagerness to hear mine and the principals' response to this call.

Principal Response to the Superintendent's Directives

Over the next few months, I worked closely with the building principals to formulate a response to the superintendent's directives. Periodic updates were given to the school board along the way. The end result was a written report to the school board that was delivered at the June 20, 2012 board meeting.

Prior to that board meeting, the three comprehensive Independence School District high schools celebrated their commencement ceremonies on June 11, 2012 at a local professional sports stadium. It was a sunny day and Liberation's ceremony was the final one of the day.

Like all of the district's high schools, Liberation students are permitted to vote on and choose a faculty member to speak at graduation. The students chose Jan Langston, a retiring social studies teacher with over thirty years of experience at Liberation High School. In fact, she was on staff when the school opened in 1977.

I was on the stage, along with the superintendent and all five board members when Ms. Langston approached the podium. Shortly into her speech, she mentioned how grateful she was to have spent her career at such a wonderful school like Liberation, a school that she considered "not just good, but great." She slightly turned toward the superintendent when emphatically

making this point. She asked the assembled seniors in their blue gowns and caps seated before her, “If you felt that you benefited educationally from the eight period schedule, please stand up.” It looked as though every senior stood. Many were smiling and while there was not an outbreak of handclapping, they were talking to one another and nodding and affirming the teacher’s request.

As the graduates stood, I looked at the parents who were seated all around the seniors. There were smiles, and a few seated closer to the stage that were visible to me looked, if not confused, somewhat passive. There was no applause.

After Ms. Langston told the students to be seated, she then asked a follow up question. “If you think you would have been better served by a traditional six period schedule, please stand up.” Four students stood up out of a graduating class of approximately 250. The teacher recognized the boys and said, “Good for you Johnny, Richard....always stand up for what you believe in.” She then went on with the rest of her speech. Since it was the last ceremony of the day, there was no debriefing afterward with the superintendent and the school board.

In the written report to the school board that I presented at the June 20 board meeting, I delivered specific principal’s responses to each of the superintendent’s directives from the January 25, 2012 letter. Beginning with Lion Hill, I worked with Principal Earl and our career and technical education director to craft new elective offerings that would commence in the 2012-13 school year. The first was a project management course that prepares students to apply quantitative and qualitative knowledge, skills, tools, and techniques to manage projects in a wide range of fields and occupations. This program includes instruction in project planning, risk management, cost and time management, contracts and procurement, accounting, statistics, decision making, and human resources. Secondly, for the first time, Lion Hill would be offering

an introduction to computer science course to help students gain knowledge and skills in computational thinking. Students learn to program simple computer games, assemble small electronic gadgets and script web pages. This program utilizes a unique partnership with a large local software company that also happens to be the employer of two of the board members.

In addition, with the passage of the building bond, district staff and Lion Hill administration committed to exploring additional course offerings in the future new facility that would be open to all district students like an information technology academy in which students could earn industry certifications. A health professions program was proposed that could introduce students to the knowledge and skills applicable to many medical occupations. A course on emergency management services was proposed that could prepare students to recognize and respond to local and regional disasters. Areas of study would include law enforcement, health care, public utilities, and local government. The Lion Hill plan was received with no reservations by the board.

The response to the directives for Independence and Sovereignty high schools received greater attention and questioning from the board of directors.

In working with Polly and Linda, surveys were administered to all students in April and May of 2012. In April, 2820 students were surveyed at Independence and Sovereignty high schools across all grade levels. Students were asked about their current schedule and their interest in increasing course offerings or access to additional classes. Results of that survey showed:

- 28% said they preferred that their schedule be left as is.
- 10% said they would like a required seven period schedule for all with accompanying increased graduation requirements, if resources allowed.

- 54% said they would like an optional 7th period that they could choose to take or not without any subsequent increases in graduation requirements, if resources allowed.
- 8% had no opinion.

In addition, in May of 2012, a survey was issued to all seniors in all of the district's high schools. 707 (89%) seniors at Independence and Sovereignty high schools were asked about their level of satisfaction in their ability to access the courses they wished to take during their high school years. 654 (93%) either agreed or strongly agreed that they were satisfied with their ability to access the courses they wished to take during their high school years. Interestingly, Liberation seniors had approximately the same degree of satisfaction with 223 (88%) expressing satisfaction with their ability to access the courses they wished to take.

Based on the results of the surveys, it appeared that the efforts of the last few years to increase flexibility in Independence and Sovereignty student's schedules had been making a positive difference. Those efforts included: elimination of pre-requisites during the registration process; allowing more students to accelerate; creation of an online learning department; allowing students to take courses that may not fit into a traditional schedule (the bulk of enrolled online students are from Independence and Sovereignty); expansion of the summer school program to include acceleration opportunities and access to electives; and increased opportunities to meet high-school graduation requirements while in middle school.

And while those action steps have made a difference, it was clear that students were interested in optional 7th period opportunities. Subsequently, I announced that two pilots would take place at Independence and Sovereignty high schools in the 2012-13 school year.

First, Independence High will be piloting an opportunity for students to access a 7th course. Students will access their learning in two distinct ways: through direct teacher/student

contact time in class and through non-traditional teacher-directed instruction including an on-line component. Students are responsible for the same amount of content, rigor, and total hours of work as the standard semester long course in each subject. This pilot is being run with PE and Health courses and approximately 60 students have signed up. Both courses are taken during the same period each day with in-class and out of class instruction alternating from week to week.

