Tailoring the Fit: The Middle School Classroom and Instructional Practices

by

Susie M. Fahey

A dissertation submitted to the faculty of

San Diego State University

In partial fulfillment of the requirements for the degree

Doctor of Educational Leadership

March 26, 2012
SAN DIEGO STATE UNIVERSITY

The Undersigned Faculty Committee Approves the Dissertation of

Susie M. Fahey:

Tailoring the Fit: The Middle School Classroom and Instructional Practices

Cheryl James-Ward, Chair
Department of Educational Leadership

Margaret Basom
Department of Educational Leadership

Donald Evans
Superintendent, Hayward Unified School District

3-26-12
Approval Date
DEDICATION

This paper is dedicated to my mother, Lucille Thompson, who taught me the value of education. I can never thank you enough for the gift you have given to me, the love of learning. You taught me that knowledge gives one the power to create change and that no one can take knowledge away from you.

I have been truly blessed to have inspirational family members that have provided unconditional love and support for me throughout my life.

I can never thank each of you enough.
ABSTRACT

This case study grew from the researcher’s interest in whether the middle school context was appropriately matched to the developmental needs of young adolescents and her desire to understand why many students in middle school begin a decline in academic achievement, lose motivation, and become disengaged from school. Eccles and colleagues’ (Eccles, Lord, & Midgley, 1991; Eccles, Lord, & Roeser, 1996; Eccles & Midgley, 1989; Eccles & Wigfield, 2002; Wigfield & Eccles, 2006) advanced stage-environment fit theory for their studies of adolescent schooling. Their research findings confirmed that the educational environment in middle school did not match the developmental needs of young adolescents and therefore created negative outcomes. The purpose of this study was to research middle school teachers’ knowledge of the developmental characteristics of young adolescents and investigate how the teachers aligned this knowledge in the classroom. Did the teachers create classrooms and instructional practices that fit young adolescents’ developmental needs, including their physical, emotional/psychological, moral, social, and intellectual/cognitive needs? Were there differences in teacher knowledge, instructional practices, and classroom environments between a high performing middle school and a low performing middle school? Using qualitative research methodology, the researcher examined teacher knowledge and teacher practice in two urban middle schools from the same California district, one high-performing and one low-performing. Both schools served 6th through 8th grade students, and teachers at both schools were organized into interdisciplinary teams. The researcher surveyed eight teachers, four from the low-performing school and four from the high-performing school and conducted classroom observations in each of
the teacher’s classrooms. Artifacts of teacher lesson plans, student documents, and data from schools websites were collected and analyzed. Pseudonyms were used to describe the district, schools and teachers. The Middle School Teacher Survey, developed for this study, revealed that all eight teachers had “Partial Knowledge” of the characteristics of young adolescents; however, the depth of their understanding varied. During classroom observations the researcher noted differences in classroom environments and in instructional strategies used by the teachers. In contract to instruction in the low performing schools, teachers in the high-performing schools offered students opportunities for autonomy, high-level thinking activities, and a variety of instructional strategies that actively engaged students. Findings confirmed the need to provide both in-service training in the area of adolescent development for current middle school teachers and additional learning opportunities for pre-service teachers who wish to teach in middle schools. Findings from this study have practical implications for teachers’ practice and their students’ motivation, engagement, and academic achievement. Recommendations for future research include using a more precise measurement tool to assess teacher knowledge and studying a larger population.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT ................................ ................................................................. v</td>
</tr>
<tr>
<td>LIST OF TABLES ................................ ............................................................... xiii</td>
</tr>
<tr>
<td>LIST OF FIGURES ................................ ............................................................... xv</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS ................................ ............................................................ xvi</td>
</tr>
<tr>
<td>CHAPTER 1—INTRODUCTION ................................ ...................................................... 1</td>
</tr>
<tr>
<td>Background ................................ ................................................................. 2</td>
</tr>
<tr>
<td>Training for Middle School Teachers ................................ .............................. 4</td>
</tr>
<tr>
<td>The Middle School Concept ................................ ............................................. 5</td>
</tr>
<tr>
<td>Theoretical Rationale ................................ ........................................................ 7</td>
</tr>
<tr>
<td>Person-Environment Fit Theory ................................ ...................................... 7</td>
</tr>
<tr>
<td>Stage-Environment Fit Theory ................................ ......................................... 8</td>
</tr>
<tr>
<td>Resilience ................................ ........................................................................ 10</td>
</tr>
<tr>
<td>Statement of the Problem ................................ .................................................. 10</td>
</tr>
<tr>
<td>Purpose of the Study ................................ .......................................................... 12</td>
</tr>
<tr>
<td>Research Questions ................................ .......................................................... 12</td>
</tr>
<tr>
<td>Assumptions ................................ .................................................................... 13</td>
</tr>
<tr>
<td>Limitations of the Study ................................ ..................................................... 13</td>
</tr>
<tr>
<td>Methodology ................................ .................................................................... 14</td>
</tr>
<tr>
<td>Setting ................................ ......................................................................... 15</td>
</tr>
<tr>
<td>Subjects ................................ ........................................................................ 15</td>
</tr>
<tr>
<td>Instrumentation ................................ ............................................................. 16</td>
</tr>
<tr>
<td>Survey ................................ ........................................................................ 16</td>
</tr>
</tbody>
</table>
Observations .................................................................17
Artifacts .....................................................................18
Data Collection ..............................................................19
Significance of the Research ................................................19
Definition of Terms ..........................................................21
Organization of the Remainder of the Study .........................24

CHAPTER 2—LITERATURE REVIEW ...........................................25

Introduction ....................................................................26
History of the Middle School ..............................................28
Developmental Characteristics of Young Adolescence ............35
  Physical Developmental Characteristics .................................38
  Intellectual Developmental Characteristics .............................40
  Moral Developmental Characteristics ....................................41
  Emotional/Psychological Developmental Characteristics ..........43
  Social Developmental Characteristics .....................................44
Stage-Environment Fit Theory .............................................45
  Classrooms ..................................................................50
  Teacher-Student Relationships ..........................................53
  Instructional Practices .....................................................55
  Teacher Efficacy ............................................................56
  Class Work ..................................................................57
  Grading Policies ............................................................58
  Recommendations of Turning Points 2000 .........................59
Conclusion .....................................................................61
CHAPTER 3—METHODOLOGY .................................................................63

Introduction .........................................................................................63
Research Design ..................................................................................64
Research Questions .............................................................................66
Selection Procedures ..........................................................................67
  School Selection ..............................................................................67
  Teacher Selection ............................................................................68
Participants ........................................................................................70
Data Collection and Instrumentation .................................................70
  Classroom Observations .................................................................71
  Survey ..............................................................................................73
  Artifacts ...........................................................................................76
Pilot Test .............................................................................................76
Data Collection and Analysis ..............................................................78
Ethical Issues .......................................................................................81
Summary .............................................................................................82

CHAPTER 4—RESEARCH FINDINGS .....................................................83

Descriptive Data ...............................................................................84
  Loemestead School District Profile ..................................................84
  Byron Middle School .....................................................................84
  Brentwood Middle School .................................................................88
Research Question 1 Data Analysis .....................................................91
Research Question 2 Data Analysis .....................................................100
  Byron Middle School: Mr. Harper ..................................................101
Classroom Organization and Climate ..............................................101
Lesson Plan Objective and Instructional Strategy ..........................102
Student Assignment ........................................................................103
Byron Middle School: Mrs. Tracy ......................................................103
Classroom Organization and Climate ..............................................104
Lesson Plan Objective and Instructional Strategy ..........................105
Student Assignment ........................................................................106
Byron Middle School: Mr. Klein ......................................................106
Classroom Organization and Climate ..............................................107
Lesson Plan Objective and Instructional Strategy ..........................108
Student Assignment ........................................................................109
Byron Middle School: Ms. Bonofort ................................................110
Classroom Organization and Climate ..............................................110
Lesson Plan Objective and Instructional Strategy ..........................112
Student Assignment ........................................................................113
Brentwood Middle School: Miss Lake ..............................................113
Classroom Organization and Climate ..............................................114
Lesson Plan Objective and Instructional Strategy ..........................115
Student Assignment ........................................................................116
Brentwood Middle School: Mrs. Moss ..............................................117
Classroom Organization and Climate ..............................................117
Lesson Plan Objective and Instructional Strategy ..........................120
Student Assignment ........................................................................121
Brentwood Middle School: Mrs. Palm ..............................................121
Classroom Organization and Climate .......................................................... 121
Lesson Plan Objective and Instructional Strategy ........................................ 124
Student Assignment ....................................................................................... 125
Brentwood Middle School: Mr. Gage............................................................ 126
Classroom Organization and Climate .......................................................... 126
Lesson Plan Objective and Instructional Strategy ........................................ 128
Student Assignment ....................................................................................... 129
Research Question 3 Data Analysis .............................................................. 130
Whole Class Task Organization .................................................................... 133
Byron Middle School ...................................................................................... 133
Brentwood Middle School ............................................................................ 134
Learning Climate ........................................................................................... 135
Byron Middle School ...................................................................................... 135
Brentwood Middle School ............................................................................ 137
Teacher Control and Discipline ................................................................... 139
Byron Middle School ...................................................................................... 140
Brentwood Middle School ............................................................................ 141
Student Assignments ..................................................................................... 142
Byron Middle School ...................................................................................... 143
Brentwood Middle School ............................................................................ 143
Additional Finding ......................................................................................... 145
Summary ......................................................................................................... 145
CHAPTER 5—SUMMARY AND DISCUSSION ................................................. 148
Summary of the Study ..................................................................................... 148
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion of Findings</td>
<td>150</td>
</tr>
<tr>
<td>Research Question One</td>
<td>150</td>
</tr>
<tr>
<td>Research Question Two</td>
<td>152</td>
</tr>
<tr>
<td>Research Question Three</td>
<td>154</td>
</tr>
<tr>
<td>Additional Findings</td>
<td>159</td>
</tr>
<tr>
<td>Implications</td>
<td>160</td>
</tr>
<tr>
<td>Recommendations for Future Research</td>
<td>162</td>
</tr>
<tr>
<td>Conclusion</td>
<td>163</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>166</td>
</tr>
<tr>
<td>APPENDIX</td>
<td></td>
</tr>
<tr>
<td>A MIDDLE SCHOOL TEACHER SURVEY</td>
<td>183</td>
</tr>
<tr>
<td>B CLASSROOM OBSERVATION CHECKLIST</td>
<td>188</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Characteristics of Middle and Junior High Schools</td>
<td>31</td>
</tr>
<tr>
<td>2</td>
<td>Byron Middle School Teachers Credentials and Course Descriptions</td>
<td>86</td>
</tr>
<tr>
<td>3</td>
<td>Brentwood Middle School Teacher Credential and Course Descriptions</td>
<td>90</td>
</tr>
<tr>
<td>4</td>
<td>Intellectual and Cognitive Characteristics of Young Adolescents</td>
<td>93</td>
</tr>
<tr>
<td>5</td>
<td>Physical Characteristics of Young Adolescents</td>
<td>94</td>
</tr>
<tr>
<td>6</td>
<td>Emotional and Psychological Characteristics of Young Adolescents</td>
<td>95</td>
</tr>
<tr>
<td>7</td>
<td>Moral Characteristics of Young Adolescents</td>
<td>95</td>
</tr>
<tr>
<td>8</td>
<td>Social Characteristics of Young Adolescents</td>
<td>96</td>
</tr>
<tr>
<td>9</td>
<td>Teacher Responses to Part B Matching Behavior and Developmental</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>Characteristics</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Teacher Beliefs</td>
<td>99</td>
</tr>
<tr>
<td>11</td>
<td>Mr. Harper's Classroom and Instructional Supports</td>
<td>104</td>
</tr>
<tr>
<td>12</td>
<td>Mrs. Tracy's Classroom Environment and Instructional Supports</td>
<td>107</td>
</tr>
<tr>
<td>13</td>
<td>Mr. Klein's Classroom Environment and Instructional Supports</td>
<td>111</td>
</tr>
<tr>
<td>14</td>
<td>Ms. Bonofort's Classroom Environment and Instructional Supports</td>
<td>114</td>
</tr>
<tr>
<td>15</td>
<td>Miss Lake's Classroom Environment and Instructional Supports</td>
<td>118</td>
</tr>
<tr>
<td>16</td>
<td>Mrs. Moss' Classroom Environment and Instructional Supports</td>
<td>122</td>
</tr>
<tr>
<td>17</td>
<td>Mrs. Palm Classroom Environment and Instructional Supports</td>
<td>127</td>
</tr>
<tr>
<td>18</td>
<td>Mr. Gage's Classroom Environment and Instructional Supports</td>
<td>131</td>
</tr>
<tr>
<td>19</td>
<td>Whole Class Task Observation at Byron Middle School (Low Performing)</td>
<td>134</td>
</tr>
<tr>
<td>20</td>
<td>Whole Class Task Organization at Brentwood Middle School (High</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>Performing)</td>
<td></td>
</tr>
</tbody>
</table>
Table 21 Byron Middle School Learning Climate ......................................................... 138
Table 22 Brentwood Middle School Learning Climate ..................................................140
Table 23 Byron Middle School Teacher Control and Discipline .....................................141
Table 24 Brentwood Middle School Teacher Control and Discipline ..............................142
Table 25 Byron Middle School Student Classroom Assignments ..................................143
Table 26 Brentwood Middle School Student Classroom Assignments ..........................144
LIST OF FIGURES

Figure 1. Byron Middle School California Standards Test in English Language Arts 2007-2011. .............................................................................................................87

Figure 2. Byron Middle School California Standards Test in Mathematics 2007-2011....................................................................................................................88

Figure 3. Brentwood Middle School California Standards Test in English Language Arts 2006-2011..............................................................91

Figure 4. Brentwood Middle School California Standards Test in Mathematics 2006-2011..............................................................92
ACKNOWLEDGEMENTS

This dissertation would not have happened with the encouragement and support of many individuals; my committee members, help from my friends and support from my family and husband.

First and foremost, my utmost gratitude to my advisor, Dr. Cheryl James-Ward, for her guidance, encouragement, patience and unwavering support. Thank you so much for the many hours spent reading and providing feedback on my work and sticking with me all the way through this process. Dr. Ward has been my inspiration as I hurdle all the obstacles in the completion of this work. I would also like to express my appreciation to committee members Dr. Margaret Basom and Dr. Donald Evans for their guidance and support of my research.

To my invaluable network of supportive, forgiving, generous and loving friends without whom I could not have survived the process: Rupi Boyd, Sonia Picos and Esther Omogbehin.

To my husband, Michael, for his continuous support and patience throughout this whole process, I could have not done it without him. You always believed I could do it, never having doubt about my success.

To those principals for opening their schools and being flexible in sharing their work with me. And finally to the teachers, I could have not done this without you.
CHAPTER 1—INTRODUCTION

From the early 1900s, middle-level education has been a part of educational reform. Over the past four decades, creating a new kind of school for meeting the developmental needs of young adolescents has been the purpose of many reform agendas that have been presented in publications such as *Caught in the Middle: Educational Reform for Young Adolescents in California Public Schools* (California Department of Education, 1987), Carnegie Council on Adolescent Development’s research-based report *Turning Points: Preparing Youth for the 21st Century* (1989), *Turning Points 2000: Educating Adolescents in the 21st Century* (Jackson & Davis, 2000), *Taking Center Stage: A Commitment to Standards-Based Education for California’s Middle Grade Students* (California Department of Education, 2001), and the recent *Gaining Ground in the Middle Grades: Why Some Schools Do Better* (Williams, Kirst, & Haertel, 2010).

Despite this attention, academic declines at the middle school level continue to be reported.

Today’s middle schools are faced with a plethora of challenges, from low levels of academic achievement and student motivation to high incidences of problem behaviors such as truancy and bullying (Eccles & Roeser, 2009). According to the National Assessment of Educational Progress results of 2007, young adolescents in grades six through nine indicated that school was increasingly irrelevant to their lives. Adolescents also reported openly struggling with academic achievement; others appeared to go through the motions of classroom learning at the same time their commitment and engagement were declining (Marks, 2000).
Background

At the beginning of the 19th century, laws were passed making education compulsory for all youth (Gatto, 2009; Goodlad, 1997). The United States attempted what few other countries had tried to accomplish: to educate all children; however, the current low high school graduation rate serves as a woeful indication of the degree to which this has not been accomplished. Nationally, more than 7,000 students become dropouts every school day, contributing to an annual rate of 3,000,000 students dropping out. Between 15% and 30% of adolescents, depending on the ethnic group, drop out of school before completing high school (Alliance for Educational Excellence, 2011).

During the middle grades students are either launched on the path to high school graduation or knocked off the track (Balfanz, 2009). Simmons and Blyth (1987) found that it is during the middle grades that students begin to experience academic declines and failures and sometimes drop out of school at that point. Researchers agree that what happens in the middle grades matters.

This researcher’s interest in the middle grades grew from reading the sobering reports of yearly decreases in student academic achievement, motivation, and engagement in school (Eccles & Midgley, 1989; Gottfried, Fleming, & Gottfried, 2001; National Center for Education Statistics [NCES], 2009). Blyth, Simmons, and Carlton-Ford (1983) found a decline in grade point average (GPA) for students across grades six through ten. Their study population included students who attended the same elementary school through grade eight and another group that moved from elementary to a middle school after grade six. Peterson and Crockett (1985) examined school records of 335 young adolescents. Their data indicated a significant drop in academic performance at
seventh grade in language arts, mathematics, science, and social studies. The *Third International Math and Science Study* of 2007 compiled data on middle grades achievement and generated particular concern about student achievement in mathematics. Key findings in mathematics and science revealed that U.S. fourth graders reached higher achievement levels than their peers in almost every other developed nation, but by the eighth grade U.S. students had slipped to the middle of the list of nations and underperformed students from several less developed nations.

Teachers cite students’ lack of motivation as the number one reason for their falling behind academically (Anderman, Maehr, & Midgley, 1999; Eccles & Wigfield, 2002). In a study of 16-year-olds, Gottfried et al. (2001) measured students’ intrinsic motivation to learn in different subject areas (math, reading, social studies, and science). Gottfried and colleagues found declines in all areas except social studies. Declines in intrinsic motivation were present across the entire group of adolescents.

Data gathered from the National Assessment of Educational Progress (NAEP) also reveal troublesome trends. The NAEP 2011 data indicated that only 34% of eighth grade students were proficient in reading and only 35% of eighth grade students were proficient in mathematics. Scores had remained stagnant over an eight-year period. NAEP data also revealed that the achievement gap continued to widen for minority eighth grade students. Only 20% of Hispanic and 13% of African American eighth grade students scored proficient in mathematics compared to 44% of White students. Reading scores paralleled mathematic scores. Research findings confirmed that the seeds that produce high school failure were being planted in grades 5-8.
If the trends documented in the NAEP research are to be reversed, middle school programs and practices must evolve from a full understanding of adolescent development and what works for them. The complexity of early adolescence requires an instructional climate that addresses the unique developmental characteristics of young adolescents. Few developmental periods are characterized by so many changes – physical, social, cognitive, moral, and psychological development, along with the emergence of sexuality (Caskey & Anfara, 2007; Eccles, Midgley et al., 1993). Although most teens pass through this period without difficulty, many do exhibit levels of risk. Specialized knowledge regarding this developmental stage is needed by teachers and educational leaders so they can embrace the responsibilities of educating young adolescents. Teachers need to be knowledgeable of the varied developmental characteristics of young adolescents so that they can design instruction and classroom environments that address ongoing changes and capitalize on these characteristics.

**Training for Middle School Teachers**

William Alexander (1987), founder of the middle school, frequently noted the importance of specialized middle school teacher preparation. Middle level education authorities Van Til, Vars, and Lounsbury (1967) summarized middle level teacher preparation as follows: “Perhaps the most serious obstacle to the educational development of the junior high school has been the lack of teachers specifically prepared to work at this level” (p. 49). They also described middle level teacher preparation programs as the “blind spot in teacher education” and “the forgotten teaching area.”

Advances have been made in middle level teacher preparation. For example, in 1996, McEwin and Dickerson conducted a national study of teacher preparation programs...
and found that 51% of institutions reported having specialized middle level teacher preparation programs at one or more degree levels. Yet, even though research has identified instances where progress has been made, other studies document that there are many more teachers who have not received any training. Scales and McEwin (1994) found that only 20% of middle school teachers had received any formal middle level preparation. A national survey conducted by Valentine, Clark, Hackmann, and Petzko (2002) reported only 18% of the respondents as having middle level licensure. Forty-six states were offering a middle grades teaching credential in 2002, but only 24 states required it (Gaskill, 2002). Current teacher preparation programs focus on elementary or high school levels with the assumption that graduates from either group will be prepared to teach young adolescents. Forty plus years after a degree for specialized preparation for middle school teachers was suggested, California still does not require a specialized certificate to teach at the middle school level.

The Middle School Concept

The middle school concept popularized in the 1960s was a direct response for meeting the developmental needs of young adolescents. The report *Turning Points: Preparing American Youth for the 21st Century* (Carnegie Council on Adolescent Development, 1989) was the catalyst for identifying effective components for middle schools throughout the United States. Recommendations from this report were intended to ensure success for every student.

Tenets of an appropriate middle school have been identified as (a) a rigorous, standards-based, and relevant curriculum; (b) instruction characterized by diverse and differentiated methods; (c) staff well trained in developmental characteristics of young
adolescents: (d) organizational structures that foster the development of positive student-teacher relationships; and (e) family involvement (Jackson & Davis, 2000; National Middle School Association [NMSA], 2003). Middle school proponents assert that these tenets work together to create a developmentally appropriate middle school environment. Adherence to a middle school model has been associated with gains in academic achievement (Mertens, Flowers, & Mulhall, 2002).

The middle school concept grew out of concern for young adolescents and the junior high school model. After four decades there has been movement towards establishing developmentally responsive middle schools. An indication of public recognition for special school programs for this unique age group is found in the number of schools with a middle grades school configuration (e.g. 5-8, 6-8, 7-8). Today, about 89% of middle schools have this type of grade configuration, nearly triple the amount since 1970 (McEwin & Greene, 2010). However, name and grade level configurations alone do not address the quality of programs within the school. Questions remain concerning the failure to fully implement programs and practices advocated in the literature (Dickinson, 2001; George & Alexander, 2003; NMSA, 2003).

Current studies confirm that partial implementation of the recommended components of the middle school concept is evident today (McEwin & Greene, 2010). There are about 15,000 middle schools in the United States that are designed to be developmentally responsive to young adolescents, but the extent to which this has been accomplished is questionable. Middle school students often enter developmentally unsupportive environments that emphasize departmentalization, ability grouping, teacher-centered pedagogy, and strict student discipline and control that fail to meet the
educational and developmental needs of many young adolescents (Balfanz & Mac Iver, 2000; Eccles & Midgley, 1989; Eccles & Roeser, 2009). These traditional junior high school structures evident in middle schools today were established over a century ago.

**Theoretical Rationale**

Considerable research has shown a decline in motivation and performance when children move from elementary to middle school (Eccles & Roeser, 2009). Often it is assumed that these declines are caused by the developmental changes associated with puberty and are to be somewhat expected. This assumption has been challenged by research demonstrating that the nature of motivational and academic change on entry to middle school depends on characteristics of the learning environment in which students find themselves (Midgley, 1993). The identification of structures, both physical and organizational, that better support adolescent-aged students is long overdue (California Department of Education, 1987, 2001). Several scholars (Benard, 1991; Eccles & Midgley, 1989; Hunt, 1975) have proposed theories that highlight the need for improving academic environments for adolescent children and the process by which all children are educated.

