



School-Based Attributes Instrumental in Student Success in a Florida Charter Middle School: a Formative Case Study

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Abstract

This article discusses the use of domains identified by Hattie (2009) as a research framework to conduct a qualitative, single-case study to identify attributes perceived to be instrumental in student success in a Florida Charter middle school. This study examined best practices contributing to the long-term sustained success of the middle school students in an effort to maintain and replicate high student achievement. The following question directed this study: “What school-based attributes do administrators and teachers perceive to be instrumental in student success in a Florida charter middle school?” Through research and synthesis of over 1200 meta-analyses, Hattie and his team of researchers identified 195 influences that impact learning in schools. Hattie categorized these influences into six domains identified as major contributors to learning. This case study addressed those domains under a school’s control: (a) school, (b) teacher, (c) curricula, (d) teaching. These categories provided the framework to examine the factors responsible for student success in the charter school. The data sources for the study were teacher interviews, administrator interviews, and classroom observations. The coding strategy integrated pre-figured codes aligned with Hattie’s (2009, 2011), Hattie’s (*Scholarship of Teaching and Learning in Psychology*, 1(1), 79–91, 2015) domains (school, teacher, curricula, and teaching) while allowing for the possibility for emergent codes. Research credibility was established by (a) prolonged engagement of the researcher, (b) triangulation of data, (c) identification of potential bias, and (d) peer review. The conceptual framework used as a foundation for the study provided the structure to facilitate reliability of this research. Data collection and analysis led to the identification of three over-arching themes, flexibility, personalized learning, and high expectations, as key attributes contributing to student success.

Keywords Charter school · Hattie's visible learning · Case study · Formative design

Introduction

Charter schools, like other educational solutions, appear to fall into a category that is partially a trend-driven solution and partially an unquantified school-choice option (Chabrier et al. 2016). A charter school is a tax-supported school established under a contract or charter between a granting body, such as a school board, and an interested group, such as an organized formation of teachers and parents, that

operates under the established contract and state authority (Fryer Jr. 2014). Several studies have attempted to unwrap the charter school movement and shed scientific light on what is happening (Fryer Jr. 2014; Roch and Sai 2015). Recent research examines the effect of charter schools both internally and externally and includes a study of North Carolina schools by Bettinger (2005), and a similar study of Florida schools by Sass (2006). On a more comprehensive basis, Finn Jr. et al. (2001) studied 100 charter schools asking the overarching question, “Can charter schools save public education?” The common theme across all of these studies is that more research is needed to answer this question.

According to the National Alliance for Public Charter Schools (2016), charter schools are the fastest growing school choice in the nation. The State of Florida is one of the top ten growth centers for charter schools. Despite this growth, both advocates and opponents of charter schools remain.

The subject of this study is one of the first charter schools in Northwest Florida, which was founded in 1996. The initial

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enrollment for the school was 36 students, grades six to eight, supported by two faculty and one administrator. This particular charter school is a public, nonprofit, general charter school, offering an all-purpose curriculum, as outlined by the Florida Department of Education (FLDOE 2016). The school is now open to any student entering grades five through eight and had a total enrollment in 2016 of 175 students (Seaside Schools n.d.). The age of students in the middle school with grades five through eight ranged from 10 to 14 years. Due to the reputation and continued student success of the school, more students apply than the school can accommodate.

The school has been recognized for exceptional student performance since its inception over 20 years ago and has ranked in the top 5% of all middle schools in the state of Florida for the past five years in terms of scores on standardized tests including EOCs, FCAT, and FSAs. The school has received the National Blue Ribbon award of excellence as well as AdvancED accreditation with the Science, Technology, Engineering, and Mathematics (STEM) endorsement. More students are on the waiting list for entrance into the school than are in the school itself (Seaside Schools n.d.). While the school has consistently performed at a high level, specific data relating to this performance are lacking, and reasons for the students' success are undefined. It is necessary to understand the factors contributing to the students' performance to explain the particular attributes of a high-performing charter middle school. Domains identified by Hattie (2009, 2011, 2015) in his research and synthesis of over 1200 meta-analyses of influences on school achievement provided the conceptual framework for the research.

Overview of the Conceptual Framework and Methodology

In 2009, John Hattie compiled a comprehensive synthesis of the effects of various educational influences and interventions on student success and achievement. Through research and synthesis of over 800 meta-analyses on student achievement, Hattie and his team of researchers identified 138 influences that improve learning in schools. Hattie then indexed those influences on student achievement according to the degree to which each influence affected student achievement outcomes. Hattie (2009) further categorized these influences into six domains: (a) home, (b) student, (c) school, (d) teacher, (e) curricula, and (f) teaching. This case study addressed only those domains under a school's control: (a) school, (b) teacher, (c) curricula, (d) teaching. These categories provided the framework to examine the factors responsible for the success of the charter school.

As defined by Hattie (2009), the contributions of the school include attributes of the school (e.g., finances and type of school), school compositional effects (e.g., school size,

mobility, and mainstreaming), leadership provided by principals and administration, classroom compositional effects (e.g., class size, ability grouping, and retention), classroom curriculum effects (e.g., acceleration and enrichment), and classroom influences (e.g., climate, peer influences, and disruptive behavior). The contributions from the teacher include teacher expectations, teacher effects, teacher training, quality of the teacher, teacher-student relationships, microteaching, teacher subject matter knowledge, professional development, nonlabeling of students, and clarity of teacher communication. The contributions from curricula include literacy, numeracy, writing, drama, arts, science, values, integrated curricula, "creativity programs, bilingual programs, career interventions, outdoor programs, moral education programs, perceptual motor programs, tactile stimulation programs, and play" (Hattie 2009, p. 129). The contributions from teaching approaches include goals and goal setting, success criteria, fostering student involvement, direct instruction, school-wide programs, using technology, and out-of-school learning.

In 2011, Hattie updated his research and added to the list of influences on student achievement. In his book, *Visible Learning for Teachers*, Hattie (2011) listed 150 influences. In 2015, Hattie updated this list to 195 influences on student achievement. More than 1200 meta-analyses were the base for identifying the 195 influences. It is notable that the six domains have remained the same, while the number of influences identified within the domains has increased.