Secondly, Sovereignty will be piloting an on-line support program. While approximately only 4% of Sovereignty students have taken an on-line course during the 2011-12 school year, the school does have the largest number and percentage of students taking a class on-line in the district. Of the 156 enrolled in on-line courses first semester, 83 (53%) were taken by Sovereignty students. In reviewing the success rate of tutored versus non-tutored on-line students during first semester across the district, the non-tutored students had an average grade of 85% and the non-tutored students had an average grade of 59%. In light of this information, I announced that Sovereignty will be piloting an after school tutoring program for its on-line students as a check in and support service. I told the board that building administration will work with the district on-line learning coordinator in implementing the pilot.

The embedded 7th period hybrid option at Independence High School drew the most attention from the board. The class, in effect, was providing the ability to take seven courses that the District High School Schedule Committee was unable to recommend in part due to the prohibitive cost. By only having sixty (60) students participate in the pilot, the cost was minimal, about \$20,000. This was obviously considerably less than the millions of dollars annually that were projected by the business office to pay for a 7th period schedule for all high school students in the district.

Board Director Maggard suggested that he liked the creative solution that a hybrid class provided and he shared his wish that in hindsight he would have liked for the district schedule committee to have had some financial latitude to find a district level common schedule. He felt that the “cost-neutral” provision in the charter stymied the ability of the committee to think creatively.

At that point in the board meeting, Chief Financial Officer Jack Cooper, spoke and acknowledged the new cost of the on-line hybrid pilot class at Independence High School but reaffirmed the minimal nature of the investment and cautioned the board to think carefully before giving district committees charters to do work without sound financial parameters. He noted the high bond rating achieved and maintained by the district and continuous years of successful audits as evidence that a conservative financial approach to problem solving was most prudent.

I reported out that the Liberation administration formally requested an exemption to the 150 hour credit limit from the state in February of 2012. The assistant superintendent of secondary education at the state education office notified the school and the district in an e-mail that, “If credit waivers are necessary for the 2012-13 school year, the request for Liberation High School will be approved.”

Ironically, subsequent legislation passed in the most recent legislative session by the state legislature makes such an exemption request unnecessary moving forward. Districts can determine if they wish to allow credit for classes that meet for less time than 150 hours or through some sort of competency based system. Current district policy in the Independence School District reflects the old state language of 150 hours minimum of contact time for credit acquisition. I recommended that Independence, like all districts in the state, thoughtfully consider the staffing and budget implications of adjusting the current seat time/credit formula.

Finally, I announced that Liberation administration had created a work plan and calendar for creating a school based schedule committee that will recommend a new schedule for Liberation High School to the superintendent by November of 2012 to be implemented in the 2013-14 school year. I showed the board a website that was created showing the school committee's charter and spells out the application process, the dates of upcoming work, and some of the information-gathering work that has already been completed including staff and parent meetings meant to generate data for the Liberation Schedule Committee to consider.

I personally attended department chair meetings and all-staff meetings in April and May at Liberation. While there were some questions and hints of resentment toward the superintendent, there was a quiet acceptance that a six period day was imminent. Teachers were neither defensive nor aggressively defending the current schedule at Liberation. Core academic teachers particularly were accepting of the impending change while elective teachers expressed concern and their belief that the schedule retraction would impact their employment.

I attended two Liberation parent meetings in April and May in which a total of fourteen parents showed up. About a third of the attendees were middle school parents who expressed concern about the lack of contact time in classes for their future high school students. A few parents at those meetings who had had students go through Liberation High School shared their positive experiences regarding the schedule, but their advocacy was muted when some of the data was shared.

I told the board that while the Liberation committee would be considering the best schedule for Liberation students in the fall, the administration and staff would be monitoring the work of Sovereignty and Independence high schools around innovative ways to stretch opportunities for students through technology and staffing flexibility.

Board member Maggard expressed frustration around the cost-neutral parameter of the district charter and repeated his frustration.

Liberation folks will just end up in the same place as the district committee and will have no avenue to explore a seven period option, which I believe they want....I have an issue with this, we need to prioritize our resources. If we believe a better schedule has better impact, we should have that discussion. (June 20, 2012 Independence School Board Meeting Podcast)

Maggard went on to share that he had heard from neighbors while doorbelling for his campaign for state legislature that Liberation families love the eight period block schedule and that he was surprised that the other high schools in the district did not push to acquire it.

I shared with the director that there were fourteen representatives from the other district's high schools on the district schedule committee who could have advocated for that very thing, but did not. I also reminded him that Liberation staff on that committee voted in favor of final criteria for a district common schedule that included an increase to 150 hours of contact time. In my journal, afterwards, I wrote about my frustration in having to repeat this information to this particular board member who lived in the Liberation service area.

I finally told the director that while there was some flexibility in the schedule parameters. The Liberation committee would need to abide by those parameters, but I had little doubt that they would land on a six period schedule of some kind. They may seek out creative ways for 7th period options like the one being piloted at Independence, but they would ultimately land on six periods.

Maggard expressed his surprise and appeared visibly angry. One of the cabinet members told me his "neck got red." Maggard stated that he believed that Liberation families loved the

eight period schedule. Director Weaver, whose seat was in the Sovereignty attendance area questioned Maggard's assertion by saying, "Yes, but would they still love the block schedule if they were fully aware that their kid didn't get the same amount of education as a Sovereignty or Independence kid?" (June 20, 2012 Independence School District Podcast).