**Person-Environment Fit Theory**

Hunt’s (1975) Person-Environment Fit Theory proposes that “behavior, motivation, and mental health are influenced by the fit between the characteristics individuals bring to their social environment and the characteristics of these social environments” (p. 91). Hunt (1975) saw his theory as a way of forcing “the attention of psychologists and practitioners to the otherwise neglected issue of meeting student needs” (p. 219). He argued for the importance of adopting a developmental perspective
on person-environment fit in the classroom. Hunt believed that teachers should provide the optimal level of structure for a student’s current level of maturity while providing a challenging environment to move the child along the developmental continuum toward higher levels of cognitive and social maturity. Hunt argued that when the needs of an individual match the opportunities afforded by the environment, there are motivation and positive academic outcomes. A poor fit however, would result in negative consequences for the student (Hunt, 1975).

**Stage-Environment Fit Theory**

Drawing on Hunt’s (1975) Person-Environment Fit Theory, Eccles and Midgley (1989) focused on developing the theory of stage-environment fit, which proposes that changes in educational environments during certain developmental periods can result in negative outcomes if the environment does not match the developmental needs of the students. They argued that changes in the classroom environment, both structural and climate, may contribute to changes in young adolescents’ motivation and achievement.

Eccles and Midgley (1989) reviewed empirical studies that compared the elementary classroom environment to the junior high classroom environment, looking for converging evidence on classroom differences before and after the transition to junior high school. Four patterns emerged. First, junior high school classrooms were described as having a greater emphasis on teacher control and discipline, a less personal and positive teacher-student relationship, and fewer opportunities for student decision-making and self-management. Second, the shift from junior high school was associated with whole class task organization, between-classroom ability grouping, and public evaluation of class work (social comparison). Third, class work given to junior high school students
required lower-level cognitive skills than the class work assigned at the elementary level. Finally, junior high school teachers appeared to use higher standard in judging students’ competence and grading than elementary teachers. Eccles and Midgley (1989) asserted that these changes are particularly “detrimental for this age group” (p. 173).

Researchers have identified characteristics of adolescent development. Caskey and Ruben (2007) found that during the adolescent developmental stage young adolescents are becoming more knowledgeable and skillful and are developing cognitively. Young adolescents are able to use critical thinking to explore open-ended questions or moral dilemmas. They develop a more differentiated ability concept, moving from equating ability and effort to perceiving ability or intellectual capacity as relatively stable. Kellough and Kellough (2008) described adolescents as expressing a desire for more control over their lives, becoming self-focused and self-conscious and concerned about themselves in comparison to others. Manning (2002) found that adolescent relationships with friends and other adults become especially important. Eccles and Midgley (1989) argued that if the psychological needs of middle level students were not met by their educational environment, then students’ motivation, interest, performance, and appropriate behavior could be expected to decline. The issue for middle school educators is to transfer this knowledge of adolescent development into their classroom and instructional practices so that they engage and support youth for a lifetime. Researchers believe that middle schools can create classroom environments that promote climates and teaching practices that align to the resilience factors that support positive life outcomes within its social system.
Resilience

Benard (1991) contends that resilience is simply healthy human development. She views resilience as each person’s self-righting mechanism that allows children to move toward normal adult development under all but the most persistently adverse circumstances (Benard, 2004). Benard (1991) suggests that schools, families, and communities wishing to build resiliency in adolescents need to promote three protective factors: (a) caring relationships, (b) high expectations, and (c) opportunities for participation and contribution. Recognizing that adolescents spend the bulk of their day at school, other researchers have concurred that school-based programs high in protective factors can exert positive influence on students’ educational and personal achievement (Benard, 1991; Brown, D’Emidio-Caston & Benard, 2001; Masten & Coatsworth, 1998).

Thus, it appears that problems associated with middle school arise not because of the transition to a new school but instead are directly related to the characteristics of the middle school environment. If Stage-Environment Fit Theory is valid, then the classroom environment and instructional practices used in the classroom must be evaluated for effectiveness.

Statement of the Problem

The identification of structures, both physical and organizational, that better support adolescent-aged students is long overdue (California Department of Education, 1987, 2001). Young adolescents are developmentally different from elementary students and from high school students. Their educational needs are different as well. The academic declines that are reported at the middle school level demonstrate that we have not yet fully developed middle school classrooms and instructional practices that are
responsive to young adolescent needs (McEwin & Greene, 2010). McEwin and Greene in their 2009 National Surveys of Randomly Selected and Highly Successful Middle Level Schools (HSMS) study found that some progress is being made, but the progress is slow.

Researchers have established that while content standards set the course for middle school curriculum and assessments provide the benchmarks, it is the teaching that must be improved in order to move forward on the path to student success (Stigler & Hiebert, 1999; Williams et al., 2010). Research literature has confirmed the importance of middle level teachers having a comprehensive understanding of the developmental characteristics of young adolescents and reported the implications on this understanding for teacher practice (Alexander & McEwin, 1989; Association for Supervision and Curriculum Development, 1976; Elkind, 1998; Jackson & Davis, 2000; NMSA, 2003). McEwin and Greene (2010) recommended that the developmental learning characteristics of young adolescents should serve as a basis for selecting instructional strategies. Elkind (1998) suggested that an understanding of the developmental needs of students “is the most solid and substantial basis upon which to build curricular, assessment, and teaching skills” (p. 186). Without a solid understanding of the characteristics of young adolescents and meaningful opportunities to apply that knowledge into practice, the success of middle school teachers will be limited. Lacking this understanding and opportunities for full-scale implementation, middle school teachers will not be able to fully implement developmentally appropriate programs and practices. The problem is not the lack of knowledge about the developmental characteristics of young adolescents, but
the failure to fully implement environments and instructional programs in ways that benefit young adolescents (McEwin & Greene, 2010).

**Purpose of the Study**

The purpose of this study is to investigate ways that eighth grade teachers support young adolescent development in the classroom environment and their instructional practices that keep young adolescents motivated and actively learning. How do teachers create classroom environments that move students along the developmental continuum? Also, are there differences in the eighth grade classroom environments of a high performing middle school and a low performing middle school in the areas of (a) the teacher’s ability to identify the developmental characteristics of young adolescents and (b) fit of the classroom environment and instructional practices to the developmental needs of young adolescents.

**Research Questions**

Stage-Environment Fit proposes that favorable outcomes result when the needs or goals of the individual are congruent with opportunities offered by the environment. To test this thesis, the researcher posed the following research questions:

1. What do teachers know about the intellectual/cognitive, physical, social, emotional/psychological, and moral developmental characteristics of young adolescents?

2. How do teachers align their knowledge of the developmental characteristics of young adolescents with their instructional practices and classroom environments?
   a. What evidence is found in the classroom?
b. What evidence is found in the lesson?

c. What evidence is found in the student assignments?

3. What, if any, are the differences in teachers’ knowledge and classroom environments between a high performing middle school and a low performing middle school?

**Assumptions**

The following assumptions were associated with this study:

1. Middle school teachers are knowledgeable regarding the concept of the middle school.

2. Middle school teachers are knowledgeable about the developmental characteristics of young adolescents.

3. The teachers who participated in this study will respond candidly and honestly.

4. The survey questionnaire for this study will yield valid and reliable data for understanding teachers’ knowledge of the developmental characteristics of young adolescents.

5. The teachers completing the survey are a representative sample of middle school teachers working in interdisciplinary teams.

**Limitations of the Study**

The following conditions may be limiting factors to this study:

1. Because a purposive sampling procedure was employed, findings are not considered generalizable to all middle-level schools.

2. The qualitative findings of this study could be subject to other interpretations.
3. Teachers volunteered to have their classroom observed, thus the results might not be representative of normal classroom activities nor of those teachers who declined to participate.

4. Data were collected from one grade level and therefore are not generalizable to other grade levels.

5. The data collected in this study were restricted to two public middle schools in a single school district.

**Methodology**

A mixed methods study was utilized to gain understanding of potential differences that may exist in the eighth grade classroom environments of a high performing middle school and a low performing middle school. This mixed methods study sought to apply Stage-Environment Fit Theory by investigating whether the middle school context was appropriately matched to the developmental needs of young adolescents. The classroom teacher’s knowledge was used to determine whether the teacher created a developmentally appropriate classroom that supported young adolescents in positive ways. This mixed methods study gathered information about what teachers know, how classrooms operate, how teachers taught, and how teachers supported young adolescents’ developmental needs.

According to Creswell (2009), mixed methods studies focus on collecting and analyzing, mixing both quantitative and qualitative data in a single study. The mixing of the two approaches provides a better understanding of the research problem. Accordingly, a sequential mixed method strategy was used for this study. Phase one began with a survey to determine teachers’ knowledge of the developmental
characteristics of young adolescents. The second phase, the qualitative, focused on classroom observations where the researcher collected detailed descriptions of what the classroom environment provided for young adolescents. This study was an emerging process allowing teachers’ actions, classroom environments, and student activities to guide the researcher in determining if differences existed between the eighth grade classroom environments of a high performing middle school and a low performing middle school.

**Setting**

This qualitative methods case study was limited to two public middle schools in Southern California. Using data from the 2010 California Academic Performance Index (API), the researcher selected two schools from the same urban school district. One of the selected schools had an API score of 800 or above and was not identified as being in Program Improvement by California Department of Education, thus it was defined by the researcher as a high performing school. The second school had an Academic Performance Index of 700 or below and was identified by the California Department of Education as being in Program Improvement status, indicating a low performing school. Teachers at both of the identified middle schools volunteered to participate in this study. Grade configurations for both schools were sixth through eighth grades.

**Subjects**

Eight classroom teachers volunteered for this study. To be eligible for consideration, a teacher had to be employed full time at the middle school site; teachers assigned as temporary employees were excluded. Four of the teachers were randomly selected from the high performing school, and four were randomly selected from the low
performing school. All eight teachers possessed a valid California Single Subject Teaching Credential, and all belonged to an interdisciplinary team at the eighth grade level. Each team included teachers who taught in the content areas of math, English, science, and history. Inter-disciplinary teams were selected because they are an integral component of the middle school concept. Teachers from the interdisciplinary teams worked together collaboratively on a regular basis and shared many of the same students. These eight study teachers had their classrooms observed, contributed artifacts to the study, and participated in a survey that assessed their knowledge of key developmental characteristics of young adolescents.

**Instrumentation**

This study gathered data by survey administration, through observations, and from analysis of artifacts.

**Survey**

For this study, the researcher developed the Middle School Teacher Survey (see Appendix A) to measure the teachers’ level of knowledge of the developmental characteristics of young adolescents. A teacher’s level of knowledge was defined as his or her ability to identify correctly behaviors exhibited by young adolescents that are associated with the developmental characteristics of adolescents. Parts A and B of the survey consisted of 17 multiple answer items that identified developmental characteristics of young adolescents and young adolescent behaviors. To ensure external validity the items developed in the survey included information from current literature on early adolescent development, which is summarized in the literature review and instrument research.
Using data from the Michigan Study of Adolescent and Adult Life Transitions, Eccles and her colleagues identified three main features of the middle school classrooms that affect the interaction between students and their environment: classroom climate, teacher beliefs, and the nature of the academic work (Eccles, 2004). Part C, of the survey addressed these features. Five questions included on the survey, presented in Likert-type scale, focused on teacher beliefs and professional development. The final section, Part D, consisted of two open-ended questions addressing specialized training received for educating young adolescents.

Use of a survey was chosen since it is an unobtrusive instrument that generally ensures a larger volunteer pool. The researcher considered that there could be several interpretations of developmental characteristics; therefore, the multiple-answer instrument ensured validity by providing participants with the same understanding of the questions. Prior to the study, the survey was pilot tested and reviewed by a university professor, two principals, four teachers, a counselor, and a superintendent of schools.

**Observations**

Teachers who agreed to participate were observed using the researcher-developed Classroom Observation Checklist (see Appendix B). This checklist was designed to evaluate the stage-environment fit of the classroom environment and the teacher’s instructional practices. The Classroom Observation Checklist was used to record data gathered from each classroom and was a way to ensure consistent data gathering between classrooms. Primarily it was a record keeping tool. To ensure construct validity this instrument was modeled after Eccles and Midgley’s 1989 instrument and an updated version of the instrument, Stage-Environment Fit Classroom Observation (Miller, 2010).
Elements from the literature review on Stage-Environment Fit Theory were incorporated into the instrument. To strengthen validity, the Classroom Observation Checklist was reviewed by a university professor, two principals, four teachers, a counselor, and a superintendent of schools. The checklist was designed to gather data in two categories: classroom environment and instructional practices. Each category was comprised of specific indicators to observe and record and included each of the developmental characteristics of young adolescents.

Data collected from the observations were used to describe classroom environments and instructional practices that either did or did not fit the developmental needs of young adolescents. Differences in classroom environments and teachers’ instructional practices were noted. Data were analyzed for each school and then compared between a high performing middle school and a low performing middle school. The researcher recognized that a single classroom visit could provide a narrow view, so the existence of any evidence at the classroom level for stage-environment fit was triangulated with the teacher survey and artifacts.

**Artifacts**

Unobtrusive measures are ways of collecting data that can be invisible to the subjects (Marshall & Rossman, 2006). Prior to visiting the school, the researcher conducted a thorough review of each school’s website in order to acquire an understanding of instructional practices and curriculum. A review of California’s Commission on Teacher Credentialing website provided information about each participating teacher’s credential and a description of that credential. In addition, during the classroom observation teachers provided copies of lesson plans and student
documents. These unobtrusive measures were used for triangulation of data and added external validity.

**Data Collection**

Once approval from the Institutional Review Board was granted, the researcher contacted the principals of the selected schools and teacher participants were selected. The data collection process began with the initial teacher survey meeting and collection of artifacts and concluded with a one-hour classroom observation. Since the data were to some extent already organized, what stood out was considered important.

The researcher physically sorted and highlighted the data into categories. Establishing a data display chart put the data into a visual format and facilitated the identification of emerging patterns. Data conclusions were drawn and teachers’ knowledge of the developmental characteristics was identified as well as differences that were found in the classroom environments between the low performing and high performing middle schools.

**Significance of the Research**

This study extends the notion that the middle school concept as proposed by William Alexander in 1963 remains valid today. To keep young adolescents motivated and actively learning, teachers must develop an environment that works for them (Eccles & Midgley, 1989). This study brings to the forefront the developmental characteristics of young adolescents and the need to match classroom environments with instructional practices to best support this age group. Study findings have importance for all who work with adolescents: middle school administrators, teachers, teacher educators, instructional and curriculum designers, and district and state policy makers. Very little
research has investigated the match between middle school students’ developmental needs and the environmental opportunities that are offered to them. Middle school students have the most to gain as teachers use developmentally appropriate strategies and create environments that match young adolescents’ developmental needs. Only this way can we capitalize on these characteristics to promote motivation and student engagement. This study adds to the importance of full implementation of effective middle level programs and practices.

The second area in which this research contributes to the literature is in the study of pedagogical differences between teachers at a high performing school and a low performing school. This research explored the factors that were found in the classroom environment that improved student achievement across one grade level. The stage-environment model provided a framework for understanding how differences in the classroom environment between a high performing school and a low performing school may contribute to middle school student’s academic performance.

Finally, this study can be used to contribute to the dialogue regarding young adolescent development. The results from this research are useful to middle school administrators, teachers, teacher educators, instructional and curriculum designers, and district and state policy makers. Very little research has addressed the middle school classrooms in its entirety in order to investigate the match between middle school students’ developmental needs and environmental opportunities that are offered to them. Research has shown that changes in the educational environment can result in negative outcomes if the student’s environment does not match his or her developmental needs. This study goes beyond Eccles and Midgley’s initial study to propose that the real
challenge is not getting students motivated but rather getting students to be motivated to learn instead of motivated to protect themselves from environments that threaten them in various ways.

**Definition of Terms**

The following terms are used operationally throughout this document:

*Academic Achievement:* Academic achievement is the outcome of education, the extent to which a student, teacher, or institution has achieved their educational goals. Academic achievement commonly is measured by examinations or continuous assessment, but there is no general agreement on how it is best tested or about which aspects are most important: procedural knowledge such as skills or declarative knowledge such as facts. In California, the achievement of schools is measured by the Academic Performance Index.

*Academic Performance Index (API):* API is a measurement of academic performance and progress of individual schools in California. It is one of the main components of the Public Schools Accountability Act (1999). API scores ranges from 200 to 1000. The statewide API target for all schools is 800. A school’s growth is measured by how well it is moving toward or past that goal. An API score is calculated for all students in a school as well as for each subgroup at the school (such as race, English Learner status, students with disabilities, and socioeconomically disadvantage students).

*Achievement Gap:* The achievement gap in education refers to the disparity in academic performance between groups of students. It is most often used to describe the troubling performance gaps between African-American and Hispanic students, at the lower end of the performance scale, and their non-Hispanic white peers, and the similar academic
disparity between students from low-income and well-off families. The achievement gap shows up on grades, standardized test scores, course selection, dropout rates, and college-completion rates. It has become a focal point of education reform efforts (NCES, 2009).

Adolescent: A person in the transitional period between childhood and adulthood (NMSA, 2003).

Developmentally Responsive: Schools that are developmentally responsive offer small, interdisciplinary, heterogeneous, student-centered learning communities focusing on contributing to social and emotional support for adolescents through caring relationships, high expectations, and opportunities for participation and contribution (Benard, 1991; Eccles & Midgley, 1989; Jackson & Davis, 2000). Both Eccles and Midgley (1989) and Jackson and Davis (2000) recommend improvements in the following areas for measuring developmentally responsive learning environments: classroom organization based on teacher quality, locus of responsibility for learning, and grouping practices; classroom instruction based on appropriate task structure, task complexity, and evaluation techniques; and climate based on quality of teacher-student relationship and student-student relationships, motivational strategies, and parent and community involvement. A developmentally responsive environment is organized around a teacher who is specifically trained for teaching adolescents.

Environment: As defined by the U.S. Department of Defense Education Activity Domestic Dependent Elementary and Secondary Schools (DDESS) (2010), the educational environment encompasses the physical surroundings, allotted time, and climate in which instruction takes place. The learning environment impacts student
achievement. An environment holds the social and cultural forces that shape the life of a person or a population.

*High Performing School:* Academic Performance Index score above 800.

*Instructional Practice:* Hatch (2002) simplifies the definition of teaching practices as what teaching actually is. The National Board for Professional Teaching Standards (NBPTS) (1998) describes teaching practices as the teaching skills teachers use to get specialized knowledge and/or content across to students.

*Interdisciplinary Teams:* Organizational structure of teams that include teachers from different disciplines. Interdisciplinary teaching is a method used to teach across different curricular disciplines.

*Low Performing School:* A school with an Academic Performance Index score of 700 or less and identified by the California Department of Education as in Program Improvement status is defined as a low performing school.

*Middle Level Education:* Grades 6 through 8, with any configuration: K-8, 6-8, 7-8, or 7-9.

*Program Improvement Status:* The federal No Child Left Behind (NCLB) Act of 2001 requires schools and local educational agencies receiving Title 1 funds to be identified for Program Improvement if Adequate Yearly Progress (API) criteria are not met for two consecutive years. Once in PI, a school must offer students the choice to transfer to a non-PI school with paid transportation. Additional consequences are given if a school continues to remain in PI. A school exits PI when it makes AYP for two consecutive years (California Department of Education, 2010).
Young Adolescents: The period of physical and psychological development between childhood and adulthood, including ten- to fifteen-year-olds (NMSA, 2003). Young adolescence is the stage of development that begins prior to the onset of puberty. There are five distinct developmental characteristics during this period: physical, social, intellectual/cognitive, emotional/psychological, and moral.

Organization of the Remainder of the Study

Chapter 2 contains a review of the literature pertinent to the investigation. The literature that contributed to this study used sources that remained timely and were among the most appropriate for this study.

Chapter 3 contains a description of the procedures and methods used to conduct the survey and classroom observations, as well as procedures used in conducting the study, collecting the data, analyzing the data, and ensuring validity and reliability of the instruments.

Chapter 4 reports the findings and provides answers to the research questions.

Chapter 5 presents a summary of the study, selected findings, conclusions based on the findings, and recommendations developed from the study.
CHAPTER 2—LITERATURE REVIEW

Overall, there is a modicum of research available that describes middle school teachers’ knowledge about adolescent development and how teachers link their knowledge to the middle school classroom and instructional practices that support young adolescents’ motivation and academic achievement. Matching the middle school environment to the developmental needs of students is difficult, given the challenges of individual variation. However, when teachers set up their classrooms and adjust their teaching practices to reflect what young adolescents need, positive outcomes can occur. Much research demonstrates that there is significant loss in achievement as students move across the middle grades. How much of this achievement loss is contributed by a mismatch in the learning environment at the middle school level? This study investigates how eighth grade teachers create classroom environments and instructional practices that support young adolescents. To better understand what middle school classrooms should look like and what type of instructional practices should be used, it is important to consider the existing research literature.

This literature review presents research centered on four areas pertinent to this study. The first area examines the historical perspective of the middle school concept in order to offer a valid model for organizing the schooling of young adolescents. The second area examines research on the developmental characteristics of young adolescents and what students need in regards to instruction and the environmental structure of the middle school classroom. The third area explains Stage-Environment Fit Theory as an examination of the context of the transition in order to understand the declines associated with achievement and motivation in young adolescents. Context factors examined
include the nature of activities in the classroom, increased school size, departmentalization, ability grouping, increased use of competition as a motivator, increased rigor in grading, and decreased opportunity for student autonomy. The fourth area addresses the questions that remain concerning the failure of many middle schools to fully implement recommended programs and practices outlined in the middle school concept (McEwin & Greene, 2010). Understanding the recommendations made in various publications offers evidence for what is needed to improve schools for young adolescents: The problem is not that we lack knowledge about the components of developmentally responsive middle schools but that we fail to fully implement these features in ways that benefit all young adolescents (McEwin & Greene, 2010).

**Introduction**

Children begin their school careers interested, enthusiastic, and intrinsically motivated to learn (Eccles & Midgley, 1989). Unfortunately, research shows that there has been a steady decline in students’ engagement and academics in school (Skinner, Furrer, Marchand, & Kindermann, 2008). This decline can begin in elementary school, with the most notable loss occurring during the transition to middle level school or high school (Eccles & Midgley, 1989; Gentry, Gable, & Rizza, 2002). The decline is especially severe for children of color, English learners, and children from low socioeconomic status groups (Balfanz, 2009). Middle school classroom environments and instructional practices often produce factors that undermine student engagement and declines in motivation (Eccles & Midgley, 1989; Eccles, Midgley et al., 1993; Eccles & Roeser, 2009). The middle school concept movement in the 1960s addressed this very
issue. Supporting the developmental needs of young adolescents was at the core of middle school reform efforts.

The past five decades have witnessed the publication of numerous reports stressing the importance of the middle school (Balfanz, 2009). These reports have produced recommendations for middle school educators on the broad concepts of developmental responsiveness to the needs of young adolescents, social equity, and standards-based instruction. Only recently, however, has there been research in the area of middle school student outcomes. Even less research has been conducted on the relationship between what teachers know about the developmental characteristics of young adolescents and how they create classroom environments and instructional practices that improve student outcomes. In this age of accountability in education, organizations that fail to emphasize academic achievement are clearly destined for marginalization or extinction.