Hattie's research analyzed influences on student learning and achievement by focusing on assessment outcomes (Hattie 2009). In this study, student success is defined by consistent high performance on standardized tests as an indicator of student achievement (Hattie 2009; Maas and Lake 2015). To examine and identify the attributes contributing to student success of the middle school, the four domains as defined by Hattie were the basis for developing the data collection instruments and collecting data. After data collection, Hattie's research served as the framework for data analysis. This framework added structure to data collection and coding during data analysis but did not stifle the free-flowing nature of qualitative research. Hattie's research and domains were used exclusively for the framework and to provide structure for conducting the research.

Research Questions

The following central question directed this qualitative single-case research study: "What school-based attributes do administrators and teachers perceive to be instrumental in student success in a Florida charter middle school?" The following sub-questions based on Hattie's (2009) domains further guided this study:

1. How does the school contribute to student success in the charter middle school?
2. How do the teachers contribute to student success in the charter middle school?
3. How do curricula contribute to student success in the charter middle school?
4. How does teaching contribute to student success in the charter middle school?

Participants

The population of the middle school consisted of a total of 17 teachers and 4 administrators. The criteria chosen for the teachers to participate in the study were the following: participants must be current employees of the middle school, full-time status, employed by the middle school for more than 1 year, and teach a core academic subject. Nine of the teachers were core curriculum teachers, teaching either math, science, social studies, or language arts. In addition to the nine teachers, interviews of the four administrators—the principal, guidance counselor, special needs counselor, and staff administrator—provided data from the administrative perspective.

Procedures and Methods

Teacher interviews, administrator interviews, and classroom observations provided the data for this research. Semi-structured teacher interviews, administration interviews, and classroom observations were the main sources of data. The four domains affecting student achievement, as defined by Hattie (2009), were the basis for developing the data collection instruments:

1. School—culture, demographics, school and classroom size.
2. Teacher—training, subject matter knowledge, professional development.
3. Curricula—literacy, math, science, drama, arts, outdoor and integrated programs.
4. Teaching—approaches including direct instruction, goal setting, and use of technology.

Two key environmental components, teachers and administrators, influence these four domains contributing to student success and were, therefore, the populations used for data collection in this case study.

Interviews and observations of the teachers supplied data on teacher attributes, teaching approaches, curricula, and school. Interviews of the administration provided data on

teacher attributes, teaching approaches, curricula, and school. Once the interviews were completed, analysis of the data identified common and emerging influences and themes. These identified influences and themes guided the development of the observation instrument. Observations in the classrooms annotated the presence or absence of these influences as well as emergent themes or patterns. The researcher used specific observation instruments structured according to results from the analysis of data collected during interviews.

Findings

The research findings are organized according to the four guiding sub-questions. To preserve the anonymity of the participants, the teachers are referred to as Teachers A through I and the administrators are referred to as Administrators 1 through 4. Observations were conducted in the classrooms of the teachers who agreed to participate in the study and were interviewed.

Findings: Research Question 1—School Contributions The school influences identified from the data collection and analysis as having the greatest impact on this middle school's student performance were small overall student population, small individual classes, the physical structure of the school, flexibility of scheduling, student-centered culture, high expectations for student and teacher success, and community and parent involvement.

School Size All nine teachers and four administrators cited a small student population and small individual classes as the main reasons for the long-term success of the school. These influences collectively relate to school size. Of all the influences regarding school, the size of the school itself was the most frequently discussed attribute contributing to the success of this middle school. Participants referenced the small size of the school in terms of the small overall size of the school, 175 students in the middle school, as well as small individual class size with an average of 11 students per class. Teacher E has taught in a traditional public school as well as this public charter school. According to Teacher E (personal communication, January 26, 2017)

Our charter allows us to have small class sizes. Having taught 30 kids verses teaching 15 kids in the classroom, it does make a large difference in what I am able to accomplish and the amount of time that I am able to spend with differentiating instruction to different students. I am able to go further into content than I would otherwise be able to do, just because of time and student number restrictions.

Teacher D is a veteran teacher with more than 12 years of experience and had students consistently scoring in the top 3% on their end-of-course exams. Teacher D (personal communication, January 18, 2017) made the following statements regarding the benefits of small class size:

If you read studies, small class size doesn't make any difference, but it makes a difference if you teach differently to your small classes. Everything in all the studies I've read said it doesn't make a difference. My answer to that is you have never been in a small class. You have to change the way you teach. You have time to know how each of your students learn if you have 8 to 12 kids. If you keep teaching the way anyone teaches for 25, then small class size doesn't make a difference. But if you have 8 to 12, you learn how each of those kids learn then you are able to make lesson plans directed towards them.

According to Teacher F (personal communication, January 18, 2017), "I just get to focus on knowing the students as nice young adults and then teaching them about things they and I really care about." Teacher F has been teaching more than 13 years and has been at this middle school for 4 years.

Observations in the field confirmed the data collected via interviews. Classrooms were small with an average of 12 students per class. The physical structure of the school consisted of three 2-story buildings connected by wooden boardwalks. The school had 15 classrooms, three classrooms upstairs and two classrooms downstairs in each of the buildings. Each classroom had a 15-student maximum capacity.

Flexibility Both teachers and administrators unanimously quoted flexibility as being a major contributor to the school's success. Flexibility included the small school size, the principal's willingness to take advantage of opportunities that present themselves on a weekly basis, and the flexibility to choose the particular curriculum and focus in the classroom. On taking advantage of opportunities that present themselves and the small size of the school, Administrator 1 (personal communication, January 19, 2017) stated,

So if we need to change the schedule, we change the schedule. If that's what is right for the students as a whole, then that's what we'll do. So we've had people call and say, 'XYZ musician is in town. They'd love to talk to the kids or come meet with the kids.' Done. Tell me what time they're going to be here. We can make it work. Somebody has a lab that she wants to do. A teacher may say, 'I have this awesome lab. It's not going to fit in my time schedule.' Okay. We'll take care of it. We'll get the schedule right.