Maggard claimed that the teachers at Liberation loved the schedule. I asked him which teachers. He mentioned the Liberation Science teacher who had served on the committee. I emphatically told the board member that that same science teacher at an earlier District Schedule Committee meeting had expressed his dissatisfaction with current schedule. He described it as "intellectually damaging (to) students." The board member corrected his earlier statement and said that he had misspoken and that the science teacher actually favored a seven period day and not the current eight period block schedule. I nodded and told him, slightly exasperated, that yes, he did favor that, but the cost to run such a schedule prevented it from being considered by the committee due to the cost neutral parameter.

With that, the conversation ended and the board members thanked me for the report and went on to the next topic. Later that week, the superintendent came in to my office and thanked me for my direct and blunt presentation to the board and said it was something that they needed to hear and that such a frank analysis of the situation would be helpful in the fall when Liberation begins to change to a new schedule.

CHAPTER FOUR

OUTCOMES AND CONCLUSIONS

Improved participation in communication pathways and feedback loops used by one school district in its attempt to create a common use of time in high schools to maximize resources and improve student learning provided the focus of this study. The action research portion of this study began with the creation of a district wide committee of stakeholders in the summer of 2011 whose charge was to create a common schedule for all of the Independence School District's high schools. A report of the committee's work was submitted to the school board in January of 2012. A subsequent written narrative was presented to the board in June of 2012 regarding the principals' response to the Superintendent's directives that evolved from the committee's work. Several important themes emerged from the study. This chapter details the findings and conclusions of this study, and the study's significance.

Outcomes of the Study

The Entrepreneurial Force of Teaching and Learning and Parents

When Superintendent Ralston initially tried to change Liberation's schedule in 2008, I was a principal at Liberation's only feeder middle school, Mayfield. There was a contentious relationship between Lynn Bronson, the executive director of teaching and learning and the principals at that time. Collaboration was rare and principal colleagues often shared with me how they felt scrutinized and criticized by the teaching and learning department.

In the 2009-10 school year, there was no executive director of teaching and learning and in the 2010-11 school year, a new director was hired. During that three year stretch from 2009 until 2012, there were four major high school curriculum adoptions; two in science, one in math, and one in language arts. In all of those ventures, there was a deliberate attempt by district office

staff to bring in many teacher leaders across schools to not only research texts for potential adoption, but to plan accompanying staff development with the newly adopted materials. In-depth conversations among teachers regarding pedagogy and pacing were an integral part of the curriculum adoption process.

It appears that, in part, because of that work, the teachers on the High School Schedule Committee had a common reference point to use as a filter during conversations. When a teacher spoke of the time necessary to cover a unit in science there was genuine agreement by science teachers on the committee as to how much time was needed.

In a way, the new executive director of teaching and learning, and to a lesser extent, the directors and associate superintendent who served in that capacity for a year when the position was vacant, acted as institutional entrepreneurs in this change process. Entrepreneurs act as “agents of legitimacy” by creating new organizational practices that become adopted by the whole (DiMaggio, 1988). The curricular and pedagogical work of the previous few years made the alternative approach to class offerings (i.e., an eight period schedule) that Liberation High School has used for fifteen years, to now be perceived as less appropriate. Having significantly less teacher/student contact time in favor of more course offerings was no longer embraced as a legitimate substitute.

The idea that all teachers in the organization need equal amounts of time to do their best work was almost universally accepted by the committee, and subsequently met much less resistance from all staff, and parents, specifically at Liberation High School.

The same level of acceptance was not so true of the non-core academic teachers. While there were fewer non-core academic teachers (i.e., music, PE, librarian) on the committee, the

few that did serve did not reference a common professional development experience during the committee meetings because they had no similar adoption process to reference.

Another entrepreneurial voice during this change process was that of the parents. As noted in the description of the superintendent's initial attempt to change the schedule in 2008, it was the parents who were vocal and, in the end, exceptionally influential in stopping the change process then.

In similar ways, in the second attempt to change the high school schedule, it was the parents that exerted pressure, this time, not to resist change at Liberation High School, but to advocate for change at Independence and Sovereignty high schools.

Parents and, to a lesser degree, students expressed their frustration with the perceived restrictive nature of the traditional six period day. Once again, it was predominantly the parents of the high performing students who were particularly loud in calling for a change to the present institutional practice.

In part, due to pressure from parents who pressured the school board and thus influenced the superintendent, Independence School District high school students were surveyed to determine the level of satisfaction in the current system. The results of those surveys legitimated the need to at least attempt change resulting in the on-line/in-class 7th period optional classes that will be piloted at Independence High School next school year. This type of change that incorporates part of the old institutional model with a new innovation is referred to by Campbell (1997) as a "hybrid"; interestingly that is the same term that is used to describe the class itself in the course selection guide.

A "hybrid" innovation is a type of organizational change that is not perceived as some sort of oppressive directive imposed upon a populace (as the previous schedule attempt was

characterized) but rather, it is looked at as a genuine response from actors in the organization to a challenge. The formulated response does not negate the past institutional norms, but rather adapts those norms to meet the new reality (Campbell, 1997).

