

Relationship between Organizational Health of Middle Schools and Student Achievement in Reading and Math: What Middle Grades Principals Should Hear

Kathleen Roney, EdD

Professor

Department of Elementary, Middle Level, and Literacy Education
Donald R. Watson School of Education
University of North Carolina at Wilmington
Wilmington, North Carolina

Howard Coleman, EdD

Assistant Professor

Department of Educational Leadership
Donald R. Watson School of Education
University of North Carolina at Wilmington
Wilmington, North Carolina

ABSTRACT

This study used a mixed methods approach to study the relationship between organizational health and student achievement in middle grade schools. Pearson correlation coefficients and qualitative interview data revealed that principals who are effective instructional leaders emphasize the importance of academic goals. The principal influence and academic emphasis results were congruent with effective instructional leadership models that encourage principals to focus on instructional rather than managerial tasks (Leithwood et al., 2004, p. 21). The relationship between academic emphasis and student achievement scores in reading and math indicated that effective school leaders use their positional authority to guide teachers and students to higher academic achievement.

The National Middle School Association (NMSA) first published its position statement on programs and practices that formed the basis of middle grades education in 1982. There it is stated, “The middle school is an educational response to the needs and characteristics of youngsters during early adolescence and, as such, deals with the full range of intellectual and developmental needs” (p. 14). At that point in time ten essential elements of a true middle school were articulated. Under the element of a “positive school climate” it is noted: “The overall

climate of the school is itself a ‘teacher.’ A true middle school should evidence warmth, caring, and respect” (NMSA 1982 & 1992, p. 22).

In revisiting the essentials of its philosophy and practices NMSA up-dated its original position, and identified six general characteristics and six program components (NMSA, 1995). Addressing the issue of a positive school climate, the revised edition reads, “The climate of a developmentally responsive middle level school is safe, inviting, and caring; it promotes a sense of community and encourages learning” (1995, p. 18).

Soon into the 21st Century, NMSA further delineated its position, this time identifying 14 characteristics of a successful school for young adolescents—eight facets of the culture and six programmatic characteristics. Among the eight facets of the culture is included “an inviting, supportive, and safe environment” (NMSA, 2003, p. 7); specifically, “A successful school for young adolescents is an inviting, supportive, and safe place, a joyful community that promotes in-depth learning and enhances students’ physical and emotional well-being” (p. 12).

More recently, NMSA (2010) rearticulated the tenets for working with 10-to 15-year-olds. Now 16 components are grouped in three categories: Curriculum, Instruction and Assessment (five characteristics); Leadership and Organization (five characteristics); Culture and Community (six characteristics). Within the category of culture and community, school environment continues to be identified as key to educating young adolescents. Of particular interest to us in our study is the separate category for leadership and organization and its five characteristics.

Still, as recognized by NSMA, while many middle grades schools provide a “strong foundation for young adolescents, most schools serving 10- to 15-year-olds have not implemented the full range of structures and supports that more than 30 years of research and practice have shown to work with this age group” (2006, p. 2). It is clear that no one characteristic is enough to ensure success. Rather, the 16 components must operate in concert. NMSA clarified its position that schools operate within social systems, particularly at local, state and federal levels of government stating, “Government policies at all levels profoundly affect the ability of educators to incorporate best practices—reminds us that ensuring success for every student is a shared responsibility requiring a deeper and broader partnership” (2006, p.3). NMSA issued its call to action, with five goals guiding the agenda (See Appendix A).

The impetus for our study comes from the call for research that will positively influence teaching and learning in schools: “Only when middle level schools have access to the findings of quality research—and use that information to improve their practices—will we be able to provide an excellent education to all young adolescents” (NMSA, 2006, p. 33). The purpose of this qualitative, multi-site case study was to get inside the schools and talk with the teachers and administrators about the climate they create to promote in-depth learning and to enhance students’ physical and emotional well-being.

Up to this point we reported on data collected over a two-year period for both reading or math scores and OHI-M Index scores (See Roney, Coleman, & Schlichting, 2007; and Coleman & Roney, 2009 respectively). Focusing on reading scores, we concluded that teacher affiliation, academic emphasis, and collegial leadership reflected the strongest relationship from among OHI-M indicators to positive student achievement in reading. Our conclusions regarding the relationship between student achievement in math and OHI-M indicators were that Institutional integrity and resource support were the strongest indicators. Still, we wondered what we would

find if we dug deeper into the data by combining the reading and math scores and correlating them with the OHI-M data. How would the combination of scores affect our conclusions to date?

Theoretical Framework

As explained in our earlier reports (Roney, Coleman, & Schlichting, 2007; Coleman & Roney, 2009), the social systems movement in organizational theory laid the groundwork for the theoretical framework used in this study. Parsons (1958) suggested that schools exert three levels of control over activities—technical, managerial, and institutional. A healthy school, therefore, is one in which all three levels of control work in harmony. Hoy and Feldman (1987) continued that the concept of organizational health is a mixture of organizational theories from education and sociology (Parsons, Bales and Shils, 1953). Tagiuri (1968), along with Hoy and Miskel (1996), addressed the organizational climate of a school defining it as the set of internal characteristics that distinguishes one school from another and influences the behavior of its members. In more specific terms, school climate is the relatively stable property of the school environment that is experienced by participants, affects their behavior, and is based on their collective perceptions of behavior in schools. Hoy and Hannum (1997) posited that healthy schools “successfully adapt to their environments, achieve their goals, and infuse common values and solidarity into the teacher work group” (p. 293). A number of studies by other researchers and reformers have also successfully linked healthy school climates to improved learning environments and increased student achievement (Bossert, 1988; Comer, 1980; Grosin, 1991; Hoy, Hannum & Tschannen-Moran, 1998; McPartland, Balfanze, Jordon & Legters, 1998; Purkey & Smith, 1983; Stedman, 1987).