According to Teacher G (personal communication, January 17, 2017), "our school is different because of the freedom and flexibility here, and that could have a lot to do with our current leadership. She [the principal] is so encouraging of us branching out and sort of thinking outside of the box." According to Administrator 3 (personal communication, January 23, 2017), "it is a flexible, innovative type of curriculum approach is what I see. The small size allows us the flexibility and the ability to develop the relationships with the students." The influence of flexibility exists throughout the school.

During the observation of Teacher D's classroom, the teacher received an email notification that another class was being held a few minutes late. The other class was filming a video and needed a few minutes to complete the project. Teacher D adjusted her lesson by continuing her instruction. She extended her lesson effortlessly by asking a student to lead the class in solving an additional problem on the white board. From the interviews with teachers and administrators, this observation was indicative of how teachers communicated, and schedules could be adjusted without much disruption to the rest of the school. The teachers knew they had to be flexible. The teachers embraced this type of flexibility.

Physical Structure Another school attribute consistently identified by the participants as contributing to the success of the school was the physical structure of the buildings. The classrooms connected to each other without hallways and had only stairwells. Students had to pass through other classrooms sometimes to get to the other rooms. According to Administrator 2 (personal communication, January 19, 2017), "at first people think this could be disruptive. It is just the opposite; it lends to connectivity." This type of physical joining of the classrooms contributed to the "feeling of connectivity and lack of isolation" (Administrator 2, personal communication, January 19, 2017). The school also did not have a lunchroom or cafeteria. Students brought food and found places to gather during lunchtime. According to Administrator 2 (personal communication, January 19, 2017), "Our students during lunch are just laid back, relaxed and eating. Parents can come and eat with their children at any time. We welcome that." The open structure of the school invited parental and community involvement.

Another identified physical characteristic of the school was the lack of bells to change classes. Teachers teach to finish a concept as opposed to being limited by a bell schedule. Classes change according to a block schedule, and the classes change most of the time according to the schedule. However, on occasion, a teacher could be in the middle of an important concept and needed to finish that particular point before letting the class go. Flexibility with the schedule allowed the teacher to take advantage of teachable moments.

Classroom observations confirmed the presence of the school's physical attributes viewed by both teachers and administrators as being important to the overall success of the middle school. The teacher dismissed students from classes when they were finished with instruction according to the schedule, without the ringing of bells or announcements. The classrooms connected to each other. During various times throughout the day, teachers or other students would pass quietly through the classroom to get to another area of the building. During observations of one classroom, the observer heard instruction in the adjacent room. Students remained focused on the activities in the room where they were. The students were respectful to the teacher as well as each other throughout the lessons and activities as well as during class changeover.

Culture The culture of the school is one of success. According to all nine teachers as well as the four administrators, the parents and students have high expectations for academic success as well as social-emotional wellness. These expectations exist for the students as well as the teachers. The expectations for students are to work hard and develop to reach their full potential. The expectation for the teachers is to help each student grow individually in terms of social development and academic achievement. Teacher D expressed (personal communication, January 18, 2017), "I measure student achievement in terms of growth. I ask myself, did that particular child learn all they can learn?" The teachers are focused on each student and what growth means to that particular student.

Teacher F (personal communication, January 18, 2017) described the pressure and expectations, "Historically, we have had good outcomes. There is no reason to believe that we will not continue to do that. I have pressure to maintain scores, but I don't have the fear we will not make annual yearly progress." Administrator 4 (personal communication, January 19, 2017) echoed this level of expectation as she described,

It's also the culture – it is hard to get into the school, and the demand is because of the culture of expectations. The students and their parents are of like minds, values, expectations; education is not an option. It is a given they are going to be successful.

The information from the interviews suggested a culture of success existed throughout the school.

During classroom observations, the school's culture of success was evident. In Teacher G's classroom, the standards were listed in big letters on the wall. As the class experienced success with each standard, she moved an arrow through the list to visually indicate the success of the class. Teachers

motivated the students by visually displaying the class progression through the year as the students mastered increasingly complicated tasks. Each classroom displayed various indicators of success ranging from the visualization of collective scores on weekly and monthly assessments to the number of students passing computer program certifications.

The front case, located in the entry of the school, displayed the numerous trophies from academic and non-academic successes of the school. The school had a long-standing tradition of placing first, second, or third in the B.E.S.T robotics competition. Teachers and administrators were very proud of this tradition and displayed the many trophies to highlight this long-standing academic achievement. The entry walls displayed photographs and plaques exhibiting other academic achievements, including yearly end-of-course exam scores, the school's Blue-Ribbon award, dance team competition awards, and various individual student highlights.

Parental and Community Involvement Other common influences noted by both teachers and administrators were the levels of parental and community involvement. The school was situated in a small community and was founded on the principle of being a community-based school (Seaside Schools n.d.). This sentiment was articulated by both teachers and administrators. As Administrator 1 (personal communication, January 18, 2017) explained,

We are different because we have access to this community and that's just not something everybody has. We do tennis lessons because we have access to the tennis courts. We do a swimming unit because we have access to this in our community. Our mentoring works because we have so many awesome people in our community who are willing to share their talents and their gifts with our students.

Teacher I (personal communication, January 17, 2017) expressed the difference between the middle school where this study was conducted and another where she previously taught,

The difference relates back to the parents, the expectations that all these parents have, the students have, and what the teachers have. It starts way before me. It starts at home. And the parents are all involved in helping the school succeed.

The school's foundation is one of being a community-based school.

During the visits to the middle school campus, several parents were observed visiting. These parents were meeting with the community members organizing the annual large fundraiser for the school. Several board members brought

lunch to the staff in general appreciation on the day of one of the observations. Parents, board members, and other community members visiting the school were observed on several occasions.

Small school size and small class size in this middle school were similar to those as discussed by Gleason et al. (2010). Gleason et al. (2010) found charter schools with lower enrollments had a positive impact on student achievement. A clear mission and vision for the school, a culture of success, and orderly atmosphere are all attributes identified by (2015) as being characteristic of successful charter and traditional schools.