In all likelihood, it was a new approach to decision making that allowed the parents to act as entrepreneurial voices to be heard and thus exert influence upon the direction of the district. Beginning with the more collaborative approach of the Teaching and Learning Department followed by the collective model of the High School Schedule Committee and the resulting surveys of students, new methods of including stakeholders and providing feedback loops has made decision making during this study in the Independence School District less contentious.

External Pressure Responses

Parents, many of whom had the ear of the school board, were stakeholders exerting large amounts of pressure during this study. Whether it was an attempt to preserve the existing system at Liberation High School, or to instigate a change at the other two large comprehensive high schools, it was the parent voice that proved to be a strong catalyst for moving forward when the staff may have been more content with the status quo.

During the same time that the “Optimal High School Experience” work was taking place, the school board was pushing for and adopting new ways of measuring performance in the school district. “Key Performance Indicators” (KPI’s) based on business performance measures used in the private sector were being implemented in the Independence School District. Those KPI’s were heavily laden with traditional standardized test score data and, to a lesser extent, with satisfaction-type survey data. End of Course (EOC) math assessment data ended up being a measure included as part of the district’s KPI’s. It was the academic performance in mathematics as shown in End of Course (EOC) exams that proved to be a central piece to the argument for a

change of Liberation's schedule. This same concern was magnified with my own quantitative study of PSAT scores among sophomore algebra 2 students. The analysis of the data suggested that there was some sort of performance deficiency associated with the schedule at Liberation. A deficit in performance, according to some institutional theorists, can be cause for or require change (Oliver, 1997). Ironically, Director Maggard, the school board member from the Liberation service area, was the largest proponent of adopting the KPI's. He was emblematic of the greater Liberation community when he came to the realization that some sort of change was likely necessitated. But rather than adopt an existing institutional practice like the Independence and Sovereignty schedules, he advocated for a blended approach or hybrid (i.e. a seven period schedule).

It was the teaching staff, mostly at Liberation, that touted the importance of measuring a school not just by its test scores but by its social significance. The schedule, they argued, was part of Liberation's culture and had served the community well. It was embedded in their identity. Producing well-rounded students with a wide array of experiences was as important, if not more so, than high test scores.

Interestingly, this argument found traction with the Independence and Sovereignty parents on the committee, who sought, more aggressively than the principals and teachers, some sort of way to give more opportunity for class offerings at those two schools.

Isomorphic Change

Two predictors of Isomorphic change are worthy of closer examination as they applied to the schools involved in this study. The first, as posited by DiMaggio (1983) is that organizations will model themselves after those perceived to be more successful. Related to this, the more

tightly coupled an organization, the less likelihood of internal variation. Conversely, a more loosely coupled environment is more likely to exhibit variation.

Many Liberation staff and community members certainly did not view themselves as less successful. When differences in academic performance were raised as a rationale for change, resisters to that change defended the existing system, especially during the first attempt. Whether it was an assertion that the difference was attributable to demographic differences or that that the ability to produce a more well-rounded graduate outweighed the importance of higher test scores; the Liberation community, in general, was adamantly opposed to the superintendent's initial directive to change the schedule.

In the interim between change initiatives, as stated, there was significant amount of curricular work done at the high school level. That work, as argued, resulted in a greater degree of agreement among teachers across the district around curriculum, instruction, and assessment of student learning. Subsequently, the system became more tightly coupled around, and more certain of, the relationship between the ends and the means of student learning. Similarly, the state and the Independence School Board implemented universal methods of assessment (i.e., the EOC's and the KPI's) that all staff, and to a lesser degree parents and students, were not only familiar with, but on which, stakeholders expected students to perform well.

The united front of opposition that surfaced in 2008 did not reappear in 2012. Teacher's on Liberation staff, the second time around, were not giving talking points to parents on how to pressure the superintendent or the school board. Instead, working with staff across schools, they were providing more data and ultimately arguments for changing the Liberation schedule to increase contact time.

The second hypothesis of note is the belief that the greater extent to which organizations in a particular field interact with the state, there is a greater likelihood of isomorphism in the field as a whole (DiMaggio, 1983). It was the Chief Financial Officer at one of the earliest High School Schedule Committee meetings who suggested that all the schools should be on six period, sixty minute per period schedules, because it most closely aligned with how he received his apportionment from the state. He told the committee that that was why most districts in the State run that way.

During the four years that is covered in this study, the State was addressing a budget deficit in each of those years. The Independence School District made budget cuts in each of those four years totaling millions of dollars. In one of those years, 2008-09, the district implemented a reduction in force of teachers.

While it came out during the High School Schedule Committee, that Liberation High School did not receive any additional funding to run their schedule, it was noted that to run the eight period schedule properly, the school actually should be allocated more staffing. Without any subsidizing from the district, Liberation, in theory, should have higher class sizes. As noted and as seen in appendix 3, Liberation's class sizes are not markedly different than those of Independence or Sovereignty. However, it became clear that disproportionately larger numbers of students serving in teacher assistant roles and taking study hall periods with classified staff, as opposed to with teachers, was a key reason why Liberation avoided higher class sizes.

Being part of the same financial system tied to the state played a role in the eventual directive by the superintendent for Liberation to change and become more like the other schools in the district.