Utilizing Parson (1958), Hoy and Feldman’s (1987) concept of organizational health is defined by three levels of control—the technical, managerial, and institutional—which combine to create a healthy school. The technical level addresses issues related to a school’s academic emphasis and the affiliation of its teachers, inclusive of job satisfaction and a commitment to colleagues and students. At the managerial level issues of leadership, principal influence and resource support are at work. Lastly, the level of institutional integrity is described as “the degree to which the school can cope with environment in a way that maintains the educational integrity of its programs” (Hoy & Hannum, 1997, p. 294).

The three levels of control framing this study directed the collection and analysis of the data in relation to our question about the relationship between a school’s climate and the academic achievement of its students.

Research Design

Using a mixed-methods research design the following question was explored: Focusing on the middle grade school level, specifically, student scores in reading and math, what can we say about the relationship between student achievement and organizational health. Our research hypothesis anticipated that increases in organizational health would be related to increases in student scores on standardized tests.

Sample and Context

Our unit of analysis is a group of five middle grades schools (we use pseudonyms) in two school districts in southeastern United States. Demographically (See Table 1) the five schools had a mix of majority/minority students, students with disabilities, and non-economically disadvantaged versus economically disadvantaged students. Teachers varied in terms of their education and experience.

Table 1

2004-2005 School and Student Demographics

School	Arion	Bacchus	Canola	Decuma	Emer
Number of Students:	391	904	931	632	896
Black	55.5%	10%	51%	33%	18%
White	38%	83%	38%	55%	77%
Multi-Racial	5%	4%	3%	3%	3%
Hispanic	0.8%	2%	6%	7%	1%
Economically Disadvantaged	64%	34%	55%	66%	45%
Students with Disabilities	19%	11%	15%	15%	13%
Total No. Teachers	33	53	62	46	55
With Advanced Degrees	24%	28%	29%	17%	11%
Years Teaching Experience:					
0-3 years	21%	28%	24%	35%	16%
10+ years	49%	45%	52%	37%	46%

Data Collection Procedures

OHI-M. Using the Organizational Health for Middle School (OHI—M) inventory (Hoy, n.d.), quantitative data were collected from teachers and principals in these schools over the 2004-2005 (n = 202) and 2005-2006 (n = 169) school years. The OHI-M inventory measures the organizational health of a school on the technical, managerial and institutional levels. The OHI-

M instrument is the product of more than a decade of research and development (Hoy, Tarter, & Kottkamp, 1991). The instrument is available free and on line. A scoring guide is included.

Semi-structured interviews. In order to probe more deeply the responses from the inventory, qualitative data were collected through semi-structured interviews. Five principals and five to seven teachers in each middle school ($n = 36$) were interviewed. The participants offered general statements about teaching in their schools, the importance of academics, leadership, and issues related to family and community.

Data Analysis Procedures

The Pearson r correlation coefficient was used to compare the standardized overall OHI-M scores and OHI-M subtest scores for the five schools with student achievement results. Critical Pearson r values were used to determine the significance of the relationship between student achievement results and overall OHI-M scores (see Appendix B). The qualitative strategies included triangulation of survey responses with interviews, use of verbatim statements, and application of low-inference descriptors.

Findings and Discussion

Principal Influence and Collegial Leadership: Links to Math and Reading Scores

The overall OHI-Index and student achievement scores for 2005 are presented in Table 2. The 2005 data analysis revealed a moderately strong relationship ($r=0.34$) between higher OHI-M index scores and higher reading and math scores. The schools with the highest OHI-M scores (Canola and Emer) had some of the highest reading and math scores for 2005. One of the schools (Arion) with low OHI-M scores had low reading and math scores for 2005. The school with the lowest OHI-M scores (Bacchus) had the lowest math scores in 2005 and the highest reading scores in 2005. In general, higher organizational health scores were moderately related to higher student achievement scores.

Table 2

Overall Health Index & Reading/Math Score Correlations: 2005

School	2005 OHI-M Index Scores	2005 Reading Scores	2005 Math Scores
Arion	487.5484	78.70	79.50
Bacchus	482.7234	90.80	72.40
Canola	532.6263	81.40	84.10
Decuma	529.3479	79.30	80.00
Emer	532.5765	90.50	89.90
<i>r = 0.34</i>			
<i>moderately strong, positive relationship</i>			

The overall OHI-Index and student achievement scores for 2006 are presented in Table 3. The 2006 data analysis revealed no relationship ($r=0.03$) between OHI-M index scores and reading and math scores. Although one school (Emer) had high OHI-M scores and high reading and math scores for 2006, there appeared to be no overall relationships between OHI-M scores and student achievement scores for 2006.

Table 3

Overall Health Index & Reading/Math Score Correlations: 2006

School	2006 OHI-M Index Scores	2006 Reading Scores	2006 Math Scores
Arion	487.5484	77.10	36.00
Bacchus	482.7234	90.50	68.40
Canola	532.6263	80.40	56.40
Decuma	529.3479	81.00	49.70
Emer	532.5765	86.30	56.80
<i>r = 0.03</i>			
<i>no relationship</i>			

Six subtest OHI-M Index scores for the five schools were compared with student reading and math achievement scores for 2005 and 2006. The comparisons of Academic Emphasis, Collegial Leadership and Institutional Integrity OHI-M Index scores with reading and math achievement scores are presented in Table 4.