Findings: Research Question 2—Teacher-Specific Contributions

The teacher influences identified as having the greatest impact on this middle school's student success were being flexible, student-focused, dedicated, motivating, enthusiastic, and trustworthy; showing a willingness to collaborate; having high expectations; and modeling behaviors.

Teacher Flexibility One recurring theme or characteristic discussed by teachers and administrators as lending to the success of the middle school was teacher flexibility. Flexibility in terms of being open to changing schedules to take advantage of opportunities, being willing to try different teaching strategies, and open to new innovative types of curricula. Teacher A has taught in both a traditional public middle school in the area as well as this middle school. She expressed the importance of hiring the right teachers to adapt to the culture of the middle school. Teachers must be willing to adapt to the changing schedule that may occur as a result of the school capitalizing on various opportunities that present themselves without much notice. As Teacher A (personal communication, January 24, 2017) explained, "It goes back to the hiring; you have to have teachers that can be flexible. You know you have to be super flexible as the teacher because this is the opportunity that has come across right now." All teachers and administrators discussed the importance of being flexible with schedules, teaching methods, and curriculum.

Student-Focused Other teacher influences identified by the teachers themselves, as well as the administrators, were the teacher's dedication, enthusiasm, and passion. These influences collectively relate to the teachers' goal to be student-focused. As Administrator 3 (personal communication, January 23, 2017) explained,

The teachers really want the students to be successful. I think it's less about them and how, like what grades they earn as a teacher, and more about what can I do to help the student. How can I support them best?

Teacher B served as an integral part of the robotics program. Teacher B (personal communication, January 23, 2017) explained,

Our ultimate goal is that everyone succeeds, and that success is going to look different for different students. We are focused on the students as individuals. We play to each student's strengths. We allow the student to work within that strength, build upon that strength, and then with increased confidence, the student can learn or try something new.

In several of the classrooms, the teacher modeled the behavior desired, such as solving a math problem or creating a graph and allowing the students to complete the task themselves. Teacher D was a social studies instructor. He was observed letting students choose their presentation groups based on their preferences for presentation topics. Teacher D structured the class so students took ownership of the process and chose their role within the group. The process was student-focused and individualized.

Collaborative The atmosphere of the school was one of collaboration and support as described by several teachers. The data suggested that teachers had a true sense of trust as professionals as they felt supported by each other. Several teachers expressed how they worked together to collaborate on projects, helping each other. This was one way the teachers were modeling behavior for their students. Modeling happened in the classroom teaching academic subjects, but also in how the teachers were willing to support and help each other. According to both teachers and administrators, the students saw this teamwork and, in turn, learned how to develop these social and life skills. According to Teacher H (personal communication, January 17, 2017)

It's easy for us to have a lot of camaraderie. And that shows through, I think, to the students. They see that, and they emulate because they do model not only what we do when we get up there and teach them how to solve quadratic equations, but they also model how we treat each other and how we interact with each other.

Nearly every interviewee discussed the dedication of the teachers and their willingness to collaborate with other teachers and staff. As Teacher C (personal communication, January 25, 2017) described the difference between this middle school and another school within the county where she previously taught,

I think the amount of time that teachers and staff spend here is different. You can go pretty much anywhere in

the room, and there's like 5 to 10 kids that people are working with. I don't think you get that everywhere. It's really the devotion of the teachers and the students.

Teamwork and coordination among the teachers and staff were cited consistently as the main contributor to the success of the school. Teachers expressed the ability to improve their teaching skills and become more effective because of the collaboration.

Motivated Common among all of the interviewee responses were key phrases that signaled teacher motivation such as “highly motivated,” “passionate,” and “full of enthusiasm.” Part of the motivation came from the appreciation the teachers and administrators felt about being at the middle school. According to Administrator 4 (personal communication, January 23, 2017), “Teachers feel privileged to be here. Teachers are able to focus on the positive parts of teaching, and not classroom management. Teachers are also very much appreciated by the parents. The parents are involved and appreciate the teachers.” According to Teacher C (personal communication, January 25, 2017), “I just think everyone's very passionate about their job. I think everyone is excited to come to work every day and everyone's working on new ideas and sharing ideas.” Teacher H had taught in other middle schools in other counties and has over 10 years of teaching experience. Teacher H explained (personal communication, January 17, 2017), “I feel like this culture is much like a family. It's very positive and uplifting. We are all passionate about what we do, and it is easy to be motivated.” Teacher H continued to describe the teachers at the middle school as “very active, high interest, doing some really unique things in the classroom.” Teachers were comfortable and motivated to try new and innovative strategies in the classroom.

During the observations, the enthusiasm and motivation of the teachers were apparent. As noted during observations, the subject matter knowledge of individual teachers was apparent in their ability to explain an idea in detail, and explain the particular idea using different approaches. Teachers drew upon their own experiences and interests to engage the students. The teachers connected the lessons through these experiences to bring real-world connections to the lesson content.

High Expectations All of the teachers expressed their high expectations for success for their students. As described by both teachers and administrators, the culture of the school was one of high expectations, and they each personally felt this level of expectation. The school had experienced 20 years of success and had a reputation for success. Administrator 1 was the only current employee who had been on staff since the school's inception in 1996. She expressed this level of high expectation in terms of the whole student and whole student

achievements. Administrator 1 (personal communication, January 18, 2017) explained,

When we talk about high performing, I like to talk about test scores and all those other things, but I mean they're high performing in their communication skills. They are high performing in the way that they can collaborate with people, and I think one of the things that I feel like our kids leave with is a really good sense of themselves, where they are, and confidence. These have been and are the expectations.

According to Teacher I (personal communication, January 17, 2017), “There is an expectation here that, ‘hey, we're at this high-achieving level, and we're going to keep it up.’ There is a huge difference between here and some other places I've worked.” Also expressing high expectations, Teacher D explained,

I think that kids can learn so much more than anybody ever asks them to. I think if you set the bar high, that they'll jump high. Whether they need the bar or not, they just jump as high as they can.