Eccles and Midgley (1989) questioned whether there was something unique about the early adolescent developmental period and proposed that the interaction between developmental changes at both the individual and the social/environmental levels affects the transitional nature of early adolescence. Studies have documented low levels of student engagement and drops in academic achievement in U.S. schools, especially at middle level schools (Goodlad, 1997; NCES, 2009; Oakes, 1985; Skinner et al., 2008). Eccles, Midgley et al. (1993) found that the organizational, social, and instructional processes in schools changed as children moved from elementary to middle school. Middle level environments were found to be developmentally regressive in comparison to those of elementary school. The researchers argued that if this is the case, the problems
attributed to transition to a new school should be reexamined as a problem linked directly to the characteristics of the middle level environment.

The middle school concept was designed so that the developmental needs of young adolescents influenced both the educational environment and the organizational structure (George & Alexander, 2003). To date, many people do not know the differences between a middle school and a junior high school. To some, the middle school concept is merely a label given to schools that educate young adolescents. Therefore, tracing the history of the middle school concept, examining the developmental characteristics of adolescents, explaining stage-environment fit, and understanding the recommendations that have been made in *Turning Points 2000* should contribute to our understanding of the need for a valid model of organizing schooling for young adolescents.

**History of the Middle School**

The traditional school organization model, which dominated much of the 19th century, was that of the eight-year elementary and four-year high schools. The 8-4 pattern provided students with opportunities for basic skills and vocational training and prepared a small number for college (Allen, 1992).

In the early 1900s, school reform focused on the functions and relationships of the elementary school and the high school. The National Education Association (NEA) and other educational committees advocated restructuring the predominant 8-4 organization to better serve the needs of young adolescents. At the same time, an increase in immigrants caused overcrowding in elementary schools, industrialization called for a better work force, and colleges wanted college preparatory classes to start before the
ninth grade (Juvonen, Le, Kaganoff, Augustine & Loaey, 2004). As a result, the first three-year junior high schools, incorporating grades 7-9, were established in Columbus, Ohio in 1909 (Allen, 1992). The two curriculum priorities that influenced early junior high school programs were (a) academic programs for college-bound students and (b) vocational programs for students heading into the job market. As the junior high school emerged, a third priority arose: that of meeting the unique social, personal, and academic needs of young adolescents (Manning, 2002).

In the 1940s to 1950s, American educators encountered an educational phenomenon know as the Life Adjustment Movement (Yecke, 2005). This philosophy of schooling stressed socialization and downplayed academic rigor. It also advocated that not every child would be able to master basic skills, as was expressed by a principal who addressed the National Association of Secondary Principals in 1951:

> When we come to the realization that not every child has to read, figure, write and spell…that many of them either cannot or will not master these chores, then we shall be on the road to improving the junior high curriculum. If and when we are able to convince a few folks that mastery of reading, writing, and arithmetic is not the one road leading to happy, successful living, the next step is to cut down on the amount of time and attention devoted to these areas in junior high courses.

(Lauchner, 1951, p. 299)

The Life Adjustment Movement resonated with those who were dissatisfied with the academic emphasis of junior high schools and were calling for reform (Yecke, 2005).

During the 1950s and 1960s, educators questioned whether the junior high school actually served the needs and interests of young adolescents. Their concerns resulted in
junior high school reform and the emergence of the middle school. The Bay City Michigan school system established the first middle school in 1950 (Allen, 1992). Critics of middle schools argued that the middle schools lacked a clear educational focus. Middle school curriculum stood apart, neither building upon the work of the elementary grades nor preparing students for high school (Lounsbury, 1992).

During the 1970s and through the 1980s, researchers began to emphasize the needs of young adolescents. Alexander and George (1981) proposed that the middle school build its programs on the positive contributions of the junior high school, that is, a core curriculum, guidance programs, exploratory education, and vocational and home arts. The middle school would eliminate high school practices such as competitive sports and subject matter orientation (Allen, 1992) and add team teaching and interdisciplinary learning. Table 1 summarizes the differences between the two structures as described by the National Middle School Association.

As the middle school concept developed rapidly during the twentieth century, two things became apparent. First, schools with grades six, seven, and eight needed to focus on the physical, social, and emotional development of their students. Second, schools also needed to respond to the students’ developing intellectual abilities (California Department of Education, 2001). Schools throughout the country were ill prepared to meet these dual requirements. In 1982, key characteristics of a middle school were identified when the newly formed National Middle School Association (NMSA) published a position paper titled *This We Believe*. The document listed ten “essential elements of a ‘true’ middle school”: (a) educators knowledge about and commitment to young adolescents, (b) a balanced curriculum based on student needs, (c) a range of
Table 1

**Characteristics of Middle and Junior High Schools**

<table>
<thead>
<tr>
<th>Middle School</th>
<th>Junior High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Student-centered</td>
<td>• Subject-centered</td>
</tr>
<tr>
<td>• Fosters collaboration</td>
<td>• Fosters competition</td>
</tr>
<tr>
<td>• Affective and cognitive growth are emphasized</td>
<td>• Cognitive development is first priority</td>
</tr>
<tr>
<td>• Focus on creative explorations and experimentation of subject</td>
<td>• Focus on mastery of concepts and skills in separate disciplines</td>
</tr>
<tr>
<td>• Varies length of time students are in courses</td>
<td>• Offers subjects for one semester or one year</td>
</tr>
<tr>
<td>• Offers high interest exploratory coursework</td>
<td>• Provides highly structure activity program after school</td>
</tr>
<tr>
<td>• Advisory program – teacher oriented guidance</td>
<td>• Study hall – access to counselor</td>
</tr>
<tr>
<td>• Athletics organized around intramural concept</td>
<td>• Athletics organized around interscholastic concept</td>
</tr>
</tbody>
</table>

organizational arrangements, (d) varied instructional strategies, (e) a full exploratory program, (f) comprehensive advising and counseling, (g) continuous progress for students, (h) evaluation procedures compatible with the nature of young adolescents, (i) cooperative planning, and (j) positive school climate (NMSA, 1982, pp. 10-15). The influence of this document in defining middle schools is notable.

Concerns about meeting the needs of young adolescents led to the publication in 1987 of *Caught in the Middle: Educational Reform for Young Adolescents in California Public Schools*. This publication captured the essence of what was needed to educate young adolescents. It called for urgency in middle grade educational reform. In 1989 the
Carnegie Council on Adolescent Development presented a powerful vision for middle schools, *Turning Points: Preparing American Youth for the 21st Century*. The report did not recommend a particular grade configuration for the middle school but proposed five target behaviors for graduating middle school students: Students should be (a) intellectually reflective, (b) en route to a lifetime of meaningful work, (c) good citizens, (d) caring and ethical, and (e) healthy people (Carnegie Council on Adolescent Development, 1989). The report also made eight recommendations to help educators meet young adolescent needs. The recommendations included dividing large middle schools into smaller schools, providing a core curriculum, preparing teachers to work with young teens, emphasizing health and fitness, and connecting with families and communities. Worthy of note is that these recommendations are similar to Benard’s (1991) resilience-promoting framework that advocated providing caring relationships, setting high expectations, and providing opportunities for meaningful participation and contributions. Supporting these recommendations in theory, administrators at most of the newly transformed middle schools struggled to provide the necessary programs outlined under the middle school concept, with the result that the schools continued operating under the same premise as before: a junior high school model (Eccles, Midgley et al., 1993; Jackson & Davis, 2000). Despite the challenges, however, effective middle schools persisted.

Lee and Smith (2001) conducted one of the first studies to link the implementation of middle school components with student achievement. Their study examined the effects of school restructuring on achievement and engagement of middle school students. According to their research, the following two elements needed to be
present in the middle school for it to be considered restructured in a way that was faithful to the middle school concept: (a) reduced or eliminated departmental structures and (b) heterogeneously grouped instruction and team teaching. Lee and Smith (1995) examined a subsample of data from the National Longitudinal Study of 1988, which included 8,845 eighth graders in 377 public, private, and independent middle schools. They found that schools that had implemented elements of the restructuring were positively associated with academic achievement and engagement. There were modest increases in academic achievement (e.g., reading and mathematics) and increases in student engagement (e.g., students completing homework and being prepared for class).

Between 1991 and 2003, over 3,700 studies related to middle schools were published (Hough, 2003). A number looked at what happened when middle school components were implemented as a complete set, over time, and with high fidelity (DePascale, 1997). In 1997, the results of an Illinois middle school study examined the effect of the Turning Points recommendations on student academic achievement, socio-emotional development, and behavior. Data from 1990 and 1992 were collected from 31 Illinois middle schools. Four levels of structural/organizational implementation were determined for each school: (a) interdisciplinary teaming and common planning time; (b) team size; (c) presence and frequency of advisory periods; and (d) levels of instruction, decision-making, and teacher norms consistent with educational practices. Schools then were placed into one of three categories: low, partial, or high implementation. Felner et al. (1997) found that students in high implementation schools outperformed students in partial and low implementation school in all subject areas. Using teacher ratings of student behavior (aggression, anxiety, and learning related problems), the researchers
found that students in highly implementation schools had lower levels of behavior problems. Also, students in higher implementation schools reported lower levels of worry and fear and higher levels of self-esteem. This study validated that the middle school components, when used, did produce academic achievement and student engagement.

Four national surveys have provided a longitudinal perspective on the degree of implementation of key middle school programs and practices. The studies were conducted in 1968 (Alexander, 1968), 1988 (Alexander & McEwin, 1989), 1993 (McEwin, Dickinson & Jenkins, 1996), and 2001 (McEwin, Dickinson & Jenkins, 2003). A fifth study related to this series, conducted by McEwin and Greene (2010), was the 2009 National Surveys of Randomly Selected and Highly Successful Middle Level Schools. In this latest study, researchers compared the results from the highly successful schools to results from a random sample of middle schools to determine if differences existed and, if so, what lessons could be learned from those differences. The study included 101 middle schools that were identified as Schools to Watch (highly successful middle schools) and 99 randomly selected middle schools that responded through an electronic survey. Data from this study were compared with similar data from the four earlier surveys to search for trends over time. The researchers found that all key middle school components were associated with positive outcomes, but they also found that many middle level schools had failed to fully implement developmentally responsive programs. The researchers recommended that all stakeholders should intensify efforts to overcome the challenges associated with authentic middle school reform and work
collaboratively to implement key middle school programs and practices since practices, when implemented, lead to positive academic gains.

Today there are more than 15,000 public middle schools in the United States, but high-performing middle schools still are considered rare. Jackson and Davis (2000) cite structural reasons: "Relatively little has changed at the core of most students' school experience: curriculum, assessment, and instruction" (p. 5). Dickinson (2001) emphasized the importance of academic focus in the middle school environment: “Although structures and practices exist that are in keeping with the best of the middle-grades reform, dramatic and sustained improvements in student performance occur only if teachers also provide all students with better learning opportunities every day” (p. 54). The failure to successfully implement the tenets of the middle school concept raises a question: What specialized knowledge do middle school teachers need to better teach young adolescents? Understanding the developmental characteristics of young adolescents is a starting point.

**Developmental Characteristics of Young Adolescence**

Early adolescence is a distinct period of human growth. During this stage of the life cycle, young adolescents (10-14 years old) experience rapid and significant developmental changes. Young adolescents experience more growth than at any other time in their life except for infancy. There are important physical, intellectual/cognitive, social, emotional/psychological, and moral characteristics of adolescents that parents and teachers and other people should contemplate when deciding the best way to educate this group of students.
McEwin, Dickinson, and Hamilton (2000) conducted a survey of National Board Certified teachers to explore their perspectives about middle-level teacher preparation. Seventy-three out of 81 National Board Certificated teachers, all with middle school teaching experience, responded to the survey. Seventy-three of the respondents had at least four years of overall teaching experience, with 55% of them reporting having 15 years or more. However, only 4% of the respondents had completed a specialized middle-level teacher preparation program and obtained a license specifically for the middle grades. Most of the teachers reported that their initial teaching license was in elementary (49%). The researchers (McEwin et al., 2000) found that respondents believed middle-level teacher preparation programs were important and should have a strong emphasis on learning about young adolescents. All 73 participants expressed the belief that there are “important ideas, principals, and understandings that an effective middle level teacher needs to know” (p. 212). Participants were asked to list what they believed teachers should know; the most common response related to the importance of learning about early adolescents.

Conducting a qualitative study, Roney (2001) interviewed middle-school principals, teachers, and students to investigate characteristics of effective teachers of young adolescents and the manner in which pre-service preparation programs assist teachers in becoming effective middle school educators. Four principals, 12 students, and 16 teachers participated in the study. One of the four themes that emerged from this study was “understanding the transitions of the young adolescent” (p. 82), specifically, the need for middle grade teachers to have an understanding of early adolescent development. Participants stated that middle grade teachers needed to be understanding
and should be required to be adaptive, flexible, and familiar with a variety of teaching strategies. Participants in this study also reported a lack of preparation in their own university program in regards to learning about the developmental needs of young adolescents.

Thistle and O’Connor (1992) conducted a survey study of 24 principals and 48 middle grade teachers from California to investigate their attitudes toward specialized teacher certification. Participants indicated whether they strongly agreed, agreed, disagreed, strongly disagreed with, or had no opinion about 22 statements regarding middle grades certification. Forty-three of the 48 teachers agreed or strongly agreed that middle grade teacher preparation programs should include coursework that addresses the physical, emotional/psychological, intellectual/cognitive, moral, and social development of young adolescents. Twenty-three of the 24 principals also agreed or strongly agreed with the need for inclusion in teacher training programs of coursework on early adolescent development.

Findings from the research of McEwin et al. (2000), Roney (2001), and Thistle and O’Connor (1992) suggest that educators support the recommendations that middle grade teachers should be knowledgeable about young adolescent development. Understanding where young adolescents are developmentally is foundational knowledge in designing and implementing appropriate learning environments.

In addition to research documenting the belief that knowledge of early adolescent development is important for middle school teachers, there is research (Conklin, Luciana, Hooper, & Yarger, 2007) to support that lack of such knowledge may lead to inaccurate perceptions of young adolescents and their capabilities. This section on the
characteristics of young adolescent development provides an overview of what middle school teachers should know about their students.

**Physical Developmental Characteristics**

Physical development includes bodily changes in growth, improved fine and gross motor skills, and biological maturity. Growth spurts occur about two years earlier in girls than in boys (Steinberg, 2007). Developmental growth affects height, weight, and internal organ size as well as changes in skeletal and muscular systems. Since bones are growing faster than muscles, young adolescents may experience coordination issues.

Fluctuations in metabolism cause youth to experience periods of restlessness and weariness (Kellough & Kellough, 2008). Young adolescents tend to have “ravenous appetites and peculiar tastes” (Kellough & Kellough, 2008, p. 22). They often are physically vulnerable due to poor physical fitness and poor health habits (Scales, 2003); may display high-risk behaviors, including the use of alcohol or illicit drugs (Johnston, O’Malley, Bachman & Schulenberg, 2009); and may experiment with sexual activity.

The onset of puberty is an intense developmental period. The highly visible physical changes can cause many adolescents to become uncomfortable about their differences. Practitioners need to recognize the physical development of each child. School counselors and teachers can mitigate young adolescents’ concerns about their physical development by explaining these natural changes. They can give relevant information, respond to questions, and present health curriculum to students.

Brigman and Campbell (2003) used a pre-post test with students in the middle grades to measure the impact of group counseling and related interventions (curriculum based on physical changes and nutritional information) on academic achievement. The
The curriculum was called *Academic and Social Support: Student Success Skills (SSS)*. The treatment group of 185 students was randomly selected from students in grades five through nine in schools using counselor-led interventions. The control group consisted of another 185 students in grades five through nine randomly selected from schools not implementing the interventions. Using math and reading scores from the Florida Comprehensive Assessment Test (FCAT) as their measure, the researchers evaluated student achievement. School success behaviors were found for both treatment and control groups. Sizable gains in academic performance as well as high levels of self-esteem were recorded. Findings indicated, in part, the positive effect of group counseling when young adolescents were given the information they needed.

During adolescence the brain also undergoes development. Though the size of the brain remains unchanged there are significant changes within the brain (Blakemore & Choudhury, 2006). The adolescent brain experiences a growth spurt just before puberty that continues until about the age of 18. During this time, the process of “hardwiring” takes place. As Wilson and Horch (2002) describe, “This means that the intellectual activities given the most time, the most opportunity to strengthen the connections in the brain, will influence learning for the rest of the student’s life” (p. 58). If a young adolescent is involved in music, sports, or academics, then those are areas that are being “hardwired” and will survive later in life.

Through the use of neuroimaging technology, researchers have observed that the prefrontal cortex, the area of the brain that handles executive functions such as planning, reasoning, anticipating consequences, sustaining attention, and making decisions, is not fully developed in young adolescents (Caskey & Ruben, 2007); hence, this is the time for
growth. Brain-based researchers (Beamon, 1997; Brandt, 1998; Sousa, 2001) have provided a wealth of information on how the brain works and how certain strategies can get and hold attention during instruction and have suggested methods for improving memory storage for young adolescents (Wilson & Horch, 2002).

**Intelectual Developmental Characteristics**

Intellectual development is the ability of people to understand and reason. Young adolescents develop the ability for metacognition (the ability to think about one’s own thinking) and independent thought (Kellough & Kellough, 2008). They are highly curious and interested in many things, although few thoughts are sustained. They are eager to learn about topics that they find interesting and useful, prefer active learning over passive learning experiences, prefer authentic learning experiences, and prefer interactions with their peers (Kellough & Kellough, 2008). Young adolescents, as learners, build upon their own experiences and prior knowledge to make sense of their world (Piaget, 1960). Young adolescents are most interested in real life experiences and authentic learning opportunities; therefore, teachers need to provide a wide variety of educational approaches and materials that are appropriate to young adolescents’ cognitive abilities. To foster intellectual development these young adolescents need to interact directly with their world, with their peers, and with adults.

As cited earlier, there is evidence that classwork during the first year of the middle school requires lower cognitive skills than does class work at the elementary level, even though research has established that this approach to educating young adolescents is inconsistent with their needs. Mitman, Mergendoller, Packer, and Marchman (1984) observed 11 middle school science classes: only a small proportion of
tasks required higher-level creative or expressive skills. The most frequent activity they observed was copying answers from the board or textbook onto worksheets.

Walberg, House, and Steele (1973) rated the level of complexity of student assignments across grades 6 through 12 in 121 classrooms. They found that activities such as memorization and knowing the best answer were emphasized more in the higher grades, while higher level processes such as application, comprehension, finding consequences, and discovering solutions were more prominent in the lower grades. They also found that the proportion of low-level activities peaked at ninth grade. The changes in perceptions across grade levels suggested “educational maladaptation” (Walberg et al., 1973, p. 144) to student needs and abilities. The study also indicated that students begin to withdraw from school because classes appear to lack appropriate stimulation and intellectual challenge. Both of the above studies suggest that that cognitive demands made on adolescents may decrease rather than increase as they make the transition from elementary school to the middle school.

**Moral Developmental Characteristics**

Moral development is a person’s ability to make principled choices. Young adolescents tend to be idealistic and possess a strong sense of fairness (Kellough & Kellough, 2008). They have increased capacity for analytical thought, reflection, and understanding of people who care for them (Roney, 2005). Youth begin to develop their own personal values, usually embracing the values of their parents or key adults (Scales, 2003). They start to consider complex moral and ethical questions, yet are unprepared to cope with them. Consequently, they are at risk when it comes to making sound moral choices (Kellough & Kellough, 2008).
Piaget (1977) contributed to early theories regarding moral development in young adolescents. He assumed that intellectual and moral development progress together and that moral development is the thought process of an individual. Being moral is distinguished from right and wrong in that being moral is primarily an intellectual task. Piaget held that intellectual and moral development proceeded through a series of stages or phases. He asserted that the stages of moral judgments are sequential and universal and that all children and youth develop through the same stages, in the same order. Even though a child may not reach all of the stages, development will occur in an orderly manner.

Kohlberg (1981), using Piaget’s classifications, proposed that individuals develop moral judgment by moving through six stages contained within three levels. Middle level educators mostly see students who are thinking and acting in Stages 1 to 4. Some middle school students will continue to operate predominantly in Stage 1, where “what we can get away with” determines what is “right” to them (George & Alexander, 1993). As children begin to enter Stage 2, where what is right and wrong depends on who is involved and their relationship, relationships are usually limited to one-on-one associations and groups are not important. George and Alexander (1993) have characterized this as “right is what produces pleasure for me in our relationship, wrong is whatever does not produce pleasure” (p. 10). Young adolescents pass through Stage 2 and egocentric behavior to the desire to please others and win acceptance in Stage 3, where approval from groups is important. At this stage students become very sensitive to the opinions and values of people they know, care about, and interact with. Agreements with these groups are defined as “good” and disagreement becomes “bad.” The readiness
of young adolescents for learning about group citizenship is at the heart of Stage 3. Middle schools can contribute towards moral development by organizing and operating in ways that develop positive group involvement, loyalty, duty, responsibility, ownership, and citizenship.

Most young adolescents do not move into Stage 4 during middle school. Stage 4 is advanced and involves a willingness to do what is right because one knows that the institutions will cease to function effectively unless people act in moral ways, following the rules and behaving for the good of the institution (George & Alexander, 1993). Middle school educators can make important contributions to the moral development of young adolescents by preparing them for moving to State 4.

**Emotional/Psychological Developmental Characteristics**

During early adolescence, emotional/psychological development is characterized by the quest for independence and identity formation and the search for adult identity and adult acceptance while maintaining peer approval (Kellough & Kellough, 2008). Young adolescents have a tendency to be moody, restless, and preoccupied with themselves and can exhibit erratic and inconsistent behavior. Even though they are aware of these issues, young adolescents believe that their personal problems are exclusively their own. This puts them at risk for making decisions with negative consequences (Benard, 1993). In a study conducted by Waters, Marzano, and McNulty (2004), the researchers found that teachers who had high quality relationships with their students had 31% fewer discipline problems, rule violations, and related problems over a year’s time than did teachers who lacked high quality relationships with their students. Having a positive outlook for their future helped make adolescents psychologically resilient.
Social Developmental Characteristics

Social development refers to a person’s capacity to interact in a mature manner with individuals and groups. Adolescents have a strong desire to belong to a group and receive peer approval (Scales, 2003). There is strong loyalty to these groups and their friends. Social maturity often lags behind physical and intellectual development. In striving to gain a social position within their peer group, young adolescents may experiment with slang and alternative behaviors (Kellough & Kellough, 2008). Young adolescents are socially vulnerable due to media and negative interactions with adults (Kellough & Kellough, 2008). Though they may seem rebellious to parents and adults, young adolescents still need their parents (Scales, 2003).

In 1999, a Chicago research consortium studied the relationships of students’ social support and academic press to gains in student achievement among more than 28,000 middle school students in 304 Chicago schools (Lee, Smith, Perry & Smylie, 1999). Survey data were collected from teachers and students, and 1997 achievement data from the reading and math portions of the Iowa Test of Basic Skills were obtained for sixth and eight grade students. For the purposes of the study, social support was defined as an average score from four composite measures on the student survey. Each composite measured support from one of four sources: teachers, parents, peers, or the student’s community. Academic press was gathered from teachers’ reports about their focus on academic achievement and from student reports about being challenged by teachers to reach high levels. Lee and associates found that the amount of social support was strongly related to one-year gains in both reading (1.42 grade equivalents) and math (1.67 grade equivalent). Schools with high social support and high academic press
reported the greatest gains in reading (1.82 grade equivalents) and math (2.39 grade equivalents).