Table 4

Overall Health Index Subtests and Reading/Math Score Correlations: 2005 & 2006

	Academic Emphasis Index Score	Collegial Leadership Index Score	Institutional Integrity Index Score
2005 Reading/Math Scores	$r = 0.61$ <i>strong, positive relationship</i>	$r = -0.34$ <i>moderately, negative relationship</i>	$r = 0.36$ <i>moderately, positive relationship</i>
2006 Reading/Math Scores	$r = 0.11$ <i>no relationship</i>	$r = -0.33$ <i>moderately negative relationship</i>	$r = -0.22$ <i>weak, negative relationship</i>

The comparisons showed a strong positive relationship ($r = 0.61$) between academic emphasis and student achievement results for 2005 (as OHI-M indicators increase, student reading and math scores increase). The analysis did not reveal a positive or negative relationship between academic emphasis and student achievement scores for 2006. The results revealed a moderately strong, inverse relationship between collegial leadership and student achievement for both 2005 and 2006. The correlation analysis showed a moderately positive relationship between institutional integrity and 2005 student achievement scores and a weak, negative relationship between institutional integrity and 2006 student achievement scores. It should be noted that the math proficiency tests were re-normed for 2006 and decreased test results across the state. We attempted to convert the 2006 math results to standard scores that would be congruent with the 2005 scores and therefore allow us to make equivalent comparisons. Unfortunately, the format of the historical data for both 2005 and 2006 did not provide enough information to equate the different benchmarks and ranges.

The subtest comparisons of Principal Influence, Resource Support and Teacher Affiliation OHI-M Index scores with reading and math achievement scores are presented in Table 5. The principal influence and student achievement score correlations revealed moderately strong, positive relationships for 2005 and 2006, indicating that higher principal leadership indicators were related to higher student achievement. The resource support correlations revealed a weak, negative relationship between resource support and student achievement for 2005 and a moderately positive relationship for 2006. Teacher affiliation scores indicated a moderately positive relationship between teacher affiliation and student reading and math scores for 2005 and a weak, positive relationship for 2006.

Table 5

Overall Health Index Subtests and Reading/Math Score Correlations: 2005 & 2006

	Principal Influence Index Score	Resource Support Index Score	Teacher Affiliation Index Score
2005 Reading/Math Scores	<i>r = 0.46 moderately positive relationship</i>	<i>r = -0.12 weak, negative relationship</i>	<i>r = 0.35 moderately positive relationship</i>
2006 Reading/Math Scores	<i>r = 0.40 moderately positive relationship</i>	<i>r = 0.32 moderately positive relationship</i>	<i>r = 0.19 weak, positive relationship</i>

In looking over the data, it is clear that the strongest relationships we found between student achievement and the six subtest comparisons were with principal influence and collegial leadership.

Principal influence. The limited variance around the mean scores strengthens the correlation results indicated by the Pearson *r* calculations. When combining quantitative data points we note that there were moderately strong, two-year positive correlations between Principal Influence index scores and student achievement scores for both 2005 (0.46) and 2006 (0.40). A review of the OHI-M means and standard deviations revealed slight variations in the 2005 and 2006 responses (See Table 6).

Table 6

Principal Influence: Mean, Standard Deviation and Standard Scores

	Mean	Standard Deviation	Mean	Standard Deviation	SdS	
SCHOOL	2005	2005	2006	2006	2005	2006
Arion	14.45	0.48	16.05	0.27	409.5100	485.2685
Bacchus	16.06	0.23	16.32	0.07	485.3774	497.7089
Canola	17.78	0.13	15.17	0.37	566.7252	443.5808
Decuma	17.48	0.29	14.64	0.21	552.1514	418.2247
Emer	18.39	0.09	16.71	0.10	595.1106	516.0377

Hoy and Hannum (1997) stated that “influential principals are persuasive with supervisors, get additional consideration, and proceed relatively unimpeded by the hierarchy” (p. 294). They further established an indirect relationship between principal influence and student learning. More recently, however, in a study of 171 high-performing middle schools and 112 low-performing middle schools, Styron and Nyman (2008) found a “significant difference” in only one of the six dimensions of the OHI-M. They stated, “Results demonstrated that high-performing middle schools scored lower than low-performing middle schools in principal influence” (p. 12). An interesting twist because our findings indicate higher Principal Influence OHI scores were related to higher student achievement scores in both 2005 and 2006. Interviews with our participants helped us understand this phenomenon.

We return to that which is stated in the position paper of the National Middle School Association: “As the prime determiner of the school culture and its direction, the principal influences student achievement and teacher effectiveness by using his or her knowledge to nurture, sustain, and advocate for a comprehensive, student-centered education program” (2010, pp. 28-29). Within the framework of Hoy and Hannum (1997), principal influence is one of the three dimensions at the managerial level. From an investigation of the relationship between principal influence and student achievement, Jason (2001) best summarized this dimension: “for principals, the potential is present to experience a high level of meaning though exercising instructional leadership since a large part of their administrative responsibilities encompasses facilitating the teaching/learning process” (p. 43).