The teachers have high expectations of success from their students and the students work to meet those expectations.

Observations in the classrooms confirmed the information gathered in the interviews. The teachers appeared to be enthusiastic, passionate, and focused on the student. The teachers' behavior in the classroom supported the quotes from both teachers and administrators relating these teacher-specific qualities. In several of the observed classrooms, the teachers expressed their level of expectation and confidence in the students being successful by using phrases such as, “I know you all are able to do this, because I have seen you do this before” and “All of you will be able to solve this equation by the time this class is dismissed.”

The importance and benefits of teachers working together and teachers trusting each other was demonstrated in a charter school in southeast Texas (Guvercin et al. 2016). Guvercin et al. (2016) further demonstrated the positive benefits of teacher collaboration especially when the collaborative efforts were focused on academics and creating a school atmosphere focused on student success. Fredrick et al. (2017) investigated the relationship between adolescent stressors, pressures to achieve, and teacher support. Fredrick et al. (2017) found teachers can be a buffer between students' perfectionism, academic pressures, anxiety, and depression.

Findings: Research Question 3—Curricula-Specific Contributions

The curricula influences identified as having the greatest impact on this middle school's student performance were

standards focused, flexible, teacher accountable, not limited by technology resources, individualized, cross-curricula, mentor delivered, and enhanced by enrichment scheduling.

Flexible and Individualized All nine teachers expressed their focus on the state standards for student mastery of their subjects, the flexibility they had to pick the curriculum to teach those standards, the trust they have from the administration in choosing the curriculum, and their ability to make the curricula individualized to each student because of small class sizes. According to Teacher G (personal communication, January 17, 2017) and expressed in similar terms by other teachers, “I have a lot of freedom in choosing how I achieve covering my standards. I’ve also been able to enrich that with several different things as well.” According to Teacher F (personal communication, January 18, 2017), “My administrator trusts me as a practitioner and a teacher. She trusts that I’m making the right choices for the classroom.” According to Teacher E in choosing curriculum (personal communication, January 26, 2017),

This goes back to our collaboration, is that there’s a greater vertical alignment of the curriculum here and there’s more opportunities for cross-curricular connections. Like we prioritize reading. We may pull some social studies articles or some science articles. We choose articles that are not only going to benefit those content areas, but also help our reading and writing standards as well. We do learning communities, and also try to focus on pulling subjects together, project-based learning, and different things like that.

Teachers took responsibility and ownership of choosing the curriculum. The administrators empowered the teachers to make these curriculum choices.

Several teachers and administrators described the ability to customize curriculum to meet the individual student’s needs. Administrator 3 (personal communication, January 23, 2017) noted, “it’s flexible, innovative type of curriculum approach is what I see; just tailoring to their needs. So making sure what is being taught and how it’s being taught, is helping them actually learn the material.” According to Teacher I (personal communication, January 17, 2017),

What I like about here is the fact that you know your class sizes are small and every student can have the opportunity to really just dig deeper. In addition, what gets me as well is that students learn differently and that’s where we can make a difference.

The teachers developed relationships with the students, learning about their strengths and weaknesses. Through this in-

depth knowledge of the student, teachers were able to customize the curriculum to meet the needs of the students.

Curriculum enhanced learning across various academic subjects. Teachers across all core academic subjects echoed the importance of being accountable for curriculum. The teachers appreciated the opportunity and freedom to choose specific materials based on their experience and the collaboration with each other in making these decisions.

Mentoring Program The teachers and administrators consistently discussed the mentoring program, as related to curriculum, as one of the main advantages of the middle school compared to other schools in the area. Working with the community, the school partnered with different businesses and professionals to work with the students to help relate core subjects to real-world experiences. Examples included mentoring with professionals to learn about working in and owning a restaurant, designing clothes and marketing them, participating in scuba diving, producing films, practicing and designing environmental stewardship programs, and creating graphic designs. The mentoring program worked to offer integrative and exploratory curriculum to augment the core subjects. As Teacher C (personal communication, January 25, 2017) explained, “Our students get to be involved in a bunch of different things, and then getting to experience a bunch of different things and activities through different things including mentoring.” The mentoring program was one of the distinctive differences between this middle school and other schools in the area.

Enrichment Scheduling Another advantage of the flexibility of the school in terms of curricula is the ability to offer “enrichment scheduling.” Enrichment scheduling involves changing the class schedule one day per week to allow time for specialized student tutoring based on individual academic needs such as improving reading skills. The school started the enrichment schedule after the first assessments identified particular academic needs of each student. Teachers conducted assessments every 9 weeks determining specific needs and made adjustments depending on the assessment results.

The importance of designing curriculum specific to middle school-aged students was investigated by Wolk (2016). The curricular focus of this middle school mirrors that discussed by Wolk in terms of, “We need to transform a passive, disconnected curriculum usually centered on textbooks and facts into an active curriculum about life and issues that matter: to young adolescents, to the seven billion people on Earth, to the planet” (Wolk 2016, p. 46). Wolk (2016) emphasizes the value of teaching middle grade students using inquiry-based curriculum focused on current and culturally relevant topics.

Findings: Research Question 4—Teaching-Specific Contributions

The teaching influences identified as having the greatest impact on this middle school's student performance were direct instruction, teacher as the facilitator, peer-to-peer teaching, hands-on, individualized, modeling behavior, flexible, and built from year-to-year based on the teacher's familiarity with each individual student.

Engaging Discussed in interviews as well as witnessed during classroom observations were various teaching approaches including direct instruction, teacher as facilitator, peer-to-peer teaching, hands-on instruction, modeling behavior, and individualized instruction. Several of the teachers discussed their active teaching methods, including Teacher D (personal communication, January 18, 2017) who explained, "I don't ever give a worksheet. I don't ever sit down." She further explained her particular approach as "I'm a real traditional teacher. I present a lesson; I show them how to do it. They show me how to do it. Then they practice on it. I do a lot of tutoring, a lot of extra tutoring." This same teacher also discussed the team mentality she fostered in her classroom. She described her class as one unit working together. Students had different learning styles and academic abilities, but as suggested by the data, teachers shared the practice of celebrating effort. As Teacher D further explained, she told the students, "You all have to work the same. We're all successful if we all move. Each student may move at a different rate, but we all move, and we all give 100% effort." The extra time devoted to the students in and outside of the classroom, the availability of after-school tutoring, and success measured in terms of effort verses test scores was a common occurrence expressed by several teachers and administrators as keys to the middle school's success.