Research on the developmental needs of young adolescents has established that they deserve educational experiences in schools that are organized to address their unique physical, intellectual, psychological, moral, and social development characteristics and needs. Researchers argue that teachers, parents, and others who work with youth need to be aware of the changes taking place and capitalize on these characteristics to move young adolescents along the developmental continuum.

**Stage-Environment Fit Theory**

Hunt’s Person-Environment Theory stated that an individual’s behavior is jointly determined by characteristics of the person and the immediate environment. When needs or goals of the individual are congruent with opportunities offered by the environment, then favorable outcomes result. When a discrepancy exists between needs of the individual and the opportunities available in the environment, unfavorable outcomes result (Hunt, 1975).

Whereas Hunt’s Person-Environment Theory applied more generally to the field of education, Eccles and Midgley (1989) developed a more specialized variation of the theory that applied specifically to middle–level education. They called this model Stage-Environment Fit. Stage-Environment Fit Theory can be explained by the use of two trajectories: (a) early adolescent growth and (b) environmental change across the school years. Both trajectories identified in the Stage-Environment Fit Theory recognize that some changes from elementary to middle level school environments may be inappropriate at “certain stages of adolescent development” (Eccles, Midgley et al., 1993,
p. 92). Positive motivational consequences occur when the two trajectories are in synchrony, when the environment is both responsive to the changing needs of the individual and offers the kinds of stimulation that will produce positive growth. If the child enters an environment that affords fewer opportunities for growth than his or her previous environment, negative consequences can result. Traditionally, elementary schools have offered support for an individual’s growth, but middle schools often created environments that offered limited support, if any at all.

Furrer and Skinner, in their 2003 longitudinal study of 641 young adolescents (equally divided by gender), found that students self-reported their engagement and motivation as factors important in their relation to their teachers. Teachers also identified these same students as having behavioral and emotional engagement. Young adolescents who felt appreciated by teachers reported that involvement in academic activities was fun and that they felt happy and comfortable in the classroom. In contrast, young adolescents who felt unimportant or ignored by teachers reported more boredom, unhappiness, and anger in participating in learning activities. Low relatedness to teachers was associated with significant declines in student engagement. Students who had better relationships with teachers and peers at school displayed greater emotional and behavioral engagement in school (Furrer & Skinner, 2003). The teachers’ knowledge of what adolescents need at this time of their development was not validated in this study. The adolescents’ need for autonomy, caring relationships, and higher expectations was not addressed.

In another study of 3,248 adolescents in 12 public schools, conducted by Feldlaufer, Midgley, and Eccles (1988), students and observers rated their junior high math teachers as being less friendly, less supportive, and less caring than their last
elementary teacher. Declines in motivation and academic achievement in students were noted. In this case the trajectories were not in synch and the environment did not meet the young adolescents’ need for caring adults; therefore, it created a mismatch with the environment and produced negative outcomes. Eccles, Midgley et al.’s (1993) proposed that the decline in middle school student motivation and performance resulted, in part, from an absence of environmental fit for young adolescents. Their research found the middle school environment to be “developmentally regressive” (p. 92), meaning that it afforded adolescents fewer opportunities for continued growth in comparison to that of the elementary school. In a study by Ward and colleagues (1982), the researchers found that whole-group instruction was the norm in the seventh grade middle school, small group instruction was rare, and individualized instruction was not observed at all. In contrast, elementary sixth grade teachers mixed whole and small group instruction within and across subject areas. Elementary students were used to having this structure for many years and responded to the trust and autonomy. Once in middle school they no longer felt this way. Increased use of whole class instruction, with most students working on the same assignments, was evident in the studies of middle grade transition.

Research data indicate that the systemic changes young adolescents experience occur in the following areas as they moved from elementary to middle school: size of the school and student body, departmentalization and ability grouping, use of competitive motivational strategies, rigor in grading and focus on normative grading standards, teacher control, and whole class instruction. Eccles and Midgley (1989) found that students experienced decreases in teacher trust of students, opportunities for student autonomy, teachers’ sense of efficacy, and caring relationships with teachers and students.
and between students and their peers. Eccles, Midgley et al. (1993) believed the systematic changes in the school environments from elementary to middle school did not meet developmental needs of this age group and accounted for some of the motivational changes that were seen in this transitional phase. Eccles, Midgley et al. (1993) suggested that it is the fit between the developmental needs of the adolescent and the education environment that is important. Positive growth will occur when the environment responds to the changing needs of the individuals within it, offering support and stimulation. A developmentally appropriate environment influences young adolescents’ perceptions of themselves and their educational experiences in positive ways. The opposite occurs if adolescents transition into a developmentally inappropriate educational environment.

Brophy and Evertson (1976) found consistent evidence that middle level teachers spent more time maintaining order and less time teaching than elementary school teachers. Students in these classrooms had fewer opportunities to make decisions or choices or to participate in self-management. Students in the study exhibited declines in motivation and academic achievement.

Lipsitz (1981) studied one inner city middle school in Detroit where educators devised a plan to allow students the following opportunities: exercise responsibility for themselves, try out areas of interest without risking failure, select their favorite teachers whom they defined as important people in their lives, and take classes with friends so that they could increase their peer-group activities. To provide these opportunities the school modified its regular schedule on Fridays to allow students to select their classes. When questioned, students reported that Monday through Thursday they could endure their
assigned structured day, which they felt offered limited opportunities for learning, because of the opportunities offered them on Friday. Through this process the school addressed adolescents’ developmental needs for increased freedom, self-responsibility, and self-determination, and students in this developmentally appropriate setting reported positive outcomes, both socially and academically (Lipsitz, 1981).

Matching the middle school environment to the developmental needs of students can present formidable challenges, given the variation within the population and the rapid changes of the age group. However, the Stage-Environment Fit Model supports this effort for this particular stage of developmental growth. According to the model, teachers provide the optimal environment to the degree that they design instruction based on the current characteristics of students, providing a balance of challenge and support that moves students along the developmental continuum. If the environment is responsive to the student population and their rapid changes, stimulation will promote positive growth (Eccles, Jacobs et al., 1993; Marzano, Pickering, & Pollack, 2001). Evidence of this was apparent in a study by Eccles, Lord, and Midgley (1991) where they compared eighth graders in a K-8 structure with eighth graders in K-6, 7-9 or K-5, 6-8 structures. Using data from the National Educational Longitudinal Study (NELS), Eccles et al. (1991) found that students in K-8 schools were more prepared for class, attended classes more regularly, were less truant, and were more engaged than those making the middle grade transition. In primarily rural and small town school districts of Missouri, Eccles et al. (1991) found that adolescents who attended schools with K-8, 9-12 grade-level organization with no transition during early adolescence did not experience declines in achievement, but increases. Students who made the transition at sixth grade did
experience declines in academic achievement. The study also found that the teacher’s personal teaching efficacy increased in the K-8 group.

Research findings suggest that middle level schools may not provide appropriate developmental environments for many adolescents or for teachers. The implication for schools is that a focus solely on cognitive development is too narrow. Schools must not ignore the critical area of youth development. Youth development is the process of growing up. It is a time of promoting intellectual/cognitive, physical, social, moral, and emotional/psychological growth. Teachers must have knowledge of adolescent development so that optimal learning takes place.

When examining middle school environments it is important to identify ways in which the middle school environments differ from those in elementary school. The variation in the context during the transition adds to the declines associated with achievement and motivation. Eccles and colleagues (1991) found that variations between the two environments (elementary and middle school) differed in six main areas: (a) classroom structure, (b) teacher-student relationships, (c) instructional practices, (d) teacher efficacy, (e) class work, and (f) grading policies. These variations are discussed below.

**Classrooms**

Connel and Wellborn (1994) and Deci and Ryan (2002) suggested that humans have three basic needs: to feel competent, to feel socially attached, and to have autonomous control in their lives. When classroom environments meet these needs, intellectual, motivational, and socio-emotional development occurs. Compared to elementary classrooms, middle school classrooms emphasize greater teacher control and
discipline and fewer opportunities for student decision-making, choice, and self-
management (Brophy & Evertson, 1978; Eccles, Midgley et al., 1993; Midgley &
Feldlaufer, 1987). Midgley, Feldlaufer, and Eccles (1988) reported that sixth grade
elementary math teachers were less concerned with controlling and disciplining of their
students than these same students’ seventh grade middle school math teachers, reported
one year later. Eccles, Midgley et al. (1993) reported similar findings when observing
students’ opportunity to participate within the classroom in decision-making regarding
their own learning. The decrease in students’ ability to participate in the decision-making
process is in conflict with their need for increased autonomy and self-determination.

Autonomy is described as an environment that allows for choice. Support for
autonomy occurs when the person in authority (the teacher) takes into account the other
person’s (student’s) perspective and provides him or her with opportunities for choice
(Black & Deci, 2000). Data have shown that autonomy-supportive environments
promote engagement in school by allowing joint decision making and supportive choices
(Furrer & Skinner, 2003; Roeser, Eccles, & Sameroff, 2000) and that students’
perceptions of autonomy support are related to an increase in their sense of academic
competency (Roeser & Eccles, 1998).

Furrer and Skinner (2003) collected data from 1,018 children (135 third graders,
340 fourth graders, 165 fifth graders, and 363 sixth graders), equally divided by gender,
who participated in a four-year longitudinal study on children’s engagement in school.
Students and their 53 teachers were drawn from public schools in a rural-suburban school
district. Self-reported questionnaires were given to students in their classrooms in three
45-minute sessions. Teachers were also given a self-reported questionnaire. The
measure of autonomy was composed of 17 items on the surveys. Observations were conducted in two fourth-grade classrooms. Everyday classroom interactions were videotaped between the fifth week and tenth week of school. Math, English, social studies, and special project classes were observed. Each day, a target child was the camera focus for about 20 minutes. Students at the sixth-grade level reported fewer opportunities for engagement and felt anxious, bored, or frustrated. Students in the lower grades reported feeling more engaged and reported opportunities for decision-making. Sixth grade students identified the teacher as the decision-maker and felt they had very little say in what they were learning. This study lent support to the assertion that if students’ needs for autonomy are not met in the classroom, students are likely to become disengaged and unmotivated (Connell, Spencer & Aber, 1994; Skinner & Belmont, 1993).

In Ward’s and colleagues 1982 study, upper elementary school students were given more opportunities to take responsibility for their schoolwork than were seventh grade students in a traditional junior high. A traditional middle school class is one in which the teacher is the center of the classroom environment and instruction is likely to be a one-way transfer of information. The students are “engaged” when they are asked to answer a question. The teacher has control of the curriculum, the instructional materials, and the flow of information. In teacher-centered classrooms the teacher is the leader and demands that student abide by and follow class rules at all times. This teacher-centered structure requires students to be passive and depends largely on the teacher’s knowledge (Ward et al., 1982). For young adolescents, with their increased cognitive abilities and developing sense of identity, a sense of autonomy is important. Students in this stage
want to be included in decision making and having some control over their activities. Unfortunately, research suggests that students in middle schools actually experience fewer opportunities for autonomy than in students in elementary schools.

**Teacher-Student Relationships**

Because teachers are the primary adult figure in the academic setting they play an important role in adolescent lives. Research indicates that the quality of teacher-student relationships is associated with students’ academic motivation and interest in the subject matter being taught. In a sample of 1,300 young adolescents, Midgley, Feldlaufer, and Eccles (1989) examined the effect of student perceptions of teacher support in their mathematics classes before and after the transition to junior high school. Early adolescents who moved from elementary teachers whom they perceived to be low in support to a junior high school math teacher they perceived to be high in support showed an increase in the value they attached to math. In contrast, early adolescents who moved from teachers they perceived to be high in support in elementary classrooms to teachers they perceived to be low in support at the junior high showed a decline in value they attached to mathematics. These declines were closely associated with academic declines as well. Teachers provide social, emotional, and intellectual support when they show students that they trust them, care for them, are respectful of them, and care about their learning. When young adolescents feel this type of support, it allows for them to approach, engage, and persist in academic learning tasks and develop positive achievement related to positive self perceptions, values, and sense of school belonging (Deci & Ryan, 2002; Wigfield, Eccles, Schiefele, Roeser & Davis-Kean, 2006).
Feeling emotionally supported is one of the most important developmental characteristics for fostering positive outcomes. People need to feel that they belong and are cared for. A positive relationship with teachers is especially important during adolescence because young people are developing an identity outside the family group (Eccles & Roeser, 2009). Middle school classrooms are characterized by less personal and positive teacher-student relationships (Eccles & Midgley, 1989).

Although the research literature does not identify a definitive reason for the decline in the quality of teacher-student relationships in middle school, an examination of organizational issues may shed some light. Middle schools typically are large institutions with a large numbers of students. With the transition into middle school, students may see as many as seven different teachers in one day, with teachers seeing approximately 30 students per hour. Much of the restructuring of junior high schools to middle schools was designed to improve the capacity for contact between teachers and students. School-wide practices such as teaming, looping, and advisory time were efforts to address teacher-student relationships. In spite of good intentions, this middle school structure may contribute to decreased teacher-student relationships, and researchers have asserted that it may not be just the structural organization that affects teacher-student relationships. Eccles and Roeser (2009) suggest that teachers may hold negative preconceptions of middle school students as unruly or unteachable and that these beliefs can impact negatively the teacher-student relationship. Additionally, although adolescents need positive teacher relationships that are supportive, warm, and friendly, teachers may not believe that this emotional component is part of their job. Researchers have found this
role is important for all students and especially important for promoting developmental competence when conditions in the family and neighborhood cannot.

**Instructional Practices**

Research studies of classrooms suggest that development is optimized when students are given challenging tasks in an environment that provides good emotional and cognitive support, meaningful and culturally diverse material to learn and master, and supported autonomy and initiative. Researchers have found that middle school teachers’ instructional practices rely mainly on whole class task organization, between-classroom ability grouping, and public evaluation of the correctness of work (Eccles & Midgley, 1989). Whole group or direct instruction is the norm, with most students working on the same assignments at the same time, using the same textbooks, and receiving the same homework assignments. Direct instruction is a curriculum-centered approach that places a premium on the transmission of information to learners who learn through the act of memorization (Anderson, 2007). This type of teacher-centered environment does not provide autonomy support for students and involves little student engagement and interaction. Feldlaufer et al. (1988) reported that small group instruction in middle schools was rare and individualized instruction was not observed at all. Larson (2000) documented that the adolescents observed in his study were bored most of the time that they were in secondary classrooms.

The use of tracking, the grouping of students into classes based on ability levels, is one of the key organizational differences between elementary and middle school (Eccles, Midgley et al., 1993; Simmons & Blythe, 1987). Studies conducted on tracking reveal that it has different effects for students in different tracks. Students in high tracks
show positive effects, students in average tracks show little effect, and those students in the lower tracks experience negative effects (Fuligni, Eccles, & Barber, 1995). Adolescence is a time when students develop their identity. Tracking students in low ability groups at the middle school level may have an effect on their identity that lasts a lifetime, especially since the overall use of ability grouping increases as students move into higher grades (McEwin, Dickinson, & Jenkins, 2003). Environments that foster competition and social comparison are often associated with lower motivation and less positive emotional outcomes for students (Roeser & Eccles, 1998). Academic assignments that lack challenge and meaning are inconsistent with adolescents’ cognitive and emotional needs (Eccles & Midgley, 1989). Motivation is maintained when middle schools introduce more challenging and meaningful academic work (Jackson & Davis, 2000).

**Teacher Efficacy**

When teachers have high expectations for student achievement and students perceive these expectations as a positive response of who they are, students learn more, experience a sense of self-worth and competence as learners, feel more connected to their teacher and their school, and resist involvement in problem behaviors (Brophy, 2004; Lee & Smith, 2001). When teachers lack confidence in their teaching efficacy, they reinforce feelings of incompetence and alienation in their students and students develop learned helpless responses to the failure in the classroom (Roeser et al., 2000). Researchers have noted that middle grades teachers can feel less effective as teachers, especially with low-ability students. Midgley et al. (1989) found that seventh grade mathematics teachers in traditional junior high schools reported much less confidence in their teaching efficacy
than did sixth grade elementary teachers in the same school district. Darling-Hammond (1997) found that teachers with low self-efficacy were more prevalent at middle schools that have high numbers of minority and poor students. Highly efficacious teachers were more likely to use open-ended inquiry and student-directed instructional strategies, whereas teachers with a low sense of efficacy were more likely to use teacher-directed instructional strategies such as lecture or reading from the textbook.

Class Work

Academic work is the primary focus of the classroom environment. Academic content has important impact on students’ attention, interest, and cognitive effort (Dewey, 1990). Content must provide meaningful exploration that is critical, given that boredom in school, low interest, and perceived irrelevance of the curriculum are associated with poor attention, diminished achievement, disengagement, and alienation from school (Jackson & Davis, 2000). Researchers have found that middle school class work requires lower-level cognitive skills than does class work at the elementary level (Mitman et al., 1984). The departmentalized middle school system has failed to provide adolescents with higher-level academic work or varied academic classes.

In an observational study of 11 junior high school science classes, Mitman et al. (1984) found that only a small proportion of tasks required high levels of creative or expressive skills. Most frequently the activity involved copying answers from the board or textbook onto worksheets. Walberg et al. (1973) rated the level of complexity of student assignments across grades 6 through 12. The proportion of low-level activities peaked at Grade 9. Both of these studies documented that cognitive demands may
decrease rather than increase as students move from elementary to secondary schools (Eccles, Midgley et al., 1993).

**Grading Policies**

Guay, Marsh, and Boivin (2003) have asserted that there is no stronger predictor of a student’s self-confidence and efficacy than the grades they receive. Moreover, if academic marks decline upon middle school entrance then motivational declines follow. Eccles and Midgley (1989) found that middle school teachers appeared to use higher standards in judging students’ competence and in grading than did elementary teachers. When adolescents’ grades changed, there was a shift in their self-perception and academic motivation, especially when they knew the material was less intellectually challenging. Middle school teachers used stricter, more social comparison-based standards than did elementary school teachers, leading to a drop in grades for many adolescents as they entered middle school. This decline was not noted on standardized achievement tests, which suggested that the decline was in the change of grading practices rather than in students’ learning (Kavrell & Petersen, 1984). Simmons and Blyth (1987) documented the impact of this grade drop on school performance and dropout. Even after controlling for a youth’s performance prior to the school transition, the magnitude of the grade drop following the transition into middle grade schools was a major predictor of leaving school early.

For optimal development to occur good stage-environment fit must exist between the needs of developing adolescents and opportunities given in their social environments. Eccles, Midgley et al. (1993) provided evidence that students at the middle school lacked close relationships, experienced low expectations, and had minimal opportunities for
participation in their learning. As observed by Eccles, Midgley et al. (1993), the previously mentioned six patterns centered on organization, instruction, and climate. These patterns provided the basis for the classroom observation portion of this research.

**Recommendations of Turning Points 2000**

Guided by the research conducted by Eccles and others, the Carnegie Council on Adolescent Development brought to the forefront the educational needs of young adolescents in its *Turning Points* reports in 1989 and 2000. These reports presented ways to help match adolescents’ needs and learning environments. Stage-Environment Fit Theory provides evidence that middle schools may not meet many of the developmental needs of middle school students. With this information available, the question can be asked: If middle school educators know what young adolescents need from their environments, why is this not being provided? Perhaps one problem is that the majority of middle school teachers does not have the specialized training for and are not aware of the specialized needs of young adolescents.

McEwin and Dickinson (1996) noted that “the lack of strong, developmentally responsive policies, practices, and programs for young adolescents and their teachers are conspicuous by their absence and are a constant reminder of the low priority given this developmental age group and their teachers” (p. 1). McEwin, Dickinson, and Jenkins (2003) suggested that without this specialized knowledge middle school teachers are simply not qualified or do not know how to design lessons and effective middle school classrooms. *Turning Points 2000* (Jackson & Davis, 2000) recommended specialized teacher preparation at the middle grades: “Staff middle grades schools with teachers who
are experts at teaching young adolescents, and engage teachers in ongoing, targeted professional development opportunities” (p. 23).

On the surface, it would appear that the problem is being addressed: Specialized middle-level preparation has been present in the literature for nearly 80 years (McEwin, Dickinson, & Smith, 2003). However, a national survey of middle school principals revealed that only 18% reported that the majority of their teachers hold a middle level license. In 2002, 44 states offered some type of middle level license or certificate, but it was required in only 21 states (Gaskill, 2002). Middle school teachers may have an elementary license and certification that allows them to teach kindergarten through eighth grade, or they may have a single subject credential that allows them to teach in the content area of the certificate, seventh through twelfth grades. In this system of overlapping licensure, any teacher can become certified to teach in a middle school.

The NCLB Act of 2001 requires that teachers be highly qualified and that schools systems adopt methods to ensure that highly qualified teachers are in the classroom (U.S. Department of Education, 2006). To be deemed highly qualified, teachers must have a bachelor’s degree and state certification or license and prove that they can demonstrate competency in the subject area they teach. Current middle school teachers verify that they know the subject by a High, Objective, Uniform State Standard of Evaluation (HOUSSE). This requirement is demonstrated through an extended period of time teaching in that subject.

Popper (1967) stated that the middle school was “a school without teachers” (p. 57). The lack of teacher education programs and licensure that focus on the middle school level leaves the majority of young adolescents taught by teachers who are
prepared for a career as an elementary or high school teacher. Fewer than one in four middle-grades teachers has received specialized training to teach at the middle level. As a result, middle school teachers can find themselves unprepared to work with this age group, and this may be a major reason why there are so few middle schools that are considered high performing or exemplary. There is growing consensus to support specialized teacher preparation at the middle grades level. This should serve as an incentive for colleges and universities to prepare future teachers to work effectively with young adolescents.

**Conclusion**

In this chapter, a review of the literature focused on what teachers, parents, administrators, and all stakeholders should know about the characteristics and nature of young adolescents. The middle school concept was developed to ensure a developmentally appropriate learning environment for this unique student population. This concept remains a valid model of organizing schooling for young adolescents. Structures that support young adolescents have been identified; middle schools were designed so that the developmental needs of young adolescent influenced the educational environment and the organizational structure of the school and classroom (George & Alexander, 2003). The degree that this has been accomplished is questioned in the latest study by McEwin and Greene (2010). Results from their study revealed that many middle level schools have failed to fully implement the tenets of the middle school concept.

Researchers have found that middle level teachers should have an understanding of young adolescent development (Eccles & Roeser, 2009; Kellough & Kellough, 2008;
McEwin, Dickinson, & Jenkins, 2003). The lack of knowledge regarding the developmental characteristics of young adolescents may lead to negative outcomes for young adolescents (Eccles, Midgley et al., 1993); however an understanding of the physical, social, moral, cognitive/ intellectual and emotional/psychological developmental characteristics of young adolescents can be established through explicit training (Conklin et al., 2007; Jackson & Davis, 2000; McEwin, Dickinson, & Jenkins, 2003).