Our participating principals zeroed in on the managerial flowchart when addressing issues related to the influence they have over the teaching and learning process. Some cited the school improvement plan as the catalyst for them. As often happens when talking with principals, one or another question catches their attention. On this question, we received short answers such as, “My SIT team is very important.” Two of the principals expounded on this topic, capturing the essence of each of the principal’s full interview:

P: My school improvement team (SIT) is made up of my curriculum leaders and focused on curriculum. It’s no longer a place where you go and fuss about the fact that kids chew gum and eat candy, and the desks are old. Those are administrative issues, not school improvement issues. It was completely focused on academics and everything that affects academics in the building. My SIT consisted of my grade level chairs and my language arts leader, my math leader—those are the people who all feel very strongly about what we’re doing here. So when I need to make a decision I call those people in and we talk about it extensively. And then they will go and talk to their curriculum teams or their grade levels, and we discuss things.

P: We [SIT] meet every month—two people per grade level, six other spots for support staff and parents. We try to encourage the rest of the staff to try to come to the meetings during the year, to observe or take part. Anybody is welcome to go. The reason I do that is that I don’t want them to think that I am a micromanager. But I know that some people have that opinion, because I am more hands-on that they are used to.

As for the teachers, they fell into one of two camps in speaking about the role of the school improvement team. For example, one-third of the participants viewed the SIT team as a part of

the process, but stated there were circumstances that were resolved by administration regardless of the SIT team.

T: Generally the administration makes the decisions. But it does go through the SIT. I was on the SIT and I kind of felt like I was a part of the decision making. But then there were those certain situations that no matter what we would have said as a team it was going one way or the other, pretty much whichever way the administration wanted it to go.

The other two thirds of the participants saw the School Improvement Team as their way of including the administration in teaching and learning processes within the school. For example,

T: We have a SIT that meets and we take concerns to them. They bring it to the committee. For instance, we're battling over next year's schedule. So teachers did tentative schedule, administrators have done some and we're looking through those and we'll decide together which is best for the kids. I think that's our goal—what's actually going to work best for the children.

Other ways the teachers spoke about the Principal's influence on the academic program fell into categories such as advocacy, parent interventions, and professional development for the teachers.

T: She fought every battle she could and even after they took a teacher and assigned the teacher to a different school, she still fought to get that position back...and she got that decision back.

T: They were going to paint the school and we wanted it painted and we pushed for it and the Principal pushed for it and got it OK'd. Then they came back and said they weren't going to be able to do it. The Principal's still, to this day, working on trying to get our classroom painted.

T: Part of being a teacher is you learn to be very creative with what you have. And if you really need something and you're told no, you'll find some way to get it. There was no instructional money left. We made a request and somehow they found the money.

T: Sometimes there are things I wish I did know. Like, I think she may have interactions with parents or some of my students that I don't hear about until I've contacted the parent about something. I almost wish there was that reciprocity where if you have to deal with the parent, you tell me. If I have to deal with the parent, I'll tell you so everybody's on the right page. She knows that we need working, cooperative situation with parents.

T: The County tries program after program after program without going, "This worked or this didn't work." And they just keep more, more, more, more and you can't do that. You have to see what works, weed them out, fix what you know. That's a big stressor because it is like something new every day.

T: Our principal really supports research, supporting you with resources, time, energy, money, those kinds of things. As a teacher that likes to try new things, I really like work here.

T: If a parent is coming out and asking for things or to yell at us or to be angry and disgruntled, the principal meets with them first and tries to dissipate things.

T: The Principal is not afraid to voice her opinion when s/he is disagreeing with the superintendent. That shows right there s/he is looking out for us and the school. I'm sure that's got to be hard for a principal to stand up to the superintendent. It's the job, right there.

Collegial Leadership

Similar to the principal influence means and standard deviations, there were slight variations for the 2005 and 2006 responses for collegial leadership (See Table 6). Again, the limited variance around the mean scores strengthened the correlational results indicated by the Pearson r calculations. Conversely, as opposed to principal influence outcomes, there were moderately strong, two-year negative correlations between collegial leadership index scores and student achievement scores for both 2005 (-0.34) and 2006 (-0.33) (See Table 4).

Collegial leadership refers to the principal's behavior—friendly, supportive, and equal. Trust, according to Hoy (2002), is the key to a principal's success in this dimension of the organizational health framework. Building a culture of trust will indirectly result in higher student achievement. Data contained in Table 7 show that four of the five schools in this study dropped in this dimension over the two years. In general collegial leadership scores revealed the inverse relationship between collegial leadership and student achievement. Qualitative findings reveal teachers' experiences of collegial leadership at their schools.

Table 7

Collegial Leadership: Mean, Standard Deviation and Standard Scores

	Mean	Standard Deviation	Mean	Standard Deviation	SdS	
SCHOOL	2005	2005	2006	2006	2005	2006
Arion	30.68	0.25	28.01	0.05	609.63	537.64
Bacchus	25.66	0.41	26.07	0.28	474.49	485.48
Canola	30.74	0.09	26.22	0.06	611.33	489.42
Decuma	28.62	0.36	27.00	0.42	554.23	510.51
Emer	26.36	0.18	24.74	0.27	493.29	449.60

In its belief statement NMSA (2010) reiterates its call for “courageous and collaborative leaders” for today’s middle grades schools. Using such phrases as “creating a learning community” and “meaningful relationships,” NMSA maps out ways through leadership and organization that this can be realized. However, if we take Hoy’s (2003) conclusion that building a culture of trust must be the top priority of school administrators, which in turn will result in higher student achievement, we need to focus on three of the characteristics listed by NMSA under the category, “culture and community” to understand how teachers look at it. Specifically, NMSA (2010) states, “The school environment is inviting, safe, inclusive, and supportive of all” (p. 33), “The school actively involves families in the education of their children” (p. 40), and “The school includes community and business partners” (p. 41).