Varied Methods Other teaching approaches discussed and observed throughout the school include those of Teacher B (personal communication, January 23, 2017) as she described her days, "I'm up there directing them. Other days it's a student-led activity; other days it's hands-on demonstration of experiments; other days it is building a robot." Teacher C (personal communication, January 25, 2017) explained she used peer tutoring in her classroom. When asked how she grouped the students, she explained,

I try to strategically pair them so they can help one another. Sometimes I pair high-ability with high ability because they enjoy the competition. Other times I pair in a more tutoring relationship. It really depends on the lesson and the student. It is nice we are so small so I can learn that about the students.

Teachers used a variety of teaching strategies, including pairing students into groups based on a variety of characteristics. During observations, the researcher witnessed small-group pairing in several classrooms. Teachers based small-group pairings on a variety of characteristics including interests, ability, age, and gender.

Teacher I (personal communication, January 17, 2017) elaborated, "Students can't hide in the corner. I see them physically as I am having them do hands-on activities and I can see that they are all participating." Teacher H (personal communication, January 17, 2017) explained how she does modeling in her classroom and created various types of groupings, even within one activity. She also described how she tried to relate the concepts to everyday things such as, "I have a list of subordinating conjunctions songs. Kelly Clarkson has a lot of songs that help students learn this concept." The various groupings help students work with all different types of people as well as get to know each other.

Classroom observations confirmed the use of varied instructional methods in the classroom. During the 50-min class time in one room, the observer noted five different teaching methods. The methods observed were direct instruction, peer-to-peer teaching, collaborative table work, learning through discussion, and demonstration.

Individualized Instruction Teachers and administrators consistently reported small class size as directly related to being able to use various teaching methods in the classroom and differentiating instruction. Teachers stated utilizing these different teaching approaches and methods work hand-in-hand with the small school and small class size. Due to the small size of each class and the teacher to student ratio, teachers celebrated the ability to try new, innovative teaching approaches without fear of losing class control if the lesson did not go as planned. As Teacher E (personal communication, January 26, 2017) expressed, the small class size "makes a large difference in what I'm able to accomplish and the amount of time that I'm able to spend with differentiating instructions to different students and going further into content." Teacher H (personal communication, January 17, 2017) explained, "You're not afraid to try something new because you feel comfortable with the students." The teachers are motivated and encouraged to take the initiative to provide individualized instruction.

Teacher H (personal communication, January 17, 2017) explained the benefit of the school structure and teachers having small numbers of students and the same students for 2 years in terms of teaching approaches as,

We do a good job of helping the students to be well rounded. We are able to say, 'Hey, this person has these strengths and these qualities, and let's help nourish them.' Here we have a lot higher chance of being able

to do that for more kids. Because I could build a relationship with a kid in sixth grade. In eighth grade, I can help them with something that they need—or even in high school because I build that relationship over many years.

Teachers throughout the school cite the structure of the school as a key contributor to being able to deliver individualized instruction.

Observations in the classrooms confirmed the information gathered in the interviews. Teaching methods utilized in the classroom were varied, student-focused, and individualized. In several of the classrooms, the observer witnessed students teaching other students, teachers giving one-on-one instruction to individual students, and individual students using instructional materials designed specifically for them. Teachers actively engaged students during all of the observations. Students asked and answered questions, worked collaboratively, asked for assistance from the teacher as well as their peers, and helped each other. In all circumstances, the teachers varied their teaching methods, actively engaging the students in learning.

The researcher made an interesting observation as it relates to the flexibility of the school, teachers, the physical building, cross-curricular activities, varied teaching methods, and teacher trust. The researcher observed a dance class walking from the classroom to the outside garden area reciting a play. The students were all in a line, reading the parts of the play in unison. The students proceeded to the boardwalk outside where they sat in a circle and continued the exercise. The weather was beautiful, the sun shining, a slight breeze, and perfect temperature. All of the students were engaged in the activity and focused on the lesson. This one occurrence demonstrated the physical structure of the school in its community setting along with the trust between the teacher and students, and cross-curricular activities.

Discussion

Analysis of the data revealed three central themes related to student success in the charter middle school. These three themes emerged from the analysis of the findings and permeated throughout the four domains used as the framework for the research. The attributes were flexibility, individualized instruction, and high expectations. These three attributes were intertwined throughout the four domains. Flexibility was evident in the ability of the school to respond quickly to learning opportunities, teachers' willingness to implement innovative teaching strategies, and the administrators' and teachers' commitment to flexible curriculum based on student needs. Individualized instruction was evident as teachers and administrators had the ability to focus on the individual student.

Individualized instruction was facilitated by assessing each student's performance and needs and subsequently delivering curricula and instruction based on the assessments and feedback. The third emergent theme was the culture of high expectations. The reputation and expectation of academic excellence was consistently communicated throughout the school from administrators and teachers. Flexibility, individualized instruction, and culture of high expectations flowed from the awareness of student needs and the mission of the educational institution.

Flexibility of the organization was the ability of the organization to focus on real-time issues, student-specific problems, and opportunities. The school had the flexibility to adjust according to the ebb and flow of daily life in the school. The charter school was adept at this aspect of success according to the subjects interviewed.

Maas and Lake (2015) compared charter and traditional schools in their literature review, "Effective Charter and Traditional School Characteristics: Aligning Findings for Informed Policy Making." Maas and Lake found that school flexibility was expressed in coaching and feedback between administrators and teachers. At the successful charter middle school, multiple opportunities for coaching and feedback existed as described by teachers and administrators. These included regular staff meetings, impromptu discussions between teachers and administrators, and problem-solving sessions. Maas and Lake noted that the inability to be flexible, including being blocked by institutional barriers, union barriers, and bureaucracy, created a school environment that was unable to respond to teacher and student needs.