In their stage-environment fit theory, Eccles and Midgley (1989) maintain that a developmentally appropriate environment is essential to students’ self-perceptions, motivation and achievement. Therefore, the school environment must furnish the most suitable structure for these characteristics accompanying adolescents so that students remain in school and progress in positive ways. Eccles, Midgley et al. (1993) stated that there are few empirical studies that have focused on differences in the classroom environment and instructional practices across grades or schools. This study aimed to help fill that research gap by investigating to what extent California middle-level teachers are able to identify the developmental characteristics of young adolescents and how they use this knowledge in the classroom. In the next chapter, the methodology for this study is presented.
CHAPTER 3—METHODOLOGY

This chapter presents the methodology and procedures that were used to conduct a mixed methods study to gain understanding of potential differences that may exist in the eighth grade classroom environments between a high performing middle school and a low performing middle school. This mixed methods study sought to apply stage environment theory by investigating whether the middle school context was appropriately matched to the developmental needs of young adolescents. The classroom teachers’ knowledge was used to determine whether the teacher created a developmentally appropriate classroom that supported young adolescents in positive ways. This mixed methods study gathered information about what teachers knew, how classrooms operated, how teachers taught, and how teachers supported young adolescents’ developmental needs. This chapter first provides an introduction, the research design, the research questions, and the selection procedures. The participants, instruments, and data analysis then are delineated. Information regarding a pilot test is included. The chapter ends with a discussion on ethical issues and a summary of the study.

Introduction

The need for developmentally appropriate schooling for adolescents has been well documented by researchers (Eccles & Midgley, 1989; George & Alexander, 2003; Manning, 2002). Since the 1960s, educational researchers (Alexander, 1987; Eccles & Midgley, 1989) have identified key characteristics of developmentally appropriate schooling for young adolescents. Students in schools that are organized and focused on developmental needs reported experiencing fewer problems with school transitions, experienced higher academic achievement, and had fewer negative shifts in motivational
beliefs than students in schools organized in a more traditional manner (Jackson & Davis, 2000; National Association of Secondary School Principals, 2006). Educators recognized that the quality of preparation in the middle school often determined the academic success that students will have in high school and beyond (Balfanz, 2009). However, the knowledge of what needs to be done frequently falls short with what is happening in the classroom. Teachers play a major role in creating the educational environment. Since young adolescents spend the majority of their day in the classroom, it is important for teachers to have the knowledge needed to establish classrooms that are developmentally responsive to young adolescents (Jackson & Davis, 2000). Stage-Environment Fit Theory suggests that positive outcomes occur when the classroom environment meets young adolescent needs. This study sought to contribute to the research that examined the extent and manner in which teachers’ knowledge of early adolescent development is manifested in middle school classrooms.

**Research Design**

This study applied mixed methods research methodology, using a survey, classroom observations, and artifacts, to determine if differences existed in the eighth grade classroom environments of a low performing middle school and a high performing middle school. Did teachers have the knowledge to create developmentally appropriate classrooms and instructional strategies? The primary focus of this study was to gauge individual teacher’s knowledge of the developmental characteristics of young adolescents to determine the extent to which he or she used this knowledge in his or her classrooms and lessons. A survey method provided the means to collect these data.
Mixed methods research is an approach to inquiry that associates both qualitative and quantitative forms of research. It involves philosophical assumptions mixing both approaches in the study (Creswell, 2009). For this study the quantitative method used was a survey. Babbie (1990) identified surveys as being useful when a researcher wants to collect data on phenomena that cannot be directly observed. In this study the phenomenon was teachers’ knowledge.

Munhall and Boyd (1993) describe the value of qualitative research as a form of scientific inquiry in the following way:

> Qualitative research involves broadly stated questions about human experiences and realities, studies through sustained contact with persons in their natural environments and producing rich, descriptive data that help us to understand those persons’ experiences. The emphasis is on achieving understanding that will, in turn, open up new options for action and new perspectives that can change people’s worlds. (pp. 69-70)

Through a mixed methods study using classroom observations, survey, and collected artifacts, this researcher took the insider’s view of what was occurring in middle school classrooms and identified ways in which teacher knowledge about the developmental characteristics of adolescents was reflected in the classroom environment and instructional practices. Mixed methods studies depend on the acquisition and aggregation of a variety of data. Data were compiled from multiple sources for this study because the mixed methods approach enabled both a holistic understanding of the teachers’ knowledge and an evaluation of how the teachers incorporated their knowledge
of the developmental characteristics of young adolescents in their natural setting: the classroom and their instructional practices.

Creswell (2009) defined a mixed methods study as a research strategy that investigates a phenomenon within its real-life context. In this case the phenomenon was Stage environment fit. The context was that of the school environment and the experiences lived there. The primary focus of this mixed methods study was to apply Eccles and Midgley’s (1989) Stage-Environment Fit Theory to investigate how the middle school teachers’ knowledge of the developmental characteristics of young adolescents might help provide an environment, the bounded system in question, that moves the adolescent across the developmental continuum in positive ways.

**Research Questions**

The study research questions were:

1. What do teachers know about the intellectual/cognitive, physical, social, emotional/psychological, and moral developmental characteristics of young adolescents?

2. How do teachers align their knowledge of the developmental characteristics of young adolescents with their instructional practices and classroom environments?
   a. What evidence is found in the classroom?
   b. What evidence is found in the lesson?
   c. What evidence is found in the student assignments?
3. What, if any, are the differences in teachers’ knowledge and classroom environments between a high performing middle school and a low performing middle school?

Teacher participants from each school were selected using purposive sampling (Creswell, 2005). In order to answer the research questions the researcher designated a group of individuals for selection in the study sample, middle school teachers, because they had the particular traits to be studied. The following criteria were established for selection of participants: (a) participants must belong to a middle school either identified as low performing or as high performing, (b) participants must be involved in interdisciplinary teaming at the eighth grade level, (c) participants must hold a valid California teaching credential, and (d) participants must be willing to participate.

Selection Procedures

The selection process involved three stages: selection of the district, selection of the school sites, and selection of teacher participants.

School Selection

Using the California Department of Education’s data files for the 2009-2010 school year, the researcher identified a school district in southern California. The Local Educational Agency (LEA) listed the 32 middle schools in that district. Using data in the testing and accountability files, the researcher identified 14 schools with an Academic Performance Index (API) of 800 or above (high performing) and 18 schools with an Academic Performance Index below 800 (low performing). The school names were written on an index card and separated either as a “low” or a “high” performing school depending on the API (Annual Performance Index). Index cards then were put into a
bowl and two cards were randomly selected – one high performing school and one low performing school. The researcher contacted principals from both schools asking permission to conduct the study on their campuses and with their teachers. The researcher obtained district permission to conduct the study within the district, and all district requirements regarding conducting research were followed. Permission from San Diego State University Institutional Review Board (IRB) on the ethical treatment of research subjects was obtained. Once all permissions were granted, the teacher selection process was initiated.

**Teacher Selection**

After the researcher had contacted the principals of both schools by phone to outline the study and received permission for their schools’ participation in the study, the researcher met with the principals and shared the teacher survey instrument, consent form, and classroom observation tool and discussed the criteria for teacher selection. The principals identified the teachers who worked in interdisciplinary teams. The researcher scheduled dates and times to meet with the eighth grade interdisciplinary teams about the study and solicit volunteers for participation in the study. During the meeting with the principals the researcher received feedback on the importance of the study.

Following the selection of the potential participants, the researcher placed a note of introduction and an invitation to an informational meeting in the identified teachers’ mailboxes at the school. As follow-up, the researcher contacted the participants by phone and reminded them of the appointment. During the meeting the purpose for the study was established, clarifying questions were answered, and volunteers were solicited.
At the high performing school three of the interdisciplinary teams volunteered to participate. The names of the three interdisciplinary teams were put into a bowl and the interdisciplinary team drawn was deemed “the participants.” The Informed Consent form was given to the teachers to describe the purpose of the study, risks, benefits, confidentiality/privacy concerns, incentives, costs, and voluntary nature of participation. Participants signed and returned consent forms to the researcher. This group remained in the room as they replied to the survey. Each teacher scheduled a time for the classroom observation before he or she left the room.

At the low performing school only one interdisciplinary team, out of four, volunteered to participate. Two of the interdisciplinary teams did not have members that met the criteria of being a teacher permanently assigned to the school, therefore eliminating their eligibility to volunteer, and the third team stated they would decline the offer to participate. The remaining interdisciplinary team, which met the criteria for participation, was deemed “the participants.” The researcher explained the consent form for the participants, and participants were asked to sign the form and return to the researcher. This group remained in the room as members replied to the survey questions and scheduled their observation times with the researcher before leaving the room.

Classroom observations were scheduled for one class period, 55 minutes in length. Teachers were asked to provide a copy of their lesson plan for the researcher as well as any copies of handouts that students used in the lesson that day. The purpose of asking for a lesson plan was to gather as much data as possible for answering the research questions.
Participants

Participants were teachers at two middle schools who volunteered to participate in this study. The two middle schools selected were located in the same large urban school district in southern California. Participants were eight classroom teachers associated with an eighth grade inter-disciplinary team at the middle school. Inter-disciplinary teaming allows for collaboration and is an integral component of the middle school concept. The inter-disciplinary team at each school consisted of an English teacher, a math teacher, a history teacher, and a science teacher, thus creating a study selection of four teachers from each school. Both male and female teachers were allowed to participate. Criteria for inclusion in the study were that the teacher possessed a valid California teaching credential and was a permanent eighth grade teacher assigned to the middle school. A criterion for exclusion from the study was teacher assignment as a temporary employee.

Data Collection and Instrumentation

The major strength of a mixed methods study is the opportunity to use many ways of analyzing and collecting data. Evidence in this study came from three sources: teacher surveys, classroom observations, and physical artifacts (lesson plans, classroom charts, and students’ documents). Using these multiple data sources allowed triangulation of the data. “Triangulation is the act of bringing more than one source of data to bear on a single point” (Marshall & Rossman, 2006, p. 202). Triangulation was particularly useful in this case study because of the multiple perspectives that were collected. “Triangulation is not so much about getting ‘truth’ but rather about finding the multiple perspectives for knowing the social world” (Marshall & Rossman, 2006, p. 204). Using multiple informants and more than one data gathering method can greatly strengthen a study’s
usefulness for other settings. In this study, triangulation verified data, thus increasing the validity of the research findings.

**Classroom Observations**

Classroom observations were the primary data collection instrument used to determine whether teachers aligned their knowledge of the developmental characteristics of young adolescents to create environments and instructional practices that were developmentally responsive. Observational evidence often is useful in providing additional information about the topic by adding new dimensions from the context being studied (Marshall & Rossman, 2006).

Classroom observations were conducted in eight classrooms at the eighth grade level for 55 minutes each (one class period). All classroom observations were scheduled in advance with both teacher and principal approval. Teachers who agreed to participate were observed using the researcher-developed Classroom Observation Checklist (Appendix B), which evaluated the stage-environment fit of the classroom environment and the teacher’s instructional practices. The Classroom Observation Checklist created by the researcher was based on the literature review of Stage-Environment Fit Theory and developmental characteristics of young adolescents and the implications for the classroom. The Classroom Observation Checklist, used to record data gathered from each classroom, was a way to ensure consistency between classrooms and served as a recordkeeping tool.

To ensure construct validity the Classroom Observation Checklist was developed from several walk-through observation models, Eccles and Midgley’s 1989 instrument found in their research, and Stage Environment Fit Classroom Observation (Miller,
In the relevant literature on testing for stage environment fit, one instrument, Stage Environment Fit Classroom Observation Tool (Miller, 2010) was worthy of consideration for use; however, the instrument focused on measuring a variety of criteria that were not relevant to this study. The researcher chose aspects of the Stage-Environment Fit Classroom Observation Tool but did not replicate any part of the instrument; therefore, permission was not required from the previous developers.

To strengthen external validity, a university professor, two principals, four teachers, a counselor, and a superintendent of schools reviewed the Classroom Observation Checklist. Items on the checklist identified classroom environments and instructional practices that are developmentally responsive and derived from the California Department of Education’s document library Characteristics of Middle Grade Students. Each of the developmental characteristics of young adolescents was categorized. Each category was comprised of specific indicators to observe and record. The data were gathered into two components: Classroom Environment and Instructional Practices.

Data collected from the observations were used to describe classroom environments and instructional practices that either fit the developmental needs of young adolescents or did not fit the developmental needs of young adolescents. Differences in the eighth grade classroom environments and teachers’ instructional practices were noted. Data were analyzed for each school and then between a high performing middle school and a low performing middle school. Classroom observations were used as a mechanism to determine if differences existed in the eighth grade environments and instructional practices between the schools identified as high performing and low performing. In
multi-case studies, each case is analyzed individually and then analyzed across cases (Merriam, 1998). One of the strengths of this type of an approach is that it is done in natural settings. This method assumes that behavior is purposeful and expressive of deeper values and beliefs (Marshall & Rossman, 2006).

Field notes were hand written during the classroom observation. Carspecken (1996) writes that the researchers should record speech, acts, body movements, and body postures; note time frequently; and report the context within which acts are meaningful, as well as diagram the setting (p. 45). Field notes such as these help add context and triangulate date when recorded using standard precautions to remain unobtrusive (Hatch, 2002). Such notes include descriptions of the classroom setting and general classroom environment, issues not addressed on the classroom observation guide, and evidence of student engagement. The researcher’s notes included as much concrete data as possible without generalizations or personal interpretations. After each observation the researcher recorded personal reflections in a research journal. A data log was maintained to track dates and duration of classroom observations.

The researcher recognized that consideration had to be given to the limited validity of generalizing observation trends since a single visit provides a narrow view. Thus, the existence of any evidence at the classroom level for stage environment fit was triangulated with the teacher survey and artifacts

**Survey**

For this study, the researcher developed the Middle School Teacher Survey (Appendix A) to specifically measure the teacher’s level of knowledge of the developmental characteristics of young adolescents. A teacher’s level of knowledge
referred to his or her ability to correctly identify behaviors and developmental characteristics of young adolescents on the Middle School Survey. To ensure external validity the items developed in the survey included information from current literature on early adolescent development (presented earlier in the literature review and instrument research description). The questions on the survey were designed to generate answers that facilitated the phenomenon of stage-environment fit in the context of student behaviors. Participants provided a response for each area of adolescent development: intellectual/cognitive development, physical development, social development, emotional/psychological development, and moral development.

In the relevant literature on adolescent development, one instrument, School Self Study, Schools to Watch-Taking Center Stage (California Department of Education, 2011) was worthy of review. However, some components of the instrument were not relevant to this study. Therefore, the researcher chose aspects of the School Self Study instrument, combined young adolescent behaviors (California Department of Education, 2011; NMSA, 2003) that could be observed in middle school classrooms, and created the Middle School Teacher Survey. The number of correct responses to the 17 items that identified 27 developmental behaviors measured the teacher’s knowledge.

Part A of the survey consisted of five multiple answer items where the teacher had to identify the developmental characteristics of young adolescents. Part B consisted of 12 items where the teacher had to match the student behavior to the developmental characteristic. The developmental characteristics and adolescent behaviors listed on the survey were identified in the National Middle School Association’s This We Believe:
Using data from the Michigan study of adolescent and adult life transitions, Eccles and colleagues identified three main features of middle school classrooms that affect the interaction between students and their environment: classroom climate, teacher beliefs, and the nature of the academic work (Eccles, 2004). Part C of the survey addressed these features. Five questions included on the survey, presented in Likert-type scale, focused on teacher beliefs and professional development. Using a 6-point scale range from “completely comfortable” to “completely uncomfortable,” two questions asked participants to respond to how comfortable they felt about teaching young adolescents and how comfortable they felt with the content they were teaching. A third question, with a 5-point rating scale that represented a range from “always” to “never,” measured how much time the teachers spent reflecting on their ability to teach young adolescents. The final section, Part D, consisted of two open-ended questions addressing specialized training received for educating young adolescents. This allowed participants to explain the reasoning for their responses. This cross-sectional survey allowed for rapid data collection at one point in time.

A survey was chosen since it is an unobtrusive instrument that can ensure a larger volunteer pool. Marshall and Rossman (2006) described surveys as similar to a conversation between two individuals. The researcher considered there could be several interpretations of developmental characteristics; therefore, the multiple answer instrument ensured validity by providing participants with the same understanding of the questions. Prior to the study, the survey was pilot tested and reviewed by a university
professor, two principals, four teachers, a counselor, and a superintendent of schools. Adjustments were made to the instrument based on the feedback from the pilot study. Comments received from participants in the pilot study included: “I think it would be better if we had choices to pick” and “I’m not sure exactly what you want me to write.” Originally the survey contained open-ended questions, but based on participant feedback, the questions were changed to multiple answer items. This provided clarity of the questions and procedures for the participants. Surveys were answered individually in a group setting of four teachers.

Artifacts
The importance of documents and archival records is that they add evidence from other sources. They can be helpful in verifying information provided through a survey or interview. In this study artifacts assisted with the triangulation of data, helping to increase trustworthiness and consistency of the study. Archival data added to the existing sources in order to achieve a better understanding of what teachers knew about developmental characteristics of young adolescents. Teacher lesson plans and student worksheets were collected to better understand the instructional practices used in the classroom.

Pilot Test
A pilot study was conducted using one interdisciplinary team at the researcher’s place of employment in order to learn whether the directions and questions on the Middle School Teacher Survey Instrument were comprehensible to participants. The pilot test also helped gauge the amount of time that participants would need to complete the
survey. After completing the survey, the pilot participants as a group discussed with the researcher their reactions to the instrument.

Pilot test participants were teachers from a middle school with a 6-8 grade configuration. All four teachers, two females and two males, taught at the eighth grade level. Each participant was given unlimited time to complete survey. Start and end times were recorded for each participant. The teachers spent approximately 45 minutes completing the survey.

After the surveys were completed, they were collected. Each participant was given a clean copy, and then the format and the written text of the survey were discussed. Each question in the survey was examined, and participants verbally shared their feedback. If there were no questions or comments about an item, participants said “clear,” and the group moved on to the next question or set of directions. Comments were recorded by the researcher. Responses to the five open-ended questions that required teachers to list characteristics of young adolescents’ physical, social, emotional/psychological, intellectual/cognitive, and moral development were reported as too difficult and not known by the teachers. Teachers felt the format was intimidating and agreed that a multiple item format would get better results since teachers would have choices. It was informative for the researcher to learn that the open-ended questions were seen as threatening since the teachers discussed that they had not given “much thought” to the developmental needs of young adolescents when they were designing their classroom or creating their lessons. Their comments led to a revision in the final version with the elimination of the open-ended questions. They were replaced with the 17 items
that simply identified the behavior associated with the developmental characteristic of the young adolescent.

The Classroom Observation Checklist was pilot tested by two principals, four teachers, a counselor, and a superintendent of schools. The checklist was used at three different middle schools. One of the principals used the checklist to conduct four classroom observations with three classroom teachers and a counselor. The superintendent used the checklist on a few walkthroughs that she conducted at a middle school, and the remaining classroom teacher conducted four classroom observations on her own. After the classroom observations were completed, the researcher met with the group. Together they calibrated what they believed worked with the instrument and deleted items they considered difficult to measure in a classroom setting.

Data Collection and Analysis

Mixed methods studies allow a researcher to gather as much information as possible about a case so the information can be analyzed and interpreted to further the development of relevant theory (Merriam, 1998). Data analysis helps organize the exhaustive amount of data collected in mixed methods research. It is important that all interpretations are grounded in the data. In this study the researcher analyzed data from artifacts, observations, and surveys to understand and identify differences that may exist in the eighth grade classroom environments and instructional practices used by teachers between the high performing school and the low performing school.

Triangulating multiple data sources was vital to this mixed methods study. “Triangulation is mostly a process of repetitious data gathering and critical review of what is being said” (Stake, 2006, p. 34). Triangulation was particularly useful for the
researcher because of the multiple perspectives that were collected. Teachers’ perspectives, as reflected in the survey, provided insights into identifying the current role of the middle school system in promoting developmentally appropriate practices that support student learning.

The researcher’s first goal in the data analysis was to determine the classroom teachers’ level of knowledge in identifying the developmental characteristics of young adolescents as identified in the literature review. In order to determine the teachers’ level of knowledge, the researcher analyzed the survey results according to the number of correct answers given by each teacher in Parts A and B of the Middle School Survey. Data were separated into analyzable parts, referred to by Hatch (2002) as frames of analysis. Teachers first were ranked in order by highest number of correct answers. Then, an analysis of each developmental characteristic (intellectual/cognitive, physical, social, moral, and emotional/psychological) was conducted by matching the teachers who identified correctly with the characteristic. This allowed for patterns to emerge. The number of correct responses to the 17 items that identified 27 developmental behaviors measured the extent of a given teacher’s knowledge. Parts C and D were analyzed for responses given and then triangulated with the qualitative data.

The researcher’s second goal in the data analysis was to identify ways that teachers aligned their knowledge to their classroom environments and their instructional practices. The qualitative analysis of the teachers’ surveys, supported by data from classroom observations, offered insight into the extent to which teachers’ knowledge about the characteristics of adolescent development was extended into the implementation of instructional practices that supported learning. To this end, themes
across all data were identified, investigated, and categorized, and domains were created. Domains were represented by included terms and cover terms (Hatch, 2002, p. 165). Included terms are all the ideas that share a relationship with the cover term or the overarching category. In this case the cover terms were the developmental characteristics of young adolescents: intellectual/cognitive, physical, social, emotional/psychological, and moral. The included terms that emerged were the classroom environment and the instructional practices used by the teacher.

Eccles and Midgely’s (1989) Stage-Environment Fit Theory argued that school organization must be adjusted to fit the developmental needs of students. If teachers know how young adolescents learn, then that knowledge will be reflected in their classroom environment and the instructional practices they use. In contrast, if teachers do not use developmentally appropriate practices to support young adolescents in their classrooms, that, too, would be reflected in their classroom environments and instructional practice.

The researcher’s final goal in the data analysis was to identify differences that might exist in the eighth grade classroom environments and the instructional practices between a high performing middle school and a low performing middle school. This stage required reading the data and searching for the relationships characterized in the data (Hatch, 2002). Five themes emerged from the triangulation of the data: (a) task organization, (b) teacher/student relationships, (c) teacher control and discipline, (d) independent student work, and (e) students’ assignments. Themes were identified, and a comparison of findings by teacher was shared. Data then were read again and coded, and
the codes were collapsed into broader themes (Creswell, 2005). Each theme was summarized with a comparison between the two schools.

Three broad themes emerged that matched Benard’s (1991) protective factors and Eccles and Midgley’s (1989) and Eccles, Midley et al.’s (1993) identified classroom features: (a) caring environment, (b) high expectations, and (c) opportunities for participation and contribution. This process created speculations about factors that affect student engagement and academic achievement in middle schools if Stage-Environment Fit Theory exists.

Constant comparison strategy, as part of a grounded theory approach, allowed for identification of patterns, themes, and categories. Member checking did not take place since the small sample size and the nature of the interdisciplinary teams could compromise identity.

The data analysis methods described above allowed the researcher to report the findings in Chapter 4 to answer each research question.

**Ethical Issues**

Credibility of the study was maintained by using multiple data sources: surveys, observations, and archival evidence. The researcher conducted the mixed methods study with the understanding of what Yin (2003) suggested as four fundamental attributes: (a) the ability to ask the right questions and interpret responses, (b) the ability to be a good listener, (c) the ability to be flexible in order to react to various situations, and (d) the ability to have an in depth understanding of issues being studied and a commitment to remaining unbiased. Merriman (1998) recommended that one should be aware of one’s own conscious and theoretical lenses when collecting analyzing and disseminating data.
Identity of the school and those surveyed were kept confidential. The data collected had identifiers linked to the subject to keep the data anonymous. Care was taken to avoid damaging anyone involved in the study by designing and standardizing survey protocols intended to protect participants. Steps were taken to keep survey responses, observation data, and other collected documents confidential. In the reporting of data, names of individual schools or teachers were not released. Aliases were used to describe districts, schools, and principals.