Teachers determine what is important in a school by observing and interpreting the principal’s actions, behaviors, and decisions. A principal who acts with care and concern for others is usually successful in changing and reforming the school culture (Purkey & Siegel, 2003, p. 5). Positive changes in the school culture increase the quality of instruction, the commitment of teachers, and ultimately student achievement (Deal & Peterson, 1998; DuFour & Eaker, 1998; Fullen, 2001). Our participants attest to this theory—teachers attest to a leadership role, Principals testify to the expertise and commitment among the teachers.

Safe, inclusive and supportive.

T: If you go to the Principal with an idea, he/she will back you up. If you go to him/her with a problem, he/she will help you straighten things out.

T: The children love coming to school. This is their safe place and it shows. They are very grateful and they're very energetic and enthusiastic. They want to do whatever it is we're doing. The administration is probably the most supportive I've ever had in my career.

T: The administrators appreciate us. We do not have a lot of extra duties. They know what we do. They appreciate us getting up and coming here every morning.

T: I can knock on the Principal's door, and s/he may be in the middle of an e-mail, but usually s/he says sit down. S/he is very accessible in that respect.

T: For the most part, everyone here is on the same wave length... We understand we have a common struggle—every day we are trying to get these kids to learn, and a lot of them do not want to learn. There is a lot of positive reinforcement among peers—congratulations on this, thank you for that, I appreciate the fact that you did this. You get a lot of that.

T: We all have a vested interest in our school or we would not be here. We want our kids to do well and I feel like for the most part we are heard by the administration.

T: I feel like my administrators grew to trust my decisions in my classroom. I feel valued. It's not perfect, but I feel valued as a professional.

T: I enjoy working here The good overwhelmingly outweighs the bad. I think when a person enjoys working around kids, kids know it. And they know when you don't. I certainly enjoy that and being here, it's a great place to be. It's very high energy.

P: Extremely dedicated staff. They like coming to work; they love coming to work in many cases. And, they are committed. They wear a lot of different hats. We are trying to foster even more leadership in the building. There's always been a lot of people pitching in and taking part, and then taking on responsibilities. But we are trying to foster more leadership in the building.

P: It's an excellent faculty. I just can't say enough about how hard and how smart they work. And, how dedicated they are to this group of students...a lot of our students come to school with a lot of baggage and things that interfere with their ability to learn and concentrate and our teachers are aware of that. The teachers go above and beyond to help the students.

Family involvement. According to Sergiovanni (2000) principals should focus on protecting and enhancing the moral life of schools. The moral life consists of the core values, beliefs, and purposes that bind the school and the community together. In Sergiovanni's view, the principal's "moral voice" supports the shared values and motivates other school participants to follow the leader's example. Sergiovanni defines moral leadership as the principal's ability to promote and to achieve higher levels of thoughtfulness, respect, caring, and civility among all students, teachers, and parents. Although we did not collect data from the parent/families, from

what we heard, it is a mixed bag of experiences among two of the stakeholders—parents/families and teachers.

T: There's a real sense of teamwork. If they were having a family math night, the whole team is there—whether you taught social studies, or science, or reading. If it's family math night, we are there.

T: Parent involvement is a big stressor...lack of parent involvement. I think sometimes it's a lack of parent understanding. ..I think some may have not done very well in school. A lot of them don't seem very comfortable when they come into the school.

T: The students love when their parents come to school. They are very proud. We made an effort to do student-led conferences. For the ones that did come, it was fabulous.

T: Parents are just doing what's best for their kid. If it's something that we cannot do because it doesn't fit the whole picture of the school, we have to let them know that there is more than just your child here. Overall they are just looking for the best for their own kid.

P: I tend to be able to take parents who are unhappy and have them Okay by the time they leave. Not everybody, but the majority. And even if I don't give you what you want, I can usually make you understand why not, and you be Okay with it. I am involved in most of my conferences around here that have any degree of controversy. Teachers do not hesitate to say, "I think this parent is going to be upset. Do you mind sitting in?" And I do that for them. I set the principles, especially if it's one that looks like the child is at risk in some way with testing.

Community and business. Anfara et al. (2006) extend Sergiovanni's thinking and offer that the developmentally responsive middle grades principal must "engage families and the wider community in understanding the developmental nature of the family itself so that parents can more effectively interact with the middle grades children" (p. 23). This flows from that which was outlined by the National Association for the Education of Young Children (1997), that leaders need "knowledge of the social and cultural contexts in which children live to ensure that learning experiences are meaningful, relevant, and respectful for the participating children and their families" (as cited in Anfara et al., 2006, p. 24).

T: We have agencies that come in and provide services for our kids. As far as what we do for the community, we try to produce thinkers.

T: When they find out that we are up in the 70th percentile of free and reduced lunch, they know we need help and a lot of people do come out to help. We send our band out and play at different places. Chorus does the same thing.

T: Our Principal feels very strongly about getting our community involved here and has given them many ways that they can interact here and to draw people in.

T: We have a number of community meetings where folks from the neighboring blocks come in and talk with us and talk with our students, getting a mentoring program going. We have gone out into the community as well.

Of the six principals we worked with, one reported a disconnect between the school and the community with regard to the school's agenda. The others offered positive results from the school working with the community.