Recommendations and Implications

With the surge in support for charter schools, the explosion of on-line learning, and the likelihood of continued government programs and incentives that encourage a more individualized approach to education, it will be necessary for educational leaders to respond by either changing what is happening in our high schools or by clearly defending the practices that are in place. Neither response; changing nor defending, will be well received by stakeholders if they feel unconnected to the school or district. School leaders must find ways to involve citizens and gather feedback from them. Developing some sort of participatory format proved critical in the Independence School District to avoid the resistance and divisiveness that resulted in the change attempt the first go around.

Practitioners using action research may find it easier to conduct research in an environment similar to the one with which I was faced. School district committees and board meetings are public by nature. The need to insert oneself into a potentially intimate or private setting was not often presented in my research. Subsequently it was not as necessary for me to assure participants of the safety that comes with confidentiality and anonymity. On the other hand, action researchers in similar settings need to consider the authenticity of their perceptions and sense making for that same reason. Individuals may say things in public to play to an audience rather than out of true conviction or they may hold back from voicing real opinions because of the sometimes unsafe nature of public proclamations. In that sense, a combination of careful note taking of public meetings coupled with thoughtful, private interviews can prove very helpful.

Study Significance

This study has theoretical, practical and substantive significance. The study contributes to the literature on institutional theory by reinforcing the conceptions of entrepreneurs as agents of

legitimacy, the role of hybrid innovation in organizational change, and the predictors of isomorphic change. At a practical level, leaders can approach organizational change through the informed lens of institutional theory, using it as a theoretical framework for understanding the dimensions of change in institutions. Of substantive significance is the assertion for the use of action research to examine problems of practice in education. Action research is based on the assumption that “all people affected by or having an effect on an issue should be involved in the process of inquiry” (Stringer, 2007, p. xvi). The informed use of action research in this setting altered the dynamics of a contentious decision and the examination of a complex problem of practice in one school district. Other school systems could find benefit from the use of action research in similar contexts.

Organizational Learning and Self Reflection

Public committees purposed with fleshing out ideas and providing cover for superintendents and school boards before a decision is rendered is a common practice. The problem that is often echoed by both observers of such committees and even those who serve on them is that the committees are viewed as rubber stamp bodies that only end up affirming a decision that had in actuality already been made. What stood out in our process in the Independence School District was the lack of a pre-ordained outcome or even a “springboard” proposal. Allowing teachers and students and parents and principals to gather and attempt to solve a difficult problem collectively at the district level was an innovative approach in the Independence School District. While skepticism about the true power of the committee surfaced at times, committee members appreciated the absence of a ready-made solution. The fact that the group could not come up with a schedule recommendation to the superintendent, while disappointing in some respects, did not take away from the sense of unity that formed over the

months that the committee worked together. That sense of camaraderie will pay dividends for the district as the schools continue to share resources, staff, and ideas as the system becomes more integrated.

On a personal note, as I reflect on the work of the last four years, I have gained a greater appreciation for the complexity of decision making in a large system. Rational arguments for change will fall on deaf ears if a leader is not able to first crack the issues of identity wrapped up in the structures that the leader is trying to change. Relationships are the key to organizational change. I know it is incumbent upon me as I continue my journey of educational leadership to view each conflict, each argument, and each impasse, as an opportunity to better understand.

References

- Aronson, J., Zimmerman, J., & Carlos, L. (1998). Improving student achievement by extending school: Is it just a matter of time. *West Ed.*, 1-9.
- Askoy, T., & Link C.R. (1999). A panel analysis of student mathematics achievement in the US 1990's: does increasing the amount of time in learning activities affect math achievement? *Economics of Education Review*, 19 (2000) 261-277.
- Battalina, J. (2006). Agency and institutions: The enabling role of individuals' social position. *Sage Publications Vol. 13(5)*, 653-676.
- Bransford, John D., & Donovan, M. Suzanne (2005). How students learn: Science in the classroom. Washington D.C.: The National Academies Press
- Calhoun, E. (2002) Redesigning professional development: Action research for school improvement. *Educational Leadership*, 59, 18-24.
- Campbell, J. L. 1997. Mechanisms of evolutionary change in economic governance: Interaction, interpretation, and bricolage. L. Magnusson & J. Ottosson (Eds.), *Evolutionary economics and path dependence*: 10-31. Cheltenham, England: Edward Elgar.
- Carnevale, Anthony P., Leila J. Gainer, and Ann S. Meltzer. 1990. *Workplace Basics: The Essential Skills Employers Want*. San Francisco: Jossey-Bass.
- Cook-Sather, A. (2006). Sound, presence, and power: "Student voice" in educational research and reform. *Curriculum Inquiry*, 36, 359-390.
- Cushman, K. (2005). *Sent to the principal: Students talk about making high schools better*. Providence, RI: Next Generation Press.
- DiMaggio, P.J., & Powell, W.W. (1991). The iron cage re-visited: Institutional isomorphism and collective rationality in organizational fields. In P.J. DiMaggio & W.W. Powell (Eds.), *The new institutionalism in organizational analysis* (pp. 63-82). Chicago: University of Chicago Press.
- DiMaggio, P. (1988) 'Interest and Agency in Institutional Theory', in L. Zucker (ed.) *Institutional Patterns and Organizations*, pp. 3-22. Cambridge, MA: Ballinger.
- DiRocco, M. (1999). How an alternating-day schedule empowers teachers. *Educational Leadership*, 56(4), 82-84.
- Dugan, J., Lewis, C. (2005). The effects of block scheduling on high school academic achievement. *NAESP Bulletin*, 89(472), 72-87.
- Dutton, J. & Dukerich, J., (1991). Keeping an eye on the mirror: Image and identity in organizational adaptation. *Academy of Management Journal*, 34: 517-554.