Care was taken to avoid detrimental feelings for anyone involved in the study by designing and standardizing the observation protocol with the intent to protect participants. Participation of teachers in the surveys was voluntary and their responses kept anonymous. The San Diego State University Institutional Review Board (IRB) reviewed all research protocols and approved them to ensure school policies were not violated.

**Summary**

Chapter 3 detailed the research design and data analysis process that were used for this study. It explained the selection of the school and subjects and the methodology employed to explore teachers’ knowledge of the developmental characteristics of young adolescents and how Stage-Environment Fit Theory supports the idea that classroom environments and instructional practices must be tailored to fit the young adolescent so that optimal learning can take place.
CHAPTER 4—RESEARCH FINDINGS

The purpose of this study was to describe middle school teachers’ level of knowledge of the developmental characteristics of young adolescents and investigate how the teachers aligned this knowledge to create classrooms and instructional practices that fit young adolescents’ developmental needs. Additionally, this study investigated whether there was a difference in teacher knowledge and classroom environments between a high performing middle school and a low performing middle school. The findings from data collected from the eight participating middle school teachers are reported in this chapter.

In Chapter 4, the analyzed data are presented as follows. First, background information is given on the school district and on the two individual schools studied. Second, findings are presented as they relate to each of the three research questions, with analyzed data from the study reported in text and tables. Survey findings are presented to answer Research Question 1: What do teachers know about the intellectual/cognitive, physical, social, emotional/psychological, and moral developmental characteristics of young adolescents? Classroom observations, teacher surveys, and artifact data that described how teachers’ knowledge of the developmental characteristics aligned with the classroom environment and instructional practices are presented to answer Research Question 2: How do teachers align their knowledge of the developmental characteristics of young adolescents with their instructional practices and classroom environments? (What evidence is found in the classroom? What evidence is found in the lesson? What evidence is found in the student assignments?) Thick, rich, and vivid description of what was happening in the eighth grade classrooms of a high performing school and a low
performing school answer Research Question 3: What, if any, are the differences in teachers’ knowledge and classroom environments between a high performing middle school and a low performing middle school?

**Descriptive Data**

The participants for this study were eight middle school teachers of eighth grade from two different middle schools within the same district in Southern California. Three of the eight teacher participants were White males, and five of the participants were female (one Filipino, three White, and one African American). Pseudonyms were given to each teacher, the district, and the schools in this study.

**Lomestead School District Profile**

Lomestead Unified School District (LUSD) is located in the large urban city of Lomestead, California. LUSD serves a total of 132,000 students in pre-school through grade 12. The district contains 24 middle schools and 11 K-8 schools. The student population is very diverse, representing more than 15 ethnic groups and more than 60 languages and dialects.

**Byron Middle School**

Byron Middle School has a total of 1,100 students. According to the school’s web site, the school was converted from a junior high school (grades 7, 8 9), to a middle school (grades 6, 7, 8) in the summer of 2007. Byron is home to an ethnically diverse population: 22% of the students are English Language Learners and 68% are considered socioeconomically disadvantaged. The school has been in Program Improvement for the past five years. Currently, Byron Middle School has an Academic Performance Index of 689.
Byron students are assigned to interdisciplinary teams in which they receive daily instruction in reading, math, science, history, and physical education. Each academic class is approximately 55 minutes in length. In addition, students are enrolled in a 20-minute advisory class, and each student participates in a 55-minute elective course (music, technology, drama, or world language). The school’s website indicated that the academic curriculum is supplemented with extracurricular activities (clubs, tutoring, homework help, and athletics) linked with the after school care program.

Participating teachers from Byron Middle School all were tenured. Teacher credentials and course descriptions and curriculum are explained in Table 2.

As students move from sixth grade to eighth grade, Byron Middle school data show declines, like so many middle schools, in academics (mathematics and English Language Arts [ELA]), as evidenced on the California Standards Test from 2007 through 2010. Figure 1 shows these declines across two- and three-year periods in English Language Arts. In 2007, seventh grade ELA proficiency showed a small increase to 36%. The 2008 seventh graders left at 42% proficiency but declined to 37% during their 2009 eighth grade year. The pattern continues with the other cohorts. At the end of their sixth grade year in 2008, 43% of the sixth graders were scoring proficient or advanced but by the end of their seventh grade year in 2009, only 37% were scoring proficient and advanced. The cohort moved to 42% in 2010 as eighth grade students scored proficient or advanced on the English Language Arts section of the California Standards Test. Over the next year, 2011, in the number of proficient or advanced students dropped to 36% (2011) in eighth grade English Language Arts.
<table>
<thead>
<tr>
<th>Teacher Name</th>
<th>Subject Taught and Course Description</th>
<th>Credentials Held</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Harper</td>
<td>8&lt;sup&gt;th&lt;/sup&gt; Grade English - “Providing the opportunity for students to improve their reading and writing skills in an atmosphere of academic rigor and exploration. The course allows for students to take control of their learning.”</td>
<td>Multiple Subject/Supplemental English Cross Cultural Language &amp; Academic Development Certificate</td>
</tr>
<tr>
<td>Mrs. Tracy</td>
<td>8&lt;sup&gt;th&lt;/sup&gt; Grade Math (Algebra) - “We have highly qualified teachers, with great experience and excitement for their subject. Math is their business! All 8&lt;sup&gt;th&lt;/sup&gt; grade students are enrolled in, Algebra readiness, Algebra, or Advance Algebra.”</td>
<td>Single Subject/Mathematics Supplementary Computer Concepts and Applications Bilingual Certificate of Competence/Filipino</td>
</tr>
<tr>
<td>Mr. Klein</td>
<td>8&lt;sup&gt;th&lt;/sup&gt; Grade Physical Science - “An interactive class that will involve student making observations and testing their hypothesis. The students will work as scientist; the class has a large lab component.”</td>
<td>Single Subject/Science Biological Sciences Cross-Cultural, Language &amp; Academic Development</td>
</tr>
<tr>
<td>Ms. Bonofort</td>
<td>8&lt;sup&gt;th&lt;/sup&gt; Grade U.S. History - “Studying the colonial period through the start of the 20&lt;sup&gt;th&lt;/sup&gt; Century, pilgrims, witch burnings, Native Americans and the long-haired radicals who created the greatest democracy of all times.”</td>
<td>Single Subject/Social Studies Authorization /Introductory Spanish Bilingual, Cross-cultural Language and Academic Development</td>
</tr>
</tbody>
</table>
Most alarming were the mathematics proficiency or advanced levels (see Figure 2). In sixth grade, students began 34% (2008), 32% (2009), and 56% (2010) proficient or advanced in mathematics and by the eighth grade year the proficiency or advanced levels drop to 15% (2008), 17% (2009), and 35% (2010). Nearly half of the students attending Byron Middle School who began their middle school career at proficiency or advanced level in mathematics left Byron Middle School below mathematics proficiency level.

Brentwood Middle School has a total of 1,096 students. The student population is ethnically diverse. Thirteen percent of the students are English Language Learners and 60% are considered socioeconomically disadvantaged. Brentwood Middle School successfully exited Program Improvement status and received the California
Brentwood Middle School

Distinguished Schools recognition. Currently Brentwood has an Academic Performance Index (API) of 879.

Brentwood students are assigned to interdisciplinary teams in which they receive daily instruction in reading, math, science, history, and physical education. Each academic class is approximately 53 minutes in length. In addition, students are enrolled in a 30-minute advisory class, and each student participates in a 53-minute elective course (music, technology, art, world language, AVID, ASB, woodshop, reading, or writing). The school’s website indicated the academic curriculum is supplemented with extracurricular activities (clubs, tutoring, homework help, and athletics) linked with the after school care program and school-generated extended day enrichment programs.
Participating teachers from Brentwood Middle School were all tenured. Teacher credentials and course descriptions and curriculum are explained in Table 3.

Even though Brentwood Middle School is identified as high performing, declines in academics (mathematics and English Language Arts) are evident in some areas as students move from sixth grade to eighth grade. These declines are evidenced on the California Standards Test for English Language Arts 2008 through 2010 (see Figure 3). Brentwood Middle School students scored 64% (2008), 65% (2009), and 80% (2010) proficient or advanced in English Language Arts at the end of their sixth grade year, but by the time they leave eighth grade only 56% (2008), 67% (2009), and 74% (2010) are proficient or advanced in English Language Arts, resulting in an 8% decrease in 2008, a 2% increase in 2009, and a 6% decrease in 2010. Although these are small declines, it is expected that students’ test scores would increase as students get older and master the skills necessary for the workforce.

Mathematics scores at Brentwood did not follow the declining trends over the grade level expansion (see Figure 4). There was an increase in proficient or advanced levels in two of the years (20% increase in 2008 and 7% increase in 2009), but in 2010 proficiency in mathematics decreased by 7%. Over the three-year testing periods as students moved from 6th grade to 8th grade, students’ levels of proficiency increased.

The sources for the above demographic information came from each school’s Accountability Report Card (2009-2010) and the district’s website, which included schools within its boundaries. The researcher did not include citation for this information since it would reveal school name and violate participants’ confidentiality.
### Table 3
*Brentwood Middle School Teacher Credential and Course Descriptions*

<table>
<thead>
<tr>
<th>Teacher Name</th>
<th>Subject Taught and Course Description</th>
<th>Credentials Held</th>
</tr>
</thead>
</table>
| Miss Lake    | 8th Grade English - integrates reading, writing, listening and speaking. Students self-evaluate their progress through writing portfolios. Literature will be read from novels and textbooks centered around American writers which aligns to 8th grade U.S. History | - Multiple Subject  
- Single Subject/English  
- Cross-Cultural, Language and Academic Development |
| Mrs. Moss    | 8th Grade Math (Algebra) - Want all students to be confident in their ability to think mathematically. Provide a range of instruction in order to meet students’ individual differences. | - Preliminary Single Subject/Foundational Level Math |
| Mrs. Palm    | 8th Grade Physical Science - Students will learn about states of matter, atomic structure, periodic tables, chemistry of life, density, buoyancy, motion, forces and science investigations through demonstrations, co-operative learning, labs and research. Emphasis on critical thinking. | - Single Subject/Science: Biological Science  
- Authorization for Introductory Science |

(table continues)
Table 3 (continued)

<table>
<thead>
<tr>
<th>Teacher Name</th>
<th>Subject Taught and Course Description</th>
<th>Credentials Held</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Gage</td>
<td>8th Grade U.S. History - Examines US history from colonial period to the Industrial Revolution. Instruct students on information reading comprehension, historical information, and trends.</td>
<td>Single Subject/Social Science</td>
</tr>
</tbody>
</table>

Figure 3. Brentwood Middle School California Standards Test in English Language Arts 2006-2011.

**Research Question 1 Data Analysis**

Research Question 1: What do teachers know about the intellectual/cognitive, physical, social, emotional/psychological, and moral developmental characteristics of young adolescents?
For this study, a teacher’s level of knowledge referred to his or her ability to identify the intellectual/cognitive, physical, social, emotional/psychological, and moral developmental characteristics of young adolescents to behaviors that young adolescents exhibit. The researcher developed a 17-item Middle School Teacher Survey to measure the teacher’s level of knowledge of the developmental characteristics of young adolescents. The number of correct responses to the 17 items that identified 27 developmental behaviors measured a teacher’s level of knowledge.

Part A, of the survey consisted of five multiple answer items where the teacher had to identify the developmental characteristics of young adolescents. For each of the five multiple answer items, the participant had to choose three behaviors out of seven that corresponded to the identified developmental characteristic of young adolescents (see...
Appendix A: Middle School Teacher Survey. Tables 4 to 8 present the teachers’ responses to the first five items on the survey. In each of the tables the highlighted lines represent the correct answers.

Item 1: Identify the intellectual/cognitive characteristics of young adolescents.
All eight teachers, from Byron Middle School and Brentwood Middle School identified transition from concrete to abstract thinking as the intellectual/cognitive characteristic of young adolescents. More teachers from Brentwood Middle School identified correctly the behaviors associated with intellectual/cognitive characteristics of young adolescents (see Table 4).

Table 4

**Intellectual and Cognitive Characteristics of Young Adolescents**

<table>
<thead>
<tr>
<th>Developmental Characteristics as defined By Association for Middle Level Education</th>
<th>Byron Middle School Teacher</th>
<th>Brentwood Middle School Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Haper</td>
<td>X</td>
<td>Miss Lake</td>
</tr>
<tr>
<td>Mrs. Tracy</td>
<td>X</td>
<td>Mrs. Moss</td>
</tr>
<tr>
<td>Mr. Kline</td>
<td>X</td>
<td>Mrs. Palm</td>
</tr>
<tr>
<td>Ms. Bonofort</td>
<td>X</td>
<td>Mr. Gage</td>
</tr>
<tr>
<td>Transition from concrete to abstract thinking</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Need active learning experiences involving peer interaction</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Maturity - Girls mature faster than boys.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Prefer same sex friends.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Want independence, sense of belonging, still need guidance</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Begin to understand people who care about them</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Highly curious, broad array of interest</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Item 2: Identify the physical characteristics of young adolescents. For multiple answer item 2 of the Middle School Teacher Survey, six participants, two from Byron Middle School and four from Brentwood, were able to identify all of the physical characteristics of young adolescents (see Table 5).
Table 5

*Physical Characteristics of Young Adolescents*

<table>
<thead>
<tr>
<th>Developmental Characteristics as defined By Association for Middle Level Education</th>
<th>Byron Middle School Teacher</th>
<th>Brentwood Middle School Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ms. Harper</td>
<td>Mr. Tracy</td>
</tr>
<tr>
<td></td>
<td>Ms. Kline</td>
<td>Ms. Bonofort</td>
</tr>
<tr>
<td></td>
<td>Miss Lake</td>
<td>Mrs. Moss</td>
</tr>
<tr>
<td></td>
<td>Mrs. Palm</td>
<td>Mr. Gage</td>
</tr>
<tr>
<td>Rapid growth – Cause awkward, uncoordinated movement</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>High achievement when challenged and engaged</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Need to be accepted by others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preoccupied with themselves(sensitive) physical growth and maturity</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Personal problems, feelings and experiences are exclusively their own</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Interested in the present – instant gratification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ravenous appetites and peculiar taste – improper nutrition</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Item 3: Identify the emotional/psychological characteristics of young adolescents.

For multiple answer Item 3 on the Middle School Teacher Survey, one teacher from Brentwood Middle School identified the three behaviors associated with the emotional/psychological characteristics of young adolescents. Two of the participants from Byron Middle School did not identify correctly any of the emotional/psychological characteristics of young adolescents. All four teachers from Brentwood were able to identify at least two of the behaviors associated with the emotional/psychological characteristics of young adolescents (see Table 6).

Item 4: Identify the moral characteristics of young adolescents. All eight teachers, from Byron Middle School and Brentwood Middle School correctly identified two behaviors pertaining to the moral development in young adolescents (see Table 7).
Table 6

*Emotional and Psychological Characteristics of Young Adolescents*

<table>
<thead>
<tr>
<th>Developmental Characteristics as defined By Association for Middle Level Education</th>
<th>Byron Middle School Teacher</th>
<th>Brentwood Middle School Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ms. Harper</td>
<td>Mrs. Tracy</td>
</tr>
<tr>
<td>Idealistic and possess a strong sense of fairness in human relations.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Improved fine and gross motor skills.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Peer groups important – want to fit in and appear different.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Psychologically vulnerable because of so many differences in themselves.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Aware of the rights and feelings of others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeking independence searching for adult identity and acceptance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive outlook for their future make adolescents psychologically resilient</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Table 7

*Moral Characteristics of Young Adolescents*

<table>
<thead>
<tr>
<th>Developmental Characteristics as defined By Association for Middle Level Educations</th>
<th>Byron Middle School Teacher</th>
<th>Brentwood Middle School Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ms. Harper</td>
<td>Mrs. Tracy</td>
</tr>
<tr>
<td>Begin to consider complex moral and ethical questions, yet are unprepared to cope with them.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hormonal changes – Cause students to feel restless, moody and fatigued. (need to release energy often)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abstract thinking-ability to develop and test hypotheses, analyze and synthesize data, grapple with complex concepts and think reflectively.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development of personal values. Rely on parents or adults for guidance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reasoning skills and decision making abilities increase.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Seek autonomy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aware of flaws of others, but remain quiet about their own.</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Item 5: Identify the social characteristics of young adolescents. All eight teachers, from Byron Middle School and Brentwood Middle School correctly identified one behavior associated with the social development of young adolescents (see Table 8).

Table 8

Social Characteristics of Young Adolescents

<table>
<thead>
<tr>
<th>Developmental Characteristics as defined by Association for Middle Level Education</th>
<th>Byron Middle School Teacher</th>
<th>Brentwood Middle School Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moral issues seen in “shades of gray” instead of just black and white.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Look for new adults to confide in.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Independent thought increases-ability to self-reflect.</td>
<td>X X X X X X</td>
<td>X X X</td>
</tr>
<tr>
<td>Much rather be with their friends than their family.</td>
<td>X X X X X</td>
<td>X X X</td>
</tr>
<tr>
<td>Self-conscious and highly sensitive to personal criticism.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Desire recognition for their positive efforts and achievement.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Attracted to “bad behavior” (act out or join gangs). Invincible</td>
<td>X X X X X</td>
<td>X</td>
</tr>
</tbody>
</table>

Part B of the survey consisted of 12 items where the teacher had to match the student behavior to the developmental characteristic. The data are represented in Table 9.

There were 12 matching items in the second section of the survey. Nearly all of the participants identified correctly the questions categorized in the following areas: Item 2 (social) *Peer approval important*; Item 3 (intellectual/cognitive) *Respond to opportunities for participation in real life situations*; Item 4 (physical) *Puberty, awareness of their sexuality*; Item 5 (moral) *Development of personal values*; Item 8 (emotional/psychological) *Exhibits intense concern about physical growth and maturity*; Item 9 (moral) *Empathy and compassion for moral issues*; Item 10
Table 9

Teacher Responses to Part B Matching Behavior and Developmental Characteristics

<table>
<thead>
<tr>
<th>Identify as: Intellectual/Cognitive (I); Physical (P); Social (S); Emotional/Psychological (E); or Moral (M) Characteristic.</th>
<th>Byron Middle School Teacher</th>
<th>Brentwood Middle School Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ms. Harper</td>
<td>Mrs. Tracy</td>
</tr>
<tr>
<td>Easily discouraged</td>
<td>E</td>
<td>S</td>
</tr>
<tr>
<td>Peer approval important (will suffer embarrassment, mockery and rejection)</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Build upon their experiences and prior knowledge to make sense of the world around them.</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>Puberty, aware of their sexuality – preoccupied by changes and are magnified when compared to peers.</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>Development of personal values. Rely on parents or adult for advice.</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>Test parent values – take opposite view on issue.</td>
<td>E</td>
<td>S</td>
</tr>
<tr>
<td>Need active learning experiences involving peer interaction.</td>
<td>S</td>
<td>I</td>
</tr>
<tr>
<td>Exhibit intense concern about physical growth and maturity.</td>
<td>I</td>
<td>E</td>
</tr>
<tr>
<td>Empathy and compassion for moral issues (animal rights, environmental problems)</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>Think about the future, anticipate needs, and develop personal Goals.</td>
<td>E</td>
<td>I</td>
</tr>
<tr>
<td>Interested in and watch adults intensely.</td>
<td>M</td>
<td>E</td>
</tr>
<tr>
<td>Developing value system (exposed to negative values from media and cultural influences such as beauty, fame and wealth).</td>
<td>M</td>
<td>M</td>
</tr>
</tbody>
</table>

(intellectual/cognitive) Consider academic goals as a secondary level of priority; and

Item 12 (social) Developing value systems (exposed to negative values from media and cultural influences) which may compromise their ideas and values.

The majority of incorrect responses were given for Item 1 (intellectual/cognitive) Easily discouraged; Item 6 (moral) Test parent values-take opposite view of issues but
strongly dependent on parental values; Item 7 (intellectual/cognitive) Prefer active leaning experiences involving peer interaction; and Item 11 (intellectual/cognitive) Interest in and watch adults intensely.

Part C of the survey, presented in Likert-type scale, included five items focused on teacher beliefs and professional development. Using a 6-point scale range from “completely comfortable” to “completely uncomfortable,” two questions asked participants to respond to how comfortable they felt about teaching young adolescents and how comfortable they felt with the content they were teaching. In response to how comfortable teachers felt about teaching young adolescents, two teachers felt slightly comfortable, five teachers felt mostly comfortable, and one teacher reported feeling completely comfortable. All eight teachers reported that they were “completely comfortable” in teaching the subject content that they were assigned (see Table 10).

A third question measured how much time teachers spent reflecting on their ability to teach young adolescents. Teachers responded to a 5-point rating scale that represented a range from “always” to “never.” Five teachers reported that they rarely reflected on their ability to teach young adolescents, while three teachers stated that they “sometimes” reflected on their ability to teach young adolescents (see Table 10).

All eight teachers at Byron Middle School and Brentwood Middle School reported feeling completely comfortable when asked “How comfortable do you feel with the content you are teaching?” However, there were differences in how they reflected on their teaching and how comfortable they were in teaching young adolescents. Three of the teachers at Brentwood reported spending some time reflecting on their ability to teach
Table 10

*Teacher Beliefs*

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Comfort in Teaching Young Adolescents</th>
<th>Reflecting on Ability to Teach Young Adolescents</th>
<th>Content Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Byron Middle</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Harper</td>
<td>Slightly</td>
<td>Rarely</td>
<td>Completely Comfortable</td>
</tr>
<tr>
<td>Mrs. Tracy</td>
<td>Mostly</td>
<td>Rarely</td>
<td>Completely Comfortable</td>
</tr>
<tr>
<td>Mr. Klein</td>
<td>Mostly</td>
<td>Rarely</td>
<td>Completely Comfortable</td>
</tr>
<tr>
<td>Ms. Bonofort</td>
<td>Slightly</td>
<td>Rarely</td>
<td>Completely Comfortable</td>
</tr>
<tr>
<td><strong>Brentwood Middle</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miss Lake</td>
<td>Mostly</td>
<td>Sometimes</td>
<td>Completely Comfortable</td>
</tr>
<tr>
<td>Mrs. Moss</td>
<td>Mostly</td>
<td>Sometimes</td>
<td>Completely Comfortable</td>
</tr>
<tr>
<td>Mrs. Palm</td>
<td>Mostly</td>
<td>Sometimes</td>
<td>Completely Comfortable</td>
</tr>
<tr>
<td>Mr. Gage</td>
<td>Completely</td>
<td>Rarely</td>
<td>Completely Comfortable</td>
</tr>
</tbody>
</table>

young adolescents while teachers at Byron reported that they rarely reflected on their ability to teach young adolescents.

The fourth question asked about the training teachers had received on the developmental characteristics of young adolescents. All eight teachers reported “none” as to the specific training they had for meeting the intellectual/cognitive, physical, social, emotional/psychological, and moral needs of young adolescents. All eight teachers possessed a single subject credential or a supplemental credential in their content area,
and two teachers had a multiple subject credential, yet they reported not having received training to meet the developmental needs of young adolescents.

The fifth question, with a “yes” “no” response, asked if teachers received any training specific to young adolescents’ (age 10-15 years old) development during their coursework at the university. All eight participants responded “no” to having received training that was specific to young adolescents aged 10-15 years old in their credential coursework at the University.