P: They use the school, but I wouldn't necessarily say the community is involved. They are using the building; they are not using the school. I don't think it's a part of any extension of the culture.

P: A large part of our community involvement is through agencies that work with the school system and then go into individual schools offering their services. As far as the surrounding community, we have a great partnership that is getting better and better. We will let them use our basketball court or they will let us use their DJ. We swap services like that all the time.

It All Comes Down to Academics

The 2006 OHI academic emphasis and student achievement scores did not reveal a relationship between the two measures. As mentioned previously, new baselines were established for the 2006 math achievement tests and scores decreased in all school districts for the 2005/2006 academic year. However, the strong positive relationship between academic emphasis and student achievement results for 2005 ($r=0.61$) confirms what Hoy and Tarter (1997, p. 33) found to be key—a commitment by the principals to drive high, achievable academic goals for students in their schools.

Hoy, Tarter, and Kottkamp (1991) offered that academic emphasis includes high expectations for all students, respect and recognition for academic success, and making help available for serious teaching and learning. As noted by Hoy and Hannum (1997), "If the leadership of the principal is to have any impact on student achievement, it needs to be linked to substantive activities in the classroom that make a difference in teaching and learning" (p. 305). The academic emphasis correlations reveal principal leadership practices that establish and maintain school learning environments that are orderly, serious and academically oriented. This includes embedded beliefs among teachers that the students in their schools have the ability to achieve academically (Hoy & Tarter, 1997, p. 37). Likewise, that students work hard and respect academic accomplishments. Data offered in Table 8 indicate that academic emphasis increased in four out of the five schools over the two-year period for this study.

Table 8

Academic Emphasis: Mean, Standard Deviation and Standard Scores

	Mean	Standard Deviation	Mean	Standard Deviation	SdS	
	2005	2005	2006	2006	2005	2006
SCHOOL						
Arion	20.23	0.69	21.70	0.81	504.14	556.51
Bacchus	20.86	0.53	21.89	0.93	526.79	563.67
Canola	21.37	0.67	24.09	0.06	544.84	642.03
Decuma	21.55	0.53	19.57	0.42	551.38	480.65
Emer	22.98	0.73	23.51	0.63	602.45	621.43

“Active learning” is the key to working with young adolescents according to the most recent edition of *This We Believe*, the position paper of the National Middle School Association (2010). Specifically, it states that in successful middle grades schools “students and teachers are engaged in active, purposeful learning” (p. 16). In an earlier report of our findings, participants’ responses assisted in understanding the importance of academic emphasis on student reading achievement (Roney, Coleman, & Schlichting, 2007). In short, the development of a learning atmosphere where “all means all,” and working smarter not harder to achieve academic goals, were teachers responses. Now that we have both reading and math scores, we return to the data base and dig for deeper understanding of the learning environment and beliefs of the teachers and principals in our schools relative to academics.

Roney, Anfara, and Brown (2008) remind us that “academic emphasis includes (a) high but achievable goals set for students, (b) safe and orderly learning environments, (c) teachers believing in their students’ ability to succeed, and (d) respect for academic accomplishments” (p. 47). We use these areas/benchmarks to frame our findings.

High but achievable goals. We note that one teacher, whose job is to work with students who otherwise would not think about college, saw a change happening in her school: “We are shifting in our school to look at the continuum. If we can get more kids doing better in middle school, they’re more apt to take the higher, rigorous classes in high school like the advanced placement, the honors classes, things like that. And they’re more likely to get into better colleges.” Indeed, the majority of participants spoke positively about the goals they and their colleagues set for their students. The special education teachers in the school offered that sometimes the goals are a little unrealistic for some students. But, that which drives the goal setting for both the regular education students and the special education students are the end of grade (EOG) tests. The state sets the bar equally for both sets of students. We are currently in a standards-driven time and that is a pall over how teachers would like to engage in active, purposeful learning.

T: Students will be at or above grade level, even the students with disabilities. When they are not performing at that level is where I step in as the special ed teacher and give us all a reality check and say, “I just don’t think this kid can do this, but he or she has these strengths over here. Let’s build on that.”

T: Everything had to go toward passing the EOGs.

T: The state Standard Course of Study, that’s our biggest thing. And, as much as we try not to teach around the test, when it comes down to it at the end of the year I think that a lot of our academic standards are based on absolutely those standards.

T: I do have very high standards and I do have high expectations. I think that it’s similar of the other teachers. But I think at the school level we have to compromise a little.

Safe and orderly learning environment. We recall that two of the five schools with which we worked were below 50 percent in economically disadvantaged category. We did not see a difference among the teachers of the five schools when it came to speaking about the learning environment. In short, academics are emphasized by teachers who create positive learning environments.

T: There is an expectation of appropriate behavior, simple things, you are not going to run down the hall and be out of control. The rules are posted in every classroom. A high number of teachers put goals and objectives in student language on the board or are visible.

T: From the minute we walk in at 7:00 a.m. in the morning teachers talk academically. We look at the students individually, constantly, and it’s always about, “What can we be doing more? What can we be doing better? How can we reach this child? How can we open that door again?”

T: Overall it’s a positive learning environment where students are challenged and feel safe and can strive to reach their goals.

T: Our focus is in getting students to achieve as high a level as possible, in particular on math and science.

T: It is a positive learning environment minus the numerous behavior disruptions. That’s the hardest battle, actually getting to teach.