- Elsbach K., & Kramer, R., (1996). Members responses to organizational identity threats: Encountering and countering the “*Business Week*” rankings. *Administrative Science Quarterly*, 41: 442-476.
- Gilby, E.M., Link C.R., & Mulligan J.G. (1993). *Flow versus stock models of learning: a panel analysis*. Working paper no. 92-06. Economics Department. University of Delaware.
- Gladwell, M. (2008). *Outliers: the story of success*. New York: Little, Brown, and Company.
- Goodenow, C. (1993). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in Schools* 30 (January), 79–90.
- Goodlad, J. I. (1984). *A place called school: Prospects for the future*. New York: McGraw-Hill
- Greenway, R., Vanourek, G. (2006). The Virtual revolution: understanding on-line Schools. *Education Next*, 6(2), 34-41.
- Gullatt, D. (2006). Block scheduling: The effects on curriculum and student productivity. *NASSP*, 90(3), 250-266.
- Hackmann, D. (2002). Block scheduling for the middle level: a cautionary tale about the Best features of secondary school models. *Middle School Journal*, 33(4), 22-28.
- Hammond, J., Keeney, R., Raiffa, H. (1999). *Smart choices: A practical guide to making better life Decisions*. New York: Broadway Books
- Hanson, H. (2001). Institutional theory and educational change. *Educational Administration Quarterly* Vol. 37(5), 637-661.
- Katz, D. & Kahn, R. (1966). *The social psychology of organizations*. New York: John Wiley.
- Kramer, S., Keller R. (2008). An existence proof: successful joint implementation of the imp and a 4x4 block schedule at a suburban u.s. high school. *Journal for Research in Mathematics Education*, 39(1), 2-8.
- Lee, Valerie E., Croninger, Robert G., and Smith, Julia B. (1997). Course-taking, equity and mathematics learning: Testing the constrained curriculum hypothesis in US secondary schools. *Education Evaluation and Policy Analysis*, 19:2, 99-121.
- Lee, Suk Hyang, Wehmeyer, Michael L., Palmer, Susan B., Soukup, Jane H. and Little, Todd D. (2008). Self-determination and access to the general education curriculum. *Journal of Special Education*, 42:91, 91-107.
- Leinhardt, G. (1977). Program evaluation: an empirical study of individualized instruction. *American Educational Research Journal*, 14 317-30.
- Levin, B. (1994). Educational reform and the treatment of students in school. *Journal of Educational Thought*, 28(1), 88-101.
- Lewis, K.A., & Seidman, L.S. (1994). Math-time capital matters: a cross country analysis. *Economics of Education Review*, 13 (3), 215-226.

- Lewis, Theodore and Cheng, Shih-Yu (2006). Tracking, expectations, and the transformation of vocational education. *American Journal of Education*, 113, 67-99.
- Matthews, J. (1998). De-bug alternative class schedules. *The Education Digest*, 63, 48-51.
- Matthews, J. (1999). Choice within schools can help students, schools, and society. *NASSP Bulletin*, 79(572), 69-76.
- McPartland, James M., and Schneider, Barbara. (1996). Opportunities to learn and student diversity: Prospects and pitfalls of a common core curriculum. *Sociology of Education*, 69, 66-81. Muncey (2010).
- Murray, S. (2008). Flexmod scheduling redux. *Principal Leadership*, 8(7), 42-46.
- Neubig, M. (2006). Essential scheduling practices for high-performing schools with career academies. *Techniques*, 81(4), 42-44.
- Nichols, J. (2005). Block scheduled high schools: impact on achievement in english and language arts. *The Journal of Education Research*, 98(5), 299-309.
- Oliver, C. 1997. Sustainable competitive advantage: Combining institutional and resource-based views. *Strategic Management Journal*, 18:697-713.
- Raudenbush, S.W, Foitu, R.P., and Cheong, Y.F. (1998). Inequality of access to educational resources: A national report card for eighth grade math. *Educational Evaluation and Policy Analysis*, 20, 253-267.
- Rettig, M. (2003). Block scheduling's missteps, successes, and variables. *School Administrator*, 60(9), 26-31.
- Sanders, W., Wright, S. P., and Horn, S. Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education*, 11(1): 57-67.
- Sewell, W. H. (1992) 'A Theory of Structure: Duality, Agency, and Transformation', *American Journal of Sociology* 98(1): 1-29.
- Shortt, T., and Thayer, Y. (1999). Block scheduling can enhance school climate. *Educational Leadership*, 56(4), 76-81.
- Sisodia, R., Wolfe, D., and Sheth, J. (2007). *Firms of endearment: How world class companies profit from passion and purpose*. Upper Saddle River, NJ: Wharton School Publishing.
- Sizer, T.R. (1984). *Horace's compromise: The dilemma for the American high school*. Boston: Houghton Mifflin.
- Stringer, Ernest T. (2007). *Action research* (3rd ed.). London: Sage Publications, 279pp (pb), ISBN: 978-1-4129-5223-1.
- Tolbert, P. S. and Zucker, L. G. (1996) 'The Institutionalization of Institutional

Theory', in S. R. Clegg, C. Hardy and W. R. Nord (eds) *Handbook of Organization Studies*, pp. 175–90. London: Sage.