Senge et al. (2012) discussed the importance of flexibility in schools in their book, *Schools That Learn* (2012). Senge noted the ability to respond to teacher and student needs with nimbleness allowed schools, students, and organizations to evolve into entities that were better equipped for new challenges. According to Senge, the ability to be flexible or nimble in dealing with school-related issues was a trait of successful schools and students. Senge described teaching as a dynamic process that involved teacher, student, structure, and curriculum and that flexibility was related to the personal mastery of the teaching or the administrative craft. Lozano (2014) described the expected and unexpected happenings within organizations as life-experience opportunities to learn and teach simultaneously.

Lozano (2014) and Senge et al. (2012) agreed that the characteristic of flexibility was a virtue which was either encouraged or blocked by the environment established by school leadership. Maas and Lake (2015) went on to explicitly state that the ability of charter schools to be one-step removed from the bureaucratic influences of politically charged school districts led to the ability to be more flexible and more adaptive in their policies, their practices, and their interactions with stakeholders in the education process. At the inception of the

charter school movement, Budde (1988) noted the attraction of charter schools was the ability to bring the education process into tighter focus by giving the local charter school provider the flexibility to select curriculum, lead teachers, and be a learning institution that responded to student and teacher needs. This flexibility was manifested in the ability of charter schools to target special needs or groups (McShane and Hatfield 2015). One result of flexibility was a greater likelihood that the school performed at a level of success acceptable to stakeholders (Maas and Lake 2015). In this successful charter school, selection of effective curriculum was an ongoing and dynamic process that was a regular subject of discussions between administrators, teachers, and board-level leadership. These discussions included both the curriculum to be selected and the methods by which that curriculum was delivered.

Another advantage of flexibility was the focus on being creative and intentional toward training and certification of teachers. Training was an integral part of personal mastery of teaching and leading in the school environment, and provided an avenue for the communication of the shared vision of the school (Senge 2012). Training provided both the tools for flexibility and the connections needed for visibility of administrative leaders within the school (Maas and Lake 2015). Budde (1996) described this coaching and participatory connection by administrators as part of the facilitation advantage of the charter school concept. Training opportunities are regularly available to teachers, administrators, and other leaders at the successful charter school. Teachers acknowledged the collaboration among themselves for professional development and the willingness of administration to provide creative and meaningful programs for their individual professional development needs.

The second major theme contributing to the school's success was individualized instruction. Individualized instruction was manifested in several ways. One catalyst to individualized instruction was the size of the school. Humlum and Smith (2015) demonstrated the link between improved student performance and smaller school size. While the class size in charter schools was not always smaller than traditional school counterparts, the smaller school size often allowed more direct and effective contact with administrators.

Gleason et al. (2010) also found that smaller charter schools outperformed larger charter schools on a macro-basis. Smaller school size enhanced the visibility and involvement of administrators with both students and teachers (Maas and Lake 2015). The flow of communication including teacher-led instruction, administrator-led procedures, and board-led policy were part of the success at the charter school. The small size of the school gave teachers the ability to design and respond to individual student needs that led to individualized instruction. Small school size also allowed the charter school to excel in areas including communicating school expectations, improving the amount of instructional time, having focused times for

extensive evaluation, scheduling time for high-intensity tutoring, and designing/implementing ability groupings.

Additionally, individualized instruction was improved by the use of ability groupings, cooperative learning groups, and a corporate focus on the learning core of English and math. The charter school utilized all of these components of individualized instruction. This focus transcended the instructional process and included regular use of assessment and evaluation of students (Maas and Lake 2015).

In this study, the themes of flexibility and individualized instruction identified as positively impacting student achievement are directly related to the small size of the overall school and the small size of each individual class.

The third emergent theme identified as a common thread woven throughout the school was the expectation for success. As discussed by Maas and Lake (2015) and Senge (2012), one trait of a successful school was the communication of high expectations throughout all levels of the organization. Sun and Leithwood (2015) stated practices that set the direction of students, like clear expectations, were effective ways of improving student performance. The charter school in this study expressed high expectations in its mission statement adopted by the board of the charter school. Expectations were communicated to administrators and teachers during board meetings and regular discussions between board leadership and school administrators. Teachers and administrators communicated the message of high expectation daily to students. Students were surrounded by the messages of striving for high academic achievement both verbally and visually. Parents heard this message through direct and indirect interactions with teachers and administrators. The local community received the message of high expectations through the direct interactions with the school, the school website, and school-related social media.

Senge (2012) expressed the idea of both high and commonly held expectations as traits of a successful, learning institution. Senge discussed that the communication of expectations must be part of a mission that was known and held institution-wide. Senge also stated that when a vision, in this case a culture of high expectations, was effectively communicated to the entire organization, a holistic view of the organization as a system is nurtured.

Budde (1988) first presented the concept of charter schools to suggest an effective option for school reform. Budde's school reform proposal identified areas that relate directly to flexibility, individualized instruction, and high expectations. Budde promoted flexibility by suggesting that teachers be allowed to use creativity and cutting-edge technology. Budde proposed individualized instruction suggesting holistic and institution-wide understanding of curricula, instructional goals, parental involvement, and participation by the business community. He recommended high expectations that placed learning responsibility on students, facilitation responsibility

on principals/administrators, teaching-plan responsibility on teachers, leadership responsibility on boards, and coordination responsibility on districts. Of particular note is how the attributes of this successful charter school reflect a similarity to Budde's original vision of charter schools.

The second conclusion from the study was the applicability of Hattie's (2009) meta-analysis and domains as a method to evaluate the attributes instrumental in the long-term student success in a Florida charter school. Literature and studies related to charter schools yield varying results regarding the academic performance of charter schools. The use of Hattie's domains as a conceptual framework and to provide structure for data collection and analysis proved to be a valuable method for conducting the research.