Belief in students’ ability to succeed. In 1989 the Carnegie Corporation of New York published the groundbreaking report, *Turning Points: Preparing American Youth for the 21st Century*, outlining what the education of middle grades students should be. Ten years later, Jackson and Davis (2000) outlined how that was to be done with their publication of *Turning Points 2000: Educating Adolescents in the 21st Century*. One of the most significant changes Jackson and Davis made was with the small word, “all.” In the 1989 vision, the goal of middle

grades education was, “ensuring success for all students.” Jackson and Davis noted that they changed that to, “every,” stating “our goal is to ensure that every student fulfills the Turning Points vision of becoming an intellectually reflective person, a person en route to a lifetime of meaningful work, a good citizen, a caring and ethical individual, and a healthy person” (p.30). We are caught by how closely our participants adhere to the Turning Points vision. As indicated here all but a few testify to the importance of ensuring success for every one of their students.

T: As an inclusion teacher I would say for the students with disabilities I probably have a higher expectation for the students than the regular ed teachers.

T: Several of the students were down on themselves saying, “we’re the dumb people.” “No, you’re not the dumb people. You work, you try. All I ask is you do the best that you can with what you have ...if you do that, I will guarantee you will pass my class and probably everybody else’s too.”

T: The quality of the instruction is key in helping every child learn. The other thing is having the time to do the teaching—the time to give each child his due. Everybody is integrated into the classroom, students’ with disabilities. It’s good for that kid but trying to give that kid his or her due and not hold back the rest of the class can be a challenge.

T: It’s a very low income area and half of these kids that we have, their parents have no education. Most of them haven’t even made it past the 9th grade. And so I think that there was definitely that mindset that they’re not going to do that well. And I do think that that interfered as far as some of the teachers’ expectations for their students.

T: We all demand a lot out of our students. When we put a demand on the students to achieve at a certain level and the emphasis at home is not on education, it is not important, the child often seems to fall off and lack in that area and doesn’t meet that expectation that they are capable of.

T: The teachers here believe strongly that the students can learn. I think we have a staff here that believes in the specific children that we have and their ability to perform.

Respect for academic achievement. Teachers report similar sentiments from their students. Teachers report that students display a respect for the academic successes of their classmates.

T: I have read some literature about African-American students not wanting to excel for fear of appearing to be white. I have not seen that type of behavior.

T: There was not a real competition for grades. The ones that did well enjoyed doing well. The ones that were in the medium level, some of them tried to strive for the A/B honor Roll. The ones that were low were not thought of any differently.

T: I think that in certain groups there is a perception that it's not cool to be performing well. But generally the students find a way around it.

T: We've got our good ones and we've got our bad ones, we talk about both. We talk about the good ones like, "I had a kid that did really well on this EOG test." Or, "I had a kid that did really well on the 6th grade final." And we've got our kids that we sort of expected them to not do so well. But we're trying. Hopefully next year we can prepare the 7th grade teachers to at least be aware of them at the beginning of the year and not get lost in the system.

From their study of 283 middle schools, Styron and Nyman (2008) determined that middle schools were consistent in maintaining healthy school environments in accord with the five dimensions of the OHI-M—academic emphasis, teacher affiliation, collegial leadership, resource support, principal influence, and institutional integrity. They continue,

A possible explanation for no significant difference in academic emphasis is the realization that successfully meeting standards set in the federal mandated state accountability system requires all middle schools to focus every facet of the educational program on improving instruction for all students regardless of race, ethnicity, or ability. School success hinges upon academic excellence of all students. (p. 12)

Implications

The 14 characteristics of a successful middle school—eight facets of the culture of such schools and six programmatic characteristics (NMSA, 2003)—were aligned with the factors that are delineated in the Organizational Health Inventory (OHI-M) for middle grades schools (See Table 9). Collegial leadership aligns with five, and academic emphasis aligns with ten of the 14 characteristics. Since then, NMSA (2010) revised its list, adding two additional characteristics—(a) leaders are committed to and knowledgeable about this age group, educational research, and best practices, and (b) ongoing professional development reflects best educational practices—both of which fall under the organizational health factors of principal influence and collegial leadership.

Table 9
Alignment of Middle School Characteristics with Organizational Health Factors

<i>This We Believe</i> (NMSA, 2010)	Organizational Health Factors
Educators who value working with 10-to 15-year-olds and are prepared to do so	Academic Emphasis Resource Support
Courageous, collaborative leaders who advocate, nurture, and sustain an effective instructional program for all students	Principal Influence and Collegial Leadership
Leaders are committed to and knowledgeable about this age group, educational research, and best practices	Principal Influence and Collegial Leadership
Ongoing professional development reflects best educational practices	Principal Influence and Collegial Leadership
A shared vision that guides decisions	Collegial Leadership Principal Influence Institutional Integrity
An inviting, supportive, and safe environment that promotes learning and develops positive relationships	Academic Emphasis Collegial Leadership
High expectations for every member of the learning community	Academic Emphasis Collegial Leadership
Students and teachers engaged in active learning	Academic Emphasis
An adult advocate for every student	Academic Emphasis and Teacher Affiliation
School-initiated family and community partnerships	Principal Influence Institutional Integrity
Curriculum that is relevant, challenging, integrative, and exploratory	Academic Emphasis Resource Support
Multiple learning and teaching approaches that promote quality learning	Academic Emphasis
Assessment and evaluation programs that promote quality learning	Academic Emphasis
Organizational structures that support meaningful relationships and learning	Institutional Integrity, Teacher Affiliation, and Collegial Leadership
School-wide efforts and policies that foster health, wellness, and safety	Academic Emphasis
Multifaceted guidance and support services	Academic Emphasis

(Roney, Anfar, & Brown, 2008, pp. 44-45, adapted).