Veal, W. (2001). How block scheduling reform effects classroom practice. *The High School Journal*, 84(4), 21-31.

Winn, D. (1997). An invitation to innovation: rethinking the high school day. *NASSP Bulletin*, 81(588), 10-18.

Yukl, G. (2010). *Leadership in Organizations 7th Edition*. Upper Saddle River, NJ: Prentice Hall

Zeith, T. Z., & Cool, V.A. (1992). Testing models of school learning: effects of quality of instruction, motivation academic course work, and homework on academic achievement. *School Psychology Quarterly*, 7 (3), 207-226.

Zepeda, S., Mayers R. (2001). New kids on the block schedule: beginning teachers face challenges. *High School Journal*, 84(4), 1-11.

Zepeda, S., Mayers, R. (2006). An analysis of research on block scheduling. *Review Of Educational Research*, 76(1), 137-170.

Appendix A
Principal Query Guide

Thank you once again for your thoughtful participation on the Independence School District High School Schedule Committee and for your commitment to the high school students of the Independence School District. With your permission, I will be recording this interview for the purpose of capturing the detail of your responses without having to take copious notes. This will allow me to fully engage in our conversation. All comments gathered here will remain confidential to the extent possible.

How great do you perceive the time pressure to institute some sort of change to your high school's schedule? Has that changed since 2008?

What information and resources do you need to implement a schedule change should such a change be required of your school?

For what reasons, if any, should your school's schedule change? How were those reasons brought to your attention and by whom?

Are there other alternatives of response to the reasons and interests given for a schedule change? If so, are they being considered?

How do you think the district could be more responsive to serving your school community when directing a substantial strategic change?

What feedback could you provide about the facilitation process of the committee? Will the committee process help or hinder your change efforts in your building?

Appendix B

Charter for District Daily HS Schedule Committee

| | |
|----------------------|---|
| Authorized by | Superintendent |
| Charge | To study and design a plan for the common use of the resource of time to effectively improve learning for all high school students, specifically to design a common District-wide schedule for the high school educational program. |
| Time Frame | <p>June 2011: Letter from Superintendent Announcing Work Plan for next Year</p> <p>Sept-Dec 2011: Committee meets and eventually designs a common district-wide schedule for the high school</p> <p>Dec 2011: Recommend to the Superintendent a common daily schedule for the high schools</p> |
| Membership | <p>Principals will solicit volunteers and determine committee members</p> <p style="text-align: center;">Committee members:</p> <ul style="list-style-type: none"> • Principals from each HS (4) • 3 certificated staff from each comprehensive HS; 1 certificated staff from TMCHS • 1 parent representing each HS: Issaquah, Liberty, and Skyline • 1 student representing each HS: Issaquah, Liberty, and Skyline |
| Facilitation | Executive Director of HS, Patrick Murphy |
| Approach | <p style="text-align: center;">Team members are asked to consider:</p> <ul style="list-style-type: none"> ▪ The provision of time for instruction that is consistent with how high school students learn ▪ Data regarding student learning for the Issaquah School District ▪ Ensure educational compatibility across Issaquah, Liberty, Skyline, and TMCHS High Schools. ▪ Allow for creative and flexible uses of time ▪ Be cost neutral. ▪ Comply with district policies, as well as state and federal laws. |
| Report | Minutes from the committee's work will be distributed to members following each meeting and posted online. |

Appendix C

| High Schools Data Table 2010 For Schedule Conversation (Parentheses denote updated data for 2011) | | | | |
|---|--------------------------------------|--------------------------------------|--------------------------------------|-----------|
| Category | Independence | Liberation | Sovereignty | Lion Hill |
| Enrollment | 1793(1802) | 1166(1172) | 1812(1879) | 96 |
| Free and Reduced | 6.7%(7.6) | 13.2%(14.1) | 2.3%(4.4) | 25% |
| SPED | 8%(8.5) | 10.1%(10.4) | 4.7%(5.0) | 31% |
| Grad Rate (on-time) | 96.6%(96.1) | 97.7%(96) | 96.8%(97.5) | 58.4 |
| Grad Rate (extended) | 99.4%(98.3) | 102.4%(96.7) | 99.4%(99.0) | 105.6 |
| Non-White/Asian | 6%(10.7) | 10.2%(13.3) | 4.9%(9.0) | 13.6% |
| HSPE Reading | 93.8%(94.3) | 88.3%(94.7) | 95.5%(96.3) | 69.6 |
| HSPE Writing | 95%(96.0) | 92.8%(95.9) | 98.4%(96.9) | 77.3 |
| HSPE Math | 73.4%(see EOC) | 60.1%(see EOC) | 78.9%(see EOC) | 41.7 |
| HSPE Science | 72.6%(77.4) | 60.5%(64.5) | 77%(87.6) | 49.9 |
| Student/Teacher Ratio | 22 | 21 | 23 | 12 |
| PSAT National Percentile Ranking for 10 th Graders in Geometry | 56 th | 44 th | 60 th | |
| PSAT National Percentile Ranking for 10 th Graders in Algebra 2 | 84 th | 73 rd | 89 th | |
| PSAT National Percentile Ranking for 10 th Graders in Combined Critical Reading and Writing | 71 st to 76 th | 63 rd to 73 rd | 76 th to 82 nd | |
| Avg. Teacher Experience | 13(11.6) | 10(11) | 12(10.1) | 11.8 |
| Teacher w/ Masters | 60.3%(70.6) | 70.7%(68.4) | 72.4%(71.1) | 62.5% |
| Credit Opportunities over 4 years | 24 | 32 | 24 | |
| Elective Credit Opportunities above HEC Board Requirements | 7 | 14 | 7 | |
| # of classes per semester | 6 | 8 | 6 | |
| # of Periods per Day | 6 | 4 | 6 | |
| Avg. Instructional Minutes per period (M,T,Th,F) | 57.7 | 89.5 | 59 | |
| Instructional | 346 | 358 | 354 | |