The final section, Part D, consisted of two open-ended questions addressing specialized training received for educating young adolescents. This allowed participants to explain the reasoning for their responses. Participants reported having curriculum, language development, progress monitoring, and state standards training in all content areas that were specific to middle school and their grade level, but none that discussed the developmental needs of young adolescents.

**Research Question 2 Data Analysis**

Research Question 2: How do teachers align their knowledge of the developmental characteristics of young adolescents with their instructional practices and classroom environments?

a. What evidence is found in the classroom organization and climate?

b. What evidence is found in the lesson?

c. What evidence is found in the student assignments?

Research Question 2 allowed the researcher to look at ways in which the classroom environments, instructional strategies, and student assignments aligned with the developmental need of young adolescents and teacher knowledge.
For this study, the number of correct responses to the 17-item Middle School Teacher Survey measured teachers’ knowledge of the developmental characteristics of young adolescents. Classroom observations and collected artifacts provided evidence for how teachers used this knowledge in their classrooms to support their students. Following is an overview of each teacher’s classroom environment and the instructional practices he or she used. Each description links each sub-question to the categories identified in the research: (a) classroom organization and climate, (b) lesson plan objective, and (c) student assignments. Comparing teacher knowledge with their classroom environments revealed whether or not there was alignment between what they knew and what they did in the classroom.

**Byron Middle School: Mr. Harper**

Mr. Harper taught an eighth grade English class with 26 students. He correctly identified 16 adolescent behaviors out of 27.

**Classroom organization and climate.** Mr. Harper’s classroom structure was set up in a traditional manner. Mr. Harper stood at a podium at the front of the class waiting for the bell to ring. Students sat at round tables, four students to a table. Tables were clustered in the middle of the classroom. Mr. Harper had a desk at the front of the room and, once the bell rang, he sat to the right of his desk at a table with a computer, looking towards the students. The Promethean board was positioned in the background. The organizational structure of the classroom was set up for whole group instruction. It was evident that a routine had been established. As the teacher took attendance, students copied a warm-up activity on roots/suffixes from the board. Class rules or norms were not posted.
The classroom felt safe; the students were orderly coming into the classroom as they chatted with their friends. The teacher greeted a few students, asking how their day was going. He used student names to address them. As students entered the classroom, they gathered their materials from a crate on the south side of the room. Students sat quietly and looked towards the teacher. Every student had a notebook and pencil. There were respectful interactions between student/teacher and student/student.

The classroom was not clean. The student tables had lead markings on them. There were wadded up papers, scraps of food, and candy wrappers on the back shelf, which extended across the back of the classroom. The floors had not been swept, and scuffmarks covered the floor. A few posters were displayed in the classroom, e.g., a Glee Club announcement posted on the window by the door, a Chicago license plate above the doorway, and a chart with reading strategies. One wall displayed a student-created Coat of Arms (six months old); behind it was faded construction paper. There were no books or other instructional materials that were visible in the classroom.

**Lesson plan objective and instructional strategy.** Mr. Harper’s lesson plan objective was to analyze characters in literature. At the beginning of class the lesson plan objective was expressed verbally to students. Students were asked to take “notes” about character analysis since they would be writing a character analysis from a text that they “would be reading in the near future.” Students complied with the request, taking out their journals and copying from the board what the teacher was writing. As the teacher started to write, he said “I want you to take notes on what is written here, but I will say it in a more friendly way so you can really understand what the prompt is about.” Students
were not asked to verbalize the objective or explain the purpose of the lesson. The instructional strategy used was to have the students copy what the teacher was writing.  

**Student assignment.** Students were directed to take notes in their writing journal. The teacher’s notes had been prepared on PowerPoint slides, and he projected each slide on the board as he talked about the significance and value of character analysis. Students participated by copying the notes. The teacher allowed approximately five minutes for students to replicate each of the slides. He would stop and ask, “Did everyone copy this?” If enough of the students replied positively, he would go on to the next slide. Four times during the lesson he asked for the meaning of a word (analyze, credible, conflict, and resolution). He would give students a very short time to answer. If they did not respond, he would define the word. Students did not volunteer to answer his questions; most students just sat back and copied from the board. After 45 minutes of teacher talking and students copying from the PowerPoint slides, the students were told that tomorrow they would “be answering those questions about a text that we will be reading.” The period continued with students checking their responses to the warm-up activity that was given at the start of the period. A few students offered the correct responses.  

Mr. Harper’s classroom and the instructional practices that supported the developmental needs of young adolescents as identified by the Association for Middle Level Education are summarized in Table 11.  

**Byron Middle School: Mrs. Tracy**  

Mrs. Tracy taught an eighth grade Algebra class with 28 students. She correctly identified 19 adolescent behaviors out of 27.
### Mr. Harper's Classroom and Instructional Supports

<table>
<thead>
<tr>
<th>Developmentally Responsive Environments and Instructional Practices Found in the Classroom</th>
<th>Intellectual/ Cognitive Supports</th>
<th>Physical Supports</th>
<th>Emotional/ Psychological Supports</th>
<th>Social Supports</th>
<th>Moral Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round Tables- 4 students per table</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Established Routine</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe Environment</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greet Students</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Used Student Names</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respectful Interactions</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Classroom organization and climate.** Mrs. Tracy’s classroom structure was set up in a traditional manner. Students sat at a desk made for two; desks faced the front of the room towards the teacher. There were five rows of desks, with eight students sitting in a row. On each desk were two mathematics textbooks. Mrs. Tracy had a desk at the back of the room but sat at a table with a document camera and a computer that was set up in front of the classroom. Once the bell rang she sat at the table with a computer,
taking attendance. A projector screen was positioned in the background. The organizational structure of the classroom was set up for whole group, direct instruction. Class rules or norms were posted.

The classroom felt safe and was clean; the students were orderly coming into the classroom as they chatted with their friends. The teacher greeted a few students. She used student names to address them. There was evidence that a routine had been established: As students entered, they took out their notebooks and began their “warm up” activity. When they finished the activity, students sat quietly and looked towards the teacher.

Lesson plan objective and instructional strategy. Mrs. Tracy’s lesson plan objective was the following: Given the lengths of two sides of a right triangle, students will be able to calculate the unknown side of the triangle. At the beginning of class, the lesson plan objective was expressed verbally to the students and was also written on the white board. Students were asked to take “notes,” and they copied what was projected on the screen. As Mrs. Tracy talked, she discussed the Pythagorean theorem, giving examples as students copied into their notebooks. Mrs. Tracy also defined inductive and deductive reasoning with students. The teacher had a prepared PowerPoint slide show and went through each slide in detail. Mrs. Tracy then gave students a handout explaining that she would do problems one and two with them, but they should also do it at their seats with her. After the students and Mrs. Tracy worked on problems one and two together, Mrs. Tracy told students that they had done a “good job” in learning and practicing the Pythagorean theorem. She asked if there were any questions and handed
out another worksheet on this same material that students were to complete for homework.

**Student assignment.** Students knew to take notes in their mathematics notebook. The teacher’s notes were prepared on PowerPoint slides, and she projected each slide on the board as she discussed the Pythagorean theorem. Students participated by copying the notes. Mrs. Tracy allowed approximately 20 minutes for students to replicate the notes. During the 20 minutes the teacher was speaking most of the time. Students asked very few questions. In the practice section of the lesson, students participated by completing calculations and simplifying algebraic expressions. A few students volunteered to answer her questions. Most just sat back and copied from the board. After 50 minutes of teacher talking and students copying from the PowerPoint and practice, students were given a homework worksheet. As students waited for the bell, the teacher gathered her notes and students talked quietly amongst themselves. When the bell rang, the teacher called out “See you tomorrow for more fun!”

Mrs. Tracy’s classroom environment and the instructional practices that supported the developmental needs of young adolescents as identified by the Association for Middle Level Education are summarized in Table 12.

**Byron Middle School: Mr. Klein**

Mr. Klein taught eighth grade physical science to 30 students. He correctly identified 18 adolescent behaviors out of 27.
Table 12

*Mrs. Tracy’s Classroom Environment and Instructional Supports*

<table>
<thead>
<tr>
<th>Developmentally Responsive Environment and Instructional Practices Found in the Classroom</th>
<th>Intellectual/ Cognitive Supports</th>
<th>Physical Supports</th>
<th>Emotional/ Psychological Supports</th>
<th>Social Supports</th>
<th>Moral Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established Routine</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe Environment</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greet Students</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom Rules Posted</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used Student Names</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Contact with Students</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respectful Interactions</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean Classroom</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Classroom organization and climate.** Mr. Klein’s classroom structure was set up in a traditional manner. Students sat at double desks, facing the front of the room towards the teacher. There were five rows of desks, with six students in a row. The teacher sat at a tall “island” at the front of the room.

The day’s agenda, lecture topic, and homework were posted on the front board. Also on the board was the “SOC” (Start of Class activity). The island included a
computer and projector. Once the bell rang Mr. Klein sat at the table with a computer, taking attendance. A projector screen was positioned in the background. The organizational structure of the classroom was set up for whole group, direct instruction. Goggles and lab equipment were placed on the shelves around the room. One bookcase stored the students’ science textbooks. Class rules or norms were posted.

The classroom felt safe; the students were orderly coming into the classroom as they chatted with their friends. The teacher stood by the door and greeted a few students, asking how their day was going. Mr. Klein used student names to address them. As he looked at the clock, he called out to students who were still in the hallway, “The bell’s going to ring, you better not be late.” Students hurried into the classroom. There was evidence that a routine had been established. Every student had a notebook and pencil, and they took out their previous homework assignments and laid them out on the desk. The teacher quickly recorded attendance and went from desk to desk placing a stamp on the homework. One student did not have his homework and the teacher asked him to come in during lunch for detention. As students were completing their tasks, a few began to talk to each other; Mr. Klein quickly reminded them that there was “No talking.” There were respectful interactions between student/teacher and student/student.

The classroom was clean. A few posters were displayed in the classroom, e.g., scientific evidence, a periodic chart of elements, the metric system, and a poster that described what scientists do. There were six computers on a bookcase in the back of the classroom with no evidence of use since they were unplugged.

**Lesson plan objective and instructional strategy.** Mr. Klein’s lesson plan objective was general lab safety. At the beginning of class, the lesson plan objective was
verbally expressed to students: “Today’s lecture is on safety, safety in the lab. Although we will not be using the lab this year, your teachers are going to love you when you get to high school and already know how to be safe in the lab.” Students were asked to take out their notebooks and take “notes.” Mr. Klein indicated that eight basic safety procedures would be tested on Friday so it was important for students to know them. The teacher presented his safety procedures on PowerPoint slides as students copied the information in their notebooks. As each procedure was displayed, the teacher read out loud the slide information and walked around the room ensuring that each student was copying the information. A few students asked very silly, irrelevant questions, which the teacher ignored. This activity lasted 30 minutes. Students then were asked to open their notebooks to the periodic table notes; they were going to review the elements since they would be having a test on Friday. Mr. Klein called out the element and students had to give him the atomic number. Students needed to raise their hand to participate. Each time a student answered, the teacher repeated what the student said. Mr. Klein encouraged the students by saying, “Raise your hand, and raise your hand.” When the hands from the same students continued to be raised, he shouted “Oh come on, more hands! The number above is the atomic number!” A few more hands went up. This review lasted for about 10 minutes. Mr. Klein ended his lesson by reminding students of the test on Friday (today was Monday) and that they would have a notebook check tomorrow. The bell rang, and students exited.

**Student assignment.** Students were directed to take notes in their science notebook. Teacher’s notes were prepared on PowerPoint slides, and he projected each one on the board as he talked about the safety procedures used in a laboratory. Students
participated by copying the notes and looking at the pictures of students that were presented in the PowerPoint. The teacher allowed approximately five minutes for students to replicate each of the notes while he walked around to ascertain whether everyone had copied each procedure. Students did not ask questions pertaining to the lecture. The first half of class students participated only by copying the teacher’s PowerPoint. One student kept asking why they needed to know this, and Mr. Klein replied each time, “Trust me; you’re going to need this.” Most students just sat back and copied from the board.

The second assignment given was for verbal participation in identifying the atomic number to an element. Only a few students participated in answering the questions. Most students appeared to be looking at the periodic table in their notebook.

Mr. Klein’s classroom environment and the instructional practices that supported the developmental needs of young adolescents as identified by the Association for Middle Level Education are summarized in Table 13.

**Byron Middle School: Ms. Bonofort**

Ms. Bonofort taught U.S. History to an eighth grade classroom of 26 students. She correctly identified 16 adolescent behaviors out of 27

**Classroom organization and climate.** Ms. Bonofort’s classroom structure was set up in a traditional manner. This was a very small sized classroom with 28 students. Ms. Bonofort and an instructional assistant stood by the door and watched students come in as they waited for the bell to ring. Students sat at double desks, which were arranged in rows facing the front of the room. A round table was to the left of the doorway. Ms. Bonofort had a teacher desk at the front of the room and a small table with a projector
Table 13

Mr. Klein's Classroom Environment and Instructional Supports

<table>
<thead>
<tr>
<th>Developmentally Responsive Environments and Instructional Practices</th>
<th>Intellectual/Cognitive Supports</th>
<th>Physical Supports</th>
<th>Emotional/Psychological Supports</th>
<th>Social Supports</th>
<th>Moral Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established Routine</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Safe Environment</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Rules Posted</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Greet Students</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used Student Names</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Respectful Interactions</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean Classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

and computer in the middle of the classroom. Once the bell rang, she sat at the computer taking attendance and asked students to retrieve their textbooks. Textbooks were on a bookshelf so students had to get up to get their own book. During this transition, students were very social with each other. The organizational structure of the classroom was set up for whole group instruction with the possibility of individual and small group instruction at the round table with the instructional assistant. There were no class rules or norms posted. A monthly calendar, history standards, and the current assignment were posted on the whiteboard in the front of the class.
The classroom felt safe; the students were orderly coming into the classroom as they chatted with their friends. The teacher greeted a few students as they entered the room. There was evidence that a routine had been established; as students entered they gathered their materials from their backpacks. They sat quietly and looked towards the teacher. There were respectful interactions between student/teacher and student/student.

The classroom walls displayed four posters of presidents: Thomas Jefferson, Alex Hamilton, John Adams, and George Washington. Another bulletin board displayed faded pictures and letters announcing National Women’s History Month, with pictures of Rita Monroe, Katherine Ortega, Gloria Esteban, Denise Chavez, and Margaret Thatcher. On one bookshelf there were bins of books for reading; most of the titles were early primary readers and most at a second grade level. Only eight of the books related to history. While students waited to begin class, the teacher stressed the importance of “being quiet.”

**Lesson plan objective and instructional strategy.** Ms. Bonofort’s lesson plan objective called for students to learn about the pioneer experience on the Oregon Trail and compare and contrast modern day travel experiences with travel experiences of the 19th century. The researcher did not observe a lesson. Instead, the teacher asked the students to open their textbooks to page 308 and directed them to read and outline the chapter “Trails of the West.” Then the teacher walked around the classroom, table to table, making sure that students were completing the assignment. The assistant in the classroom called students over to her. She had a copy of an outline, and students replicated what she had written. At the end of the period, Ms. Bonofort put the textbook on the overhead and highlighted six words for “vocabulary” - *corridor, cholera,*
westward expansion, hardship, pioneer, and trail. She asked students to give a definition as she read each word out loud. She concluded the lesson by saying that outlines are very important and students will need these in the future for studying. The bell rang and students left the room.

**Student assignment.** Ms. Bonofort asked students to read and outline the chapter “Trails of the West” beginning on page 308. She directed them to use the format that was shown on the board:

I. The Oregon Trail
   a.
   b.
   c. etc.

This assignment continued for 45 minutes. Students sat and quietly talked to each other. They took turns going out for a drink of water or a trip to the bathroom. Some students sat staring at the book. Ms. Bonofort continued walking around room, stressing that students should remain quiet, and she checked in with students as to what they were doing.

Ms. Bonofort’s classroom environment and the instructional practices observed that supported the developmental needs of young adolescents as identified by the Association for Middle Level Education are summarized in Table 14.

**Brentwood Middle School: Miss Lake**

Miss Lake taught eighth grade English to a class of 28 students. She correctly identified 20 adolescent behaviors out of 27.
Table 14

Ms. Bonofort’s Classroom Environment and Instructional Supports

<table>
<thead>
<tr>
<th>Developmentally Responsive Environment and Instructional Practices found in the Classroom</th>
<th>Intellectual/ Cognitive Supports</th>
<th>Physical Supports</th>
<th>Emotional/ Psychological Supports</th>
<th>Social Supports</th>
<th>Moral Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established Routine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Safe Environment</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Used Student Names</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Respectful Interactions</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Greet Students</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Classroom organization and climate.** Miss Lake’s classroom structure was arranged such that students were grouped at tables of four. The tables angled, facing the front of the class. A screen was pulled down, and there was a table with a document camera, computer, and projector. There were eight computers lining the east wall, and a round table on the west side of the room. Miss Lake had a desk in the back of the room. The organizational structure of the classroom was arranged for whole group instruction, direct instruction, and co-operative and small group instruction. It was evident that a routine had been established. As the teacher took attendance, students worked on a crossword puzzle. Class rules or norms were posted by the front door.

Miss Lake stood at her door and in the hallway during passing period. Students passing by would wave and say “Hi.” She greeted her students by name as they entered
the class. Students talked quietly amongst themselves, taking out their materials. On their desk was a worksheet, which students attended to without being told. When the bell rang, Miss Lake came in and took attendance as students worked on their crossword puzzle. Students continued chatting quietly as they did their work. The activities that were given to students were at a quick pace, and students moved quickly from task to task. The climate evidenced respect for the teacher and among the students. Every student was involved in an activity. The teacher quickly took attendance and counted down, “3-2-1. Okay, what was one across…?” She quickly asked students for their answers and looked across student tables to verify they had completed the work.

Motivational posters surrounded the room featuring Michael Jackson, Lady Gaga, and a few other people. Students’ progress reports were posted on one of the bulletin boards with the heading: “Is this who you strive to be?”

**Lesson plan objective and instructional strategy.** Miss Lake’s lesson plan objective was as follows: Students will study a short story and examine how, through writing, an author can comment directly/indirectly on our society as a whole. Students will develop an awareness of the problems/concerns facing our society and an appreciation of how a skilled writer can mirror society's ills and sometimes offer solutions for the problems that plague us.

At the beginning of class the lesson plan objective was expressed verbally to students. Miss Lake started the lesson by discussing a previous reading, “Do you recall reading the article about a problem being experienced in some middle schools? Kids wear uniforms in an attempt to stop school violence. Some students had been attacked by others because of the type of tennis shoes or jackets worn.” Miss Lake had students
discuss and share their feelings about problems that take place in some schools. She then stated that they were going to read a short story titled “Thank You, Ma’am” by Langston Hughes. She gave the students a quick summary of what the story was about: “a boy who wants things he doesn’t have.” After giving students about 10 minutes to read the story, she gave the students four questions that they were to use for discussion in their groups. During this time Miss Lake walked around the tables, listening and taking notes about the discussions. Students then shared out loud their ideas as a group. Miss Lake ended the lesson by telling the students to take the story home and think about how they would describe the characters and what they might be like, how they felt, and what the characters might do next. She explained that the next day they were going to act out this scenario and analyze the problems that these characters faced. The bell rang and students left the room.

**Student assignment.** The students began by looking at the vocabulary generated in a crossword puzzle. Students seemed to know that this assignment was to be done quickly, and immediate feedback was given as students checked their work. The second assignment involved going back to a previous reading and discussing their previous learning. This allowed students to connect the new learning to the previous lesson, which reinforced logical thought process. The summary of the story created interest for the students and helped students identify emotions related to their own experiences. Once students read the story, they discussed possible endings together as a small group and then as a whole group. All students were engaged and completed the assignments.
Miss Lake’s classroom environment and the instructional practices observed that supported the developmental needs of young adolescents as identified by the Association for Middle Level Education are summarized in Table 15.

**Brentwood Middle School: Mrs. Moss**

Mrs. Moss taught Algebra to 27 eighth grade students. She correctly identified 19 adolescent behaviors out of 27.

**Classroom organization and climate.** Mrs. Moss’ classroom structure was set up in a traditional manner with rows of desk facing the front of the class. Two students sat per double desk. A screen was pulled down, and Mrs. Moss had set up a table with a document camera, computer, and projector. There were eight computers lining the east wall, and a round table at the back of the room. The organizational structure of the classroom was arranged for whole group instruction, independent instruction, and cooperative and small group instruction. It was evident that a routine had been established.

As the teacher took attendance, students worked on three warm-up problems written on the board. Class rules or norms were posted by the front door.

Mrs. Moss stood at her door and in the hallway during the passing period. She greeted a few students by name as they entered the class. Students talked quietly amongst themselves while taking out their materials. When the bell rang, Mrs. Moss took attendance as students worked in their journals on the three posted problems. Students continued chatting quietly as they did their work. The climate was that of respect toward the teacher and toward each other. Every student was involved in an activity. Motivational posters surrounded the room as well as charts that demonstrated the mathematical concepts that students were working on. Students’ benchmark results
Table 15

*Miss Lake's Classroom Environment and Instructional Supports*

<table>
<thead>
<tr>
<th>Developmentally Responsive Environment and Instructional Practices found in the Classroom</th>
<th>Intellectual/ Cognitive Supports</th>
<th>Physical Supports</th>
<th>Emotional/ Psychological Supports</th>
<th>Social Supports</th>
<th>Moral Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tables- Group of 4 Students per Table</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Established Routine</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe Environment</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom Rules Posted</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Greet Students</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used Student Names</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respectful Interactions</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Contact</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean Classroom</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posters- Motivational, Identity</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Quick Pace</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 15 (continued)

<table>
<thead>
<tr>
<th>Developmentally Responsive Environment and Instructional Practices found in the Classroom</th>
<th>Intellectual/Cognitive Supports</th>
<th>Physical Supports</th>
<th>Emotional/Psychological Supports</th>
<th>Social Supports</th>
<th>Moral Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Level Thinking Skills – Grapple with Complex Problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whole Group</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Instruction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson Objective</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real Life Analysis</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Small Group</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Discussion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participative Atmosphere</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Accountability</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Student centered rather than teacher centered</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students discover information</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
posted on one bulletin board showed progress from benchmark one to benchmark three for all students. The classroom was clean and orderly. Textbooks lay on student desks. Two other bulletin boards contained student work, both individual and group posters. The activities that were assigned to students were at a quick pace, and students moved quickly from task to task.

**Lesson plan objective and instructional strategy.** Mrs. Moss’s lesson plan objective was for students to review concepts from the previous two weeks in preparation for the California Standards Test (CST). Soon after Mrs. Moss finished with her attendance, she asked for a student volunteer to facilitate checking the warm-up activity. One student was selected when she came to the front of the room and asked, “What can you tell me about problem one?” Students begin to describe the kind of problem it was and what steps were needed to solve the equation. Once this process was completed for all three problems, the teacher verbally gave the lesson plan objective for the day to the students: “Today we are reviewing concepts that will be presented to us during the CST in just a few weeks. It is very important that if you have questions with what you are doing, that you ask me for help. Remember, you can come in during lunch or after school.” Students then were assigned to one of three groups. The groups were posted on the wall so students knew where to go. One group went to the computers, one group worked in groups of four with a game, and one group joined the teacher. Mrs. Moss brought closure to the lessons by reminding the students that they would soon be tested and that they needed to think about all the work they had done this year and how prepared they were for the assessment. Students said goodbye and exited the room.
**Student assignment.** The students who worked with the teacher received a test booklet that they had used the day before. The test had been graded. Mrs. Moss asked students to talk about the problems that they had missed: “I want to hear your thinking. Tell me how you got to the answer you chose.” Mrs. Moss took notes as students discussed what they had done. Students in the group joined in to help explain the concept; a few said they “got that one wrong, too.” The students working at the computer had a login number and the math activity was selected for them. The students who divided into two groups worked on a mathematical game using the calendar to create algebraic equations. This rotation lasted 15 minutes. After 20 minutes the teacher received a new group; the game group went to the teacher, the teacher’s group went to the computer, and the computer group went to the game.