Hattie (2009) completed the first meta-analysis in 2009 identifying 138 influences on student achievement. Hattie (2011, 2015) updated the research in 2011, identifying 150 influences, and then again in 2015, identifying 195 influences. While the number of influences identified has increased, the domains have remained the same. The domains have proven to be a stable method to categorize various influences on student achievement.

Limitations

This study focused on one particular charter school in north-west Florida. These charter schools had various curricula models ranging from credit recovery, fine and performing arts, online, and college preparatory. The charter school for this study had a general curricula; therefore, the results from this study cannot be generalized to other types of charter schools.

In addition to the structure, curricula, and size of this charter school, the area surrounding the school has a specific demographic population. The population of students within the school mirrors the surrounding area, but does not represent the same diversity present in other regions of the state. The specific themes and practices identified as contributing to overall student achievement may have applications in other schools, but may not be precisely duplicated.

Hattie's (2009) research categorized influences on student achievement into six domains: (a) home, (b) student, (c) school, (d) teacher, (e) teaching, and (f) curricula. This study did not investigate "home" and "student" domains due to the inability of the school to control home and student-related influences. While home and student factors influenced student achievement, the study was designed to investigate school-based influences on student success. In addition to these domains being outside of the scope of the study, middle school students are under 18 years of age and parental permission would be required for inclusion in the study. Exploration of these domains could provide valuable insight into the demographics and prior achievement of the students attending the

middle school. Future research investigating these domains could provide data to compare and contrast school-based influences and student-based influences.

Implications

This study ultimately revealed that being flexible, focusing on individual student's learning needs and behavioral support, and having high expectations were major components to long-term school success. In this case study, flexibility was evident in terms of curricula, teaching strategies, and scheduling. Of particular note was the ability of the school to change schedules to take advantage of learning opportunities as they arose. The teachers were flexible with their learning plans and not bound by a pre-determined hard-clad schedule. The schedules were structured, but the school could alter the schedule without much notice if opportunities presented themselves.

Results of the study have implications for literature and research. The implications include (a) validation of Hattie's (2015) domains; (b) using Hattie's domains as a formative design strategy and conceptual framework for conducting prospective research; and (c) contributing information to the continued discussion on the implications of school and class size on student achievement. Hattie's (2009, 2011, 2015) meta-analyses provided a structured method to analyze implemented strategies that are aimed at improving student achievement. More importantly, his research and approach focused on asking "What works best?" instead of just "What works." Most interventions will affect student learning and achievement, but some interventions have a much greater impact than others, and have a greater return on the amount of resources needed for implementation. Hattie's research is a good starting point for other studies. All of the influences identified in the study fell into one of the six domains defined by Hattie. As evidenced by the findings in this qualitative case study, the need exists for further research to look deeper, beyond the numbers and effect size, and understand why some interventions that aim to improve student achievement work and others do not.

The second implication affecting research and literature is the application of Hattie's research domains as a conceptual model for conducting qualitative research. To the researcher's knowledge, using Hattie's research as a conceptual framework for an empirical study is a unique application of his research. Application of these domains and the framework may have a positive impact on future studies and serves as an example of a unique formative design.

The third implication of the study is the contribution to the conversation surrounding the impacts of school and class size on student achievement. In the literature, controversy continues as to whether the size of the school and the size of the individual class contribute to individual student success and therefore school success (Schanzenbach 2014). Zimmer et al.

(2009) examined the success of charter schools and the relationship between the success and school size. Zimmer et al. concluded the substantial attainment benefits for many of their students were “driven by the smaller size of charter schools” (p. 76). The findings from this study provide evidence to support smaller school size and smaller individual class size.

Suggestions for Further Study

Hattie’s meta-analysis as presented in his visible learning works provided the conceptual framework for this research study (Hattie 2009, 2011, 2015). The domains defined by Hattie (2009) served as the guiding mechanism for data collection and analysis. Evaluation of the application of this conceptual framework for research may lead to the utilization of this model in other areas. Utilization of the domains for analysis of student achievement presents a new formative design strategy for analyzing school performance.

This case study examined one middle school in Northwest Florida. Examination of additional schools with similar demographic populations may lead to a greater understanding of the similarities and differences among these schools and inform future formative design of similar schools. In addition, evaluation of schools with different age students may lead to a greater understanding of the various influences affecting student achievement across various age groups. In addition to other schools with different age students, investigating the influences in schools in different areas of the country may highlight the impact of regional variances on student achievement.

The controversy on school size continues. Application of similar techniques as used in this study can potentially link quantitative data to qualitative research. Researchers can utilize the model in larger schools to analyze the effects of various influences in larger schools as well in schools with larger class sizes. The results of this study along with other studies can be used in the formative design of future schools.

One of the most interesting results from the study is the usefulness of Hattie’s research domains as a conceptual model for conducting this qualitative research study. The effectiveness of Hattie’s domains and meta-analysis as the conceptual framework for data collection and analysis is an exciting by-product of this research study. To the researcher’s knowledge, using Hattie’s research as a conceptual framework is a new and unique application of the identified domains and influences on student achievement. The use of the domains in a prospective study is an original use of the meta-analyses. It was exciting to use a framework in a new way to conduct original research. This researcher sees multiple opportunities to apply these domains and this framework in the design of future studies.

Reflecting back on the notions prior to and after completion of the study brings to light the surprise of how important the small size of the school is as an overarching characteristic of the school. School size and class size is an ongoing topic of debate in school systems all over the country. The cost of having a small student to teacher ratio is obvious and, therefore, establishes the importance of having more research on the financial implications related to optimal class/school size. The researcher was surprised as to the number of times teachers and administrators stated how important the small size of the school was to its success. The study results support the importance of small school size and small class sizes to the overall success of the middle school.

The significance of the study relates to the connection between small school and small class size and their actual impacts on student learning and achievement. An important outcome of the study is the identification of relationships between the attributes of the school and student achievement. The effects of the school size relate back to teacher effectiveness, teaching styles, relationships in the classroom, curricula choices, classroom behavior, and being able to individualize instruction.

Compliance with Ethical Standards

Conflict of Interest The authors declare that there is no conflict of interest.

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