| | | | | |
|--|------------------------------|--|----------------------------|--|
| Minutes per day (M,T,Th,F) | | | | |
| Avg. Instructional Minutes per period (Wed.) | 38.5 | 64.25 | 39.3 | |
| Instructional Minutes per day (Wed.) | 231 | 257 | 236 | |
| Total Instructional Minutes per Week | 1615 | 1689 | 1652 | |
| Total Instructional Minutes per week by class | 269 | 243 – Week 1 179 -Week 2 211 (average) | 275 | |
| Total Instructional Minutes per Semester | 29070 | 30402 | 29736 | |
| Total Instructional Minutes per Semester by class | 4842 (80.7 hrs.) | 3798 (63.3 hrs.) | 4950 (82.5 hrs.) | |
| Avg. Teacher Planning Minutes per day | 57.7 –M,T,Th,F 38.5 –Wed. | 89.5 –M,T,Th, F 64.25 – Wed. | 59 –M,T,Th,F 39.3 –Wed. | |
| Teacher Planning per week | 4 hrs. 29 mins. | 7 hrs. 2 mins. | 4 hrs. 35 mins. | |
| Teacher Planning per semester | 80 hrs. 42 mins. | 126 hrs. 36 mins. | 82 hrs. 30 mins. | |
| Avg. Frosh GPA at UW (2004-08) | 3.25 | 3.16 | 3.26 | |
| % of Frosh on track to graduate (5.5 credits at IHS/SHS, 7 credits at LHS) | 93%(88.5) | 79.6%(82.2) | 93%(91.3) | |
| Avg. Class Size English (Eng. 9, Eng. 10, Amer. Lit/Eng. 11 Block) | 31.3 | 27.3 | 30.8 | |
| Avg. Class Size Math (Alg., Geom, Alg. 2) | 28.5 | 27.5 | 29.4 | |
| Avg. Class Size Soc. Studies (World, European, US) | 29.6 | 33.9 | 30.9 | |
| Avg. Class Size Science (Phys. Sci, Bio, Chem) | 28.3 | 27.3 | 32.1 | |
| Avg. Daily Student Case Load for 1.0 CORE Teacher (Eng, Math, Sci, | 147.1 | 87 | 154 | |

| | | | | |
|--|-----------|--|-----------|--|
| Soc. Studies) | | | | |
| Avg. Semester Student Case Load for 1.0 CORE Teacher (Eng, Math, Sci, Soc. Studies) | 147.1 | 174 | 154 | |
| Senior Waivers (1 st Semester) | 16(14) | 237 (188) | 20(10) | |
| Senior Waivers (2 nd semester) | 31(12) | 281(189) | 29(7) | |
| TA's (Student Assistants) 1 st semester | 39 | 123 | 53 | |
| TA's (Student Assistants) 2 nd semester | 90(68)* | 214(186)* | 74(36)* | *Combines 1 st and 2 nd Semester |
| Guided Study Enrollment (1 st semester) | 26(35) | 222(155) (staffed by EA, no credit) | 14(17) | |
| FTE Staffing Allocation needed to run school at 27.5:1 ratio at current enrollment | 78.2 | 56.8 | 79.1 | |
| Actual FTE Staffing allocated to run school at 27.5:1 ratio at current enrollment | 78.2 | 51.0 | 79.1 | |
| Student to Counselor Ratio | 448:1 | 389:1 | 453:1 | |
| Derived FTE for CTE students per period | .197 | .148 | .2 | |
| Actual FTE allocated staffing per period | .2 | .167 | .2 | |
| Percent of 10 th and 12 th Graders reporting "enjoyment of school" | 42% & 41% | 36% & 35% | 48% & 40% | |
| Percent of 10 th and 12 th Graders reporting "feeling safe in school" | 93% & 92% | 88% & 87% | 95% & 95% | |
| Percent of 10 th and 12 th Graders reporting "opportunities to be involved". | 64% & 77% | 66% & 64% | 74% & 72% | |
| Percent of 10 th and 12 th Graders reporting "depression". | 22% & 20% | 24% & 22% | 24% & 23% | |
| Percent of 10 th and 12 th Graders reporting "contemplation of suicide". | 12% & 11% | 13% & 9% | 12% & 8% | |

| | | | | |
|--|---------------------------|--------------|----------------------------|--|
| TMCHS Enrollment by School | 27(32) | 19(23) | 17(11) | |
| On-Line Learning Participation by School | 68(11) | 2(32) | 94(60) | |
| Tech Proficiency Challenge Test Participation by feeder middle schools | 162 (PCMS/IMS Avg.) | 36 (MWMS) | 99 (BLMS/ PLMS Avg.) | |
| AP or IB Total Exams taken | 619 | 238 | 499 | |
| | | | | |