The development of healthy school environments and high teacher efficacy is directly related to the principal's relationships with faculty members (Heck & Hallinger, 2005). This concept is congruent with earlier humanistic (Barnard, 1938, Mayo, 1933), needs (Maslow, 1943) and motivational (Herzberg, Mausner, & Synderman, 1959; McGregor, 1960) theories of organizational development and effective leadership. The emphasis on higher level needs and intrinsic reward systems encourages and supports teachers to work towards increasing student

achievement and promoting high quality school environments. The role of the principal becomes more *value-driven* relative to individually and collectively supporting teachers.

Murphy and Datnow (2003) discovered that successful principals reform their school environments by building participatory leadership environments. Gronn (2003) stated that this participatory approach maximizes the individual and group strengths of teachers. These educational leaders provide many opportunities for teachers to share their solutions to school issues and problems. Interestingly enough, that very same year NMSA (2003) rearticulated its vision statement to include “collaborative, courageous leadership.” And more recently added two characteristics that point to the importance of ongoing professional development for leaders, confirming its understanding of the role leadership plays in developing healthy middle grades schools (NMSA, 2010).

The expansion of school decision-making authority in school functions and activities is an important way for educational leaders to increase the opportunities for teachers to interact with their peers and administrators (Murphy & Hallinger, 1992). In many schools, teachers are not permitted to use their knowledge, skills, or practices to improve instruction and support services. Watkins, Cox, Owen, and Burkhardt (1992) stated that a diverse team of empowered teacher leaders is the most effective way to facilitate systemic school change and develop healthy environments. This approach argues for expanding teacher responsibilities and for establishing stronger roles for teachers in decision making.

The principal influence results in this paper reveal that successful school leaders exhibit a bias towards academic emphasis and use their positional authority to guide teachers and students to higher academic achievement. Schools with outstanding student achievement results typically have strong principals who clearly understand their role, their responsibilities and their power. Their approach to academic emphasis is more facilitative than dictatorial and they are viewed as leaders who are able to work within and through the bureaucratic structures of the school district to acquire resources for their schools. These principals effectively and responsibly use the power and authority available to them to nudge and sometimes push against administrative barriers. These principals also use all the resources at their disposal to support a variety of instructional programs to address the needs of their students.

This study revealed that principals who are effective instructional leaders emphasize the importance of academic goals. As stated previously, academic emphasis aligns with ten of the 16 characteristics of developmentally responsive middle level schools. School leaders who make student learning a priority do so by setting high academic expectations and by promoting positive organizational health among all school participants. The strong positive relationships between academic emphasis and student achievement revealed in this paper indicate a commitment by the principals to initiate and to sustain high, achievable academic goals for students in their schools.

This paper identifies academic emphasis as a potent force for principals to transform schools by helping students and teachers view academics as a collective property that is directly related to higher student performance. Principals establish academic goals as the priority in their schools by using their positional authority to guide teachers in moving their students to higher learning levels and then sustaining their students’ academic achievements from year to year. As the data in this study indicate, academic emphasis includes creating supportive relationships among teachers and students in safe learning environments. The emphasis on academics creates high expectations for all school participants. Principals who successfully maintain an academic emphasis in their schools do so by creating effective instructional programs for all students. This

includes providing a variety of instructional approaches and practices that address individualized student needs and promote high quality learning experiences.

This study's results clearly identify the impact of the principal's influence and academic emphasis on student mathematics and reading achievement. Academic emphasis is known to be a critical element in promoting high student performance. Principals who press for academic success do so by establishing learning environments that encourage students to work hard and to meet high standards. The relationship between OHI-M academic emphasis scores and student achievement revealed in this paper makes it clear that school leaders must continue to strive to maintain an academic focus in their schools.

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Appendix A: Success in the Middle: A Call to Action

Goal 1: Ensure that all middle level students participate in challenging, standards-based curricula and engaging instruction, and that their progress is measured by appropriate assessments, resulting in continual learning and high achievement.

Goal 2: Support the recruitment and hiring of teachers and administrators who have strong content knowledge and the ability to use research-based instructional strategies and assessment practices appropriate for middle level students.

Goal 3: Support organizational structures and a school culture of high expectations that enable both middle level students and educators to succeed.

Goal 4: Develop ongoing family and community partnerships to provide a supportive and enriched learning environment for every middle level student.

Goal 5: Facilitate the generation, dissemination, and application of research needed to identify and implement effective practices leading to continual student learning and high academic achievement at the middle level.

Appendix B: Critical Significance Values for Pearson r

df	Levels of Significance			
	.10	.05	.02	.01
1	.988	.997	.9995	.9999
2	.900	.950	.980	.990
3	.805	.878	.934	.959
4	.729	.811	.882	.917
5	.669	.754	.833	.874
6	.622	.707	.789	.834
7	.582	.666	.750	.798
8	.549	.632	.716	.765
9	.521	.602	.685	.735
10	.497	.576	.658	.708
11	.476	.553	.634	.684
12	.458	.532	.612	.661
13	.441	.514	.592	.641
14	.426	.497	.574	.628
15	.412	.482	.558	.606
16	.400	.468	.542	.590
17	.389	.456	.528	.575
18	.378	.444	.516	.561
19	.369	.433	.503	.549
20	.360	.423	.492	.537