Mrs. Moss’ classroom environment and the instructional practices observed that supported the developmental needs of young adolescents as identified by the Association for Middle Level Education are summarized in Table 16.

**Brentwood Middle School: Mrs. Palm**

Mrs. Palm taught eighth grade science to a class of 29 students. She correctly identified 17 adolescent behaviors out of 27.

**Classroom organization and climate.** Mrs. Palm’s classroom structure was set up in a traditional manner with rows of science desks facing the front of the class. Two students sat at each double desk. A screen was pulled down in front of the class. A projector was mounted on the ceiling, and there was a computer as well as the teacher’s stool and materials at the science workstation. There were eight computers on a counter at the back of the classroom and a teacher’s desk to the back of the room. Science lab
Table 16

*Mrs. Moss' Classroom Environment and Instructional Supports*

<table>
<thead>
<tr>
<th>Developmentally Responsive Environment and Instructional Practices found in the Classroom</th>
<th>Intellectual/ Cognitive Supports</th>
<th>Physical Supports</th>
<th>Emotional/ Psychological Supports</th>
<th>Social Supports</th>
<th>Moral Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established Routine</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe Environment</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greet Students</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used Student Names</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respectful Interactions</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students Talking Quietly While Doing Assignment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Participative Atmosphere</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Motivational Posters</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Textbooks on Desk</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student as Facilitator</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

(table continues)
Table 16 (continued)

| Developmentally Responsive Environment and Instructional Practices found in the Classroom |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Posting of Student              | X                               | X                               | X                               |                                 |                                 |
| Progress/Student Work on Display|                                 |                                 |                                 |                                 |                                 |
| Lesson Objective                | X                               | X                               |                                 | X                               |                                 |
| Small Group Instruction         | X                               | X                               | X                               | X                               | X                               |
| Opportunities for Abstract Thinking, Grapple with Complex Problem and Think Reflectively | X                               |                                 | X                               |                                 | X                               |
| Time for Reflection             | X                               |                                 |                                 |                                 |                                 |
| Discover Info rather than Being Fed Info | X                               |                                 | X                               |                                 |                                 |
materials were organized throughout the room. Student textbooks were on the desktops. There were boxes labeled Periods 1, 2, 3, 5, and 6, which contained student science journals. The organizational structure of the classroom was arranged for whole group instruction. It was evident that a routine had been established. Class rules or norms were posted by the front door. A chart displaying students’ proficiency levels was posted on the bulletin board by the front door.

Mrs. Palm stood at her door and in the hallway during passing period. She greeted a few of her students by name as they entered the class. Students talked quietly among themselves, retrieving their science notebooks before sitting down. When the bell rang, Mrs. Palm took attendance as students copied their homework assignment from the board. The activities assigned to the students were delivered at a quick pace, and students moved quickly from task to task. The climate was that of respect for the teacher and for each other. Every student was involved in an activity. Motivational posters were visible around the room as well as charts that evidenced the scientific concepts that students were exploring. The classroom was clean and orderly, and student work was displayed around the classroom.

**Lesson plan objective and instructional strategy.** Mrs. Palm’s lesson plan objective was the following: Students will relate all matter to having atoms and will be able to explain the basic structure of atoms. Mrs. Palm began her lesson with a model of the atom. She asked, “What is this?” Students began responding as the objectives of the unit were posted for the students on a large chart. Also posted were vocabulary words and a chart with the names and symbols for elements 1-20, 26-29, 47, 51, 79, 82, 92, and 94. Mrs. Palm then discussed protons, neutrons, nucleus, and electrons. Each student
received a periodic table of his or her own to add to his or her notebook. Using the periodic table, Mrs. Palm discussed the different elements and how they relate to the model of the atom. She then explained how to identify the number of protons, electrons, and neutrons and the physical differences between the elements on the table. When she showed a video on Atomic Structure, *The Modern Model of the Atom*, students were able to see what she had explained. Handouts were given for practice in identifying the elements.

**Student assignment.** When students entered the room, they copied their homework assignment from the board. Mrs. Palm began the lesson with a model of an atom. Students were asked to identify protons, neutrons, and electrons using information found on the Periodic Table. The teacher’s notes were prepared on PowerPoint slides, and she projected each slide on the board as she discussed atoms. Students participated by taking notes in their notebooks. As Mrs. Palm delivered the lesson, students listened and jotted down interesting items from the discussion. Mrs. Palm showed a video on the atomic structure, stopping the video to answer questions from students or to emphasize important points. In the practice section of the lesson, students participated by completing together with the teacher the element identification handout. When the bell rang and students responded “ahhh,” Mrs. Palm said, “Don’t worry, we will do much more this week. See you tomorrow.”

The assignment emphasized critical thinking through reading and speaking. Opportunities for decision-making were given as students decided which notes to take. Students’ interest was captured further when Mrs. Palm brought up nuclear power and how they would be discussing that soon. Mrs. Palm’s classroom environment and the
instructional practices observed that supported the developmental needs of young adolescents as identified by the Association for Middle Level Education are summarized in Table 17.

**Brentwood Middle School: Mr. Gage**

Mr. Gage taught eighth grade history to a class of 25 students. He correctly identified 18 adolescent behaviors out of 27.

**Classroom organization and climate.** Mr. Gage’s classroom was organized with four rows of desks in a theater style arrangement. The desks were facing a screen and a white board, giving the room a lecture hall feeling. A glass bookcase with textbooks and several other history books spanned the east-facing wall. In the bookcase was an American flag. The classroom had a built-in workstation on the west-facing wall where Mr. Gage placed his teaching materials and where different history books were displayed. Extra pencils lay in a basket.

The following quotation stretched across the back of the room in large letters and caught attention immediately upon entering the classroom: “No one is born a good citizen; no nation is born a democracy. Rather, both are processes that continue to evolve over a lifetime. Young people must be included from birth. A society that cuts itself off from its youth severs its lifeline,” Kofi Annun, Former UN Secretary-General.

Mr. Gage stood at his door and in the hallway during passing period. He greeted almost all of his students by name as they entered the class. Students came in quietly, taking out their materials. When the bell rang, Mr. Gage took attendance as students opened their textbooks to the page designated on the board. The established routine was evident from the moment students entered the classroom. The climate was one of respect
Table 17

*Mrs. Palm Classroom Environment and Instructional Supports*

<table>
<thead>
<tr>
<th>Developmentally Responsive Environment and Instructional Practices found in Classroom</th>
<th>Intellectual/ Cognitive Supports</th>
<th>Physical Supports</th>
<th>Emotional/ Psychological Supports</th>
<th>Social Supports</th>
<th>Moral Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established Routine</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe Environment</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greet Students</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used Student Names</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respectful Interactions</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom Organized, Equipment Organized</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students Proficiency Scores Posted</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textbooks or Instructional Materials Visible</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Whole Group Instruction/ Participatory Atmosphere</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson Objective</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standards Based</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curricula Around Real World Concepts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

(table continues)
Table 17 (continued)

<table>
<thead>
<tr>
<th>Developmental Responsive Environment and Instructional Practices found in Classroom</th>
<th>Intellectual/ Cognition Supports</th>
<th>Physical Supports</th>
<th>Emotional/ Psychological Supports</th>
<th>Social Supports</th>
<th>Moral Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivational Posters Around Room</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Student Work Displayed</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Teacher Use of Academic Language</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of Visuals</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

for the teacher and among students. Every student was involved in an activity. Once attendance was completed, Mr. Gage started the assignment and stated the objective for the day. Posters surrounding the room featured the constitution, historic landmarks, and the U.S. Bill of Rights. The subject matter students were working on was evident throughout the room. Student work was displayed on one of the bulletin boards. As students responded to a “jeopardy” game, they seemed confident. The classroom was clean and orderly.

**Lesson plan objective and instructional strategy.** Mr. Gage’s lesson plan objective was for students to review Chapters 8 and 9 in preparation for the CST assessment. Mr. Gage began the class with a jeopardy game format, which included many historical facts under the headings Landmark Cases, Issues and Events, Causes of the American Revolution, Important People, and Why 13 Colonies? Students would
quickly raise their hand if they knew the answer. The first student to raise his or her hand received a point when he or she answered the question. Mr. Gage changed the answering method throughout the activity. This activity lasted about 15 minutes. The next activity included ways for students to practice making conclusions and generalizations by reading a famous short debate and identifying which position the debate supported. Students worked in groups of six. The lesson ended with Mr. Gage reminding students to continue reviewing their notes and textbooks because the CST would be a comprehensive assessment of the whole year.

**Student assignment.** Mr. Gage’s lesson called for review of previously learned material. The jeopardy game required quick thinking. He allowed students to use their notes or textbooks as supports to retrieve the information. He used differentiated techniques as he changed the method of responding. The lesson began by calling on the first student who raised his or her hand to answer, then transitioned to the teacher calling on a student, and subsequently transitioned to waiting for everyone to answer (after all hands were up). Student assignments involved higher-level thinking skills as students were given short position papers to read, collaborate about, and prepare for presentation, which required teamwork, critical thinking, and communication skills. The assignment allowed students to work together and keep student centered. The teacher did assign the groups, but the students were given opportunities to think critically and have autonomy over their work. Mr. Gage told them that they had 20 minutes to read and prepare their presentation with the author’s viewpoint in mind. As one group presented, the others listened and were ready to discuss which side was being presented. All students
participated by reading a part of the debate or directing the conversation amongst the students.

Mr. Gage’s classroom environment and the instructional practices observed that supported the developmental needs of young adolescents as identified by the Association for Middle Level Education are summarized in Table 18.

Research Question 3 Data Analysis

Research Question 3: What, if any, are the differences in classroom environments and instructional practices of a high performing middle school and a low performing middle school?

Research Question 3 investigated differences found in the classroom environment and the teachers’ instructional practices of the high performing school and the low performing school. The differences were measured using the Classroom Observation Tool, field notes, and artifacts collected through classroom observations. Data were then read again and coded, and the codes were collapsed into broader themes (Creswell, 2005). Four themes emerged from the triangulation of the data: (a) whole class task organization, (b) learning climate, (c) teacher control and discipline, and (d) student assignments. The data suggested that some middle school classrooms offer poor stage-environment fit: (a) whole-class task organization at a time when adolescents have more individualized needs, (b) a learning climate which does not include high expectations, caring relationship, and active participation, (c) emphasis on teacher control and discipline when the adolescent desires more autonomy, and (d) student assignments requiring lower-level cognitive skills at a time when adolescents have the ability to grapple with complex concepts and thinking.
Table 18

*Mr. Gage's Classroom Environment and Instructional Supports*

<table>
<thead>
<tr>
<th>Developmentally Responsive Environment &amp; Instructional Practices found in the Classroom</th>
<th>Intellectual/Cognitive Supports</th>
<th>Physical Supports</th>
<th>Emotional/Psychological Supports</th>
<th>Social Supports</th>
<th>Moral Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Rows of Desks, Theater Style</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Established Routine</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe Environment</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greet Students</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used Student Names</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respectful Interactions</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Classroom Organized, Equipment Organized</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used Game to Reinforce Learning</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Textbooks or Instructional Materials Visible</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Developmentally Responsive Environment &amp; Instructional Practices found in the Classroom</th>
<th>Intellectual/ Cognitive Supports</th>
<th>Physical Supports</th>
<th>Emotional/ Psychological Supports</th>
<th>Social Supports</th>
<th>Moral Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Group</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Instruction/ Participatory Atmosphere Small Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson Objective</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standards Based</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curricula around Real World Concepts</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivational Posters around Room</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Student Work Displayed</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Teacher Use of Academic Language</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using Visuals</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Different Methods for Answering</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
In the next section of this chapter, each theme is identified and a comparison of findings by teacher is presented. Then each theme is summarized with a comparison between the two schools.

**Whole Class Task Organization**

Whole class task organization is a modified form of classroom lecture where the focus of the lesson is shared between the teacher and the students for the transfer of information. Typically, the teacher stands before the class and presents information for the students to learn. It was evident from the classroom observations that the organizations of all eight classrooms were mainly whole class grouping. The instructional strategies did change, however, between the low performing school and the high performing school. The following section discusses how each school used whole task grouping.

**Byron Middle School.** The whole class task organization within Byron Middle School offered students opportunities to copy notes from PowerPoint slides created by their teachers. In three classrooms, copying from the board was the task given to all students. The fourth class required students to outline a chapter in their textbook. Teachers covered the content and offered few opportunities for students to pose or answer questions. The furniture arrangement in all four classrooms suggested that the important things happened at the front of the room and that the teacher was the center of it all. However, the round tables in one of the classrooms hinted that collaborative and small group activities could take place within that classroom. Table 19 provides a description of the observations.
Table 19

*Whole Class Task Observation at Byron Middle School (Low Performing)*

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Teachers Position in Classroom</th>
<th>Delivery of Lesson</th>
<th>Student Task</th>
<th>Individualized Instruction</th>
<th>Collaboration Among Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Harper</td>
<td>Center of the Class</td>
<td>Lecture Format</td>
<td>Warm up Copy teachers</td>
<td>None Observed</td>
<td>None Observed</td>
</tr>
<tr>
<td>Mrs. Tracy</td>
<td>Center of the Class</td>
<td>Lecture Format</td>
<td>Warm up Copy teachers</td>
<td>None Observed</td>
<td>None Observed</td>
</tr>
<tr>
<td>Mr. Klein</td>
<td>Center of the Class</td>
<td>Lecture Format</td>
<td>Warm up Copy Teachers’</td>
<td>None Observed</td>
<td>None Observed</td>
</tr>
<tr>
<td>Ms. Bonofort</td>
<td>Walked Around Classroom</td>
<td>None Observed</td>
<td>Outline Chapter in Textbook</td>
<td>None Observed</td>
<td>None Observed</td>
</tr>
</tbody>
</table>

**Brentwood Middle School.** The whole class task organization within the high performing schools offered students opportunities for participation. Students responded to questions from the teacher and from each other. Teachers at Brentwood Middle School used visuals, interactive activities, and effective note taking and asked questions that guided high levels of thinking. The furniture layout within the classrooms allowed opportunities for collaborative work in all four of the classrooms at the school. Even in the science classroom, with the lab stations designed for students to face the front of the
class, the teacher provided opportunities for students to turn to each other in groups or as partners to discuss their new learning or thinking. Organized opportunities for movement within the classroom were planned into the lesson. Table 20 summarizes the observations of Brentwood classrooms.

**Learning Climate**

A teacher of adolescents should understand the importance of creating classroom environments that support each student’s intellectual, moral, social, physical, and emotion development. The adolescent’s classroom learning climate must include learning opportunities that hold students to high expectations, create positive classroom environments where students are respected and supported, and offer curriculum and instruction that allows for active participation (Benard, 2004). The researcher observed differences between the learning climate of the low performing and high performing school in this study.

**Byron Middle School.** Teacher/student relationships at Byron Middle School were linked to mutual respect and compliance with the established rules. Young adolescents need to feel cared for and need a strong sense of belonging to the school community (Benard, 2004), but the classroom environments at Byron Middle School were sterile and often cluttered, had dirty floors and furniture, and did not communicate a sense of belonging. The learning climate within the school was that of compliance. Teachers did not post student work or any evidence of what students were learning. Students were allowed to sit back and copy from the board. Checking for understanding was not observed nor was technology use observed.
<table>
<thead>
<tr>
<th>Teacher</th>
<th>Teachers’ Position in Classroom</th>
<th>Delivery of Lesson</th>
<th>Student Task</th>
<th>Individualized Instruction</th>
<th>Collaboration Among Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miss Lake</td>
<td>Center of Class/Walked around</td>
<td>Discussion Format</td>
<td>Warm-up, Discussion of Previous Reading, New Story to Read and Share Feelings</td>
<td>Supports within the Small Groups</td>
<td>Talking to Partners at Table and Within their Small Group</td>
</tr>
<tr>
<td>Mrs. Moss</td>
<td>Teacher Moved Around Classroom</td>
<td>Student Lead, Teacher as Facilitator in Small Group</td>
<td>Warm-up, Game, Computer Math Practice, Review Missed Test Questions Level</td>
<td>Small Group, Computer Program at Each Students’ Discussion</td>
<td>Game, Student Facilitating Warm-up Discussion Level</td>
</tr>
<tr>
<td>Mrs. Palm</td>
<td>Center of Class Lecture Format, Interactive Video, Note Taking</td>
<td>Warm-up None Observed</td>
<td>Collaborated with Element Identification Handout</td>
<td>(table continues)</td>
<td></td>
</tr>
</tbody>
</table>
Students did what they were asked to do: They copied onto their notebooks the notes made by the teacher. Students did not have to participate in discussions since the teachers lectured and answered their own questions if the students did not respond quickly. Mr. Harper summarized teacher expectations for students when he said, “I want you to take notes on what is written here, but I will say it in a more friendly way so you can really understand what the prompt is about,” thus suggesting to students that they will not comprehend what was written. Students were not held to high expectations nor were they actively involved in the assignments. Table 21 summarizes the learning climate at Byron Middle School.

**Brentwood Middle School.** Teachers at Brentwood Middle School offered students lessons that maximized student learning through high levels of participation from each student. Students were given opportunities for discussions with the teacher and with their peers. Topics presented were relevant to students’ lives and were

### Table 20 (continued)

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Teachers’ Position in Classroom</th>
<th>Delivery of Lesson</th>
<th>Student Task</th>
<th>Individualized Instruction</th>
<th>Collaboration Among Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Gage</td>
<td>Center of class and circulated in groups</td>
<td>Game, Format, Whole</td>
<td>Jeopardy Game, Small Group</td>
<td>Small Group, Supported all Students</td>
<td>Collaboration, within Small Group Activity</td>
</tr>
</tbody>
</table>

Students did what they were asked to do: They copied onto their notebooks the notes made by the teacher. Students did not have to participate in discussions since the teachers lectured and answered their own questions if the students did not respond quickly. Mr. Harper summarized teacher expectations for students when he said, “I want you to take notes on what is written here, but I will say it in a more friendly way so you can really understand what the prompt is about,” thus suggesting to students that they will not comprehend what was written. Students were not held to high expectations nor were they actively involved in the assignments. Table 21 summarizes the learning climate at Byron Middle School.

**Brentwood Middle School.** Teachers at Brentwood Middle School offered students lessons that maximized student learning through high levels of participation from each student. Students were given opportunities for discussions with the teacher and with their peers. Topics presented were relevant to students’ lives and were
Table 21

*Byron Middle School Learning Climate*

<table>
<thead>
<tr>
<th>Teacher</th>
<th>High Expectations</th>
<th>Caring Environment</th>
<th>Active Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Harper</td>
<td>No Evidence Observed</td>
<td>Minimal – Class Size 25</td>
<td>Minimal – Copy from PowerPoint</td>
</tr>
<tr>
<td></td>
<td>Few Students Participate</td>
<td>Greeted Students</td>
<td>Chatted Informally</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Classroom Not Organized</td>
<td></td>
</tr>
<tr>
<td>Ms. Tracy</td>
<td>No Evidence Observed</td>
<td>Minimal – Class Size 23</td>
<td>Minimal – Copy from PowerPoint</td>
</tr>
<tr>
<td></td>
<td>Few Students Participate</td>
<td>Greeted Students</td>
<td>Chatted Informally</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Classroom Not Organized</td>
<td></td>
</tr>
<tr>
<td>Mr. Klein</td>
<td>No Evidence Observed</td>
<td>Minimal – Class Size 21</td>
<td>Minimal – Copy from PowerPoint</td>
</tr>
<tr>
<td></td>
<td>Few Students Participate</td>
<td>Greeted Students</td>
<td>Chatted Informally</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Classroom Not Organized</td>
<td></td>
</tr>
<tr>
<td>Ms. Bonofort</td>
<td>No Evidence Observed</td>
<td>No – Class Size 19</td>
<td>Minimal – Outline from Book</td>
</tr>
<tr>
<td></td>
<td>Few Students Participate</td>
<td>Greeted Students Chatted Informally</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Classroom Not Organized</td>
<td></td>
</tr>
</tbody>
</table>

presented so they could grapple with the complexities of life. In all four classrooms the lessons presented by the teachers required students to use high level thinking skills in order to answer the questions presented to them.

A caring environment was established at both schools, but Brentwood Middle School classrooms were more inviting and interesting. The classrooms were clean and
organized and displayed current student work, motivational posters of encouragement, and progress monitoring charts. As students worked on their assignments, teachers checked in on the students, offered assistance, and voiced expectations for students’ completion of the assignment. Active participation was expected of all students at Brentwood. Activities in the lessons allowed for student interactions and movement within the classroom.

Brentwood teachers exhibited caring relationships with their students. Teachers seemed to know the students, often asking specific questions about their day. Students appeared to feel comfortable asking for help from their teachers as was evidenced by a student stopping to talk to Mr. Gage about a problem with the homework assignment. Brentwood’s teachers appeared to have high expectations for all students and expect that they would be active participants. Technology use was evident: Computers and videos were a part of teachers’ lessons and differentiated the lesson. Table 22 provides a description of the learning climate at Brentwood Middle School.

**Teacher Control and Discipline**

Middle school teachers are often more concerned with control and discipline (Eccles, Midgley et al., 1993) than elementary teachers. Students have fewer opportunities to make decisions or choices or to participate in self-management (Fitzgerald, 2008). Studies document that middle school teachers spend more time controlling and disciplining than teaching. The decreases in the middle schools students’ ability to participate in decision making are a mismatch with their need for increased autonomy and self-determination and were in evidence in observations at the high performing and the low performing schools in this study.
### Brentwood Middle School Learning Climate

<table>
<thead>
<tr>
<th>Teacher</th>
<th>High Expectations</th>
<th>Caring Environment</th>
<th>Active Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miss Lake</td>
<td>Yes - Assignments</td>
<td>Yes – Class Size 21</td>
<td>Small Group</td>
</tr>
<tr>
<td></td>
<td>Include Higher Order</td>
<td>Greeted Students</td>
<td>Discussions</td>
</tr>
<tr>
<td></td>
<td>Thinking</td>
<td>Classroom Organized Inviting</td>
<td>Collaborative</td>
</tr>
<tr>
<td></td>
<td>Everyone Participates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mrs. Moss</td>
<td>Yes - Assignments</td>
<td>Yes – Class Size 23</td>
<td>Small Group</td>
</tr>
<tr>
<td></td>
<td>Include Higher Order</td>
<td>Greeted Students</td>
<td>Discussions</td>
</tr>
<tr>
<td></td>
<td>Thinking</td>
<td>Classroom Organized Inviting</td>
<td>Collaborative</td>
</tr>
<tr>
<td></td>
<td>Everyone Participates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mrs. Palm</td>
<td>Yes - Assignments</td>
<td>Yes – Class Size 24</td>
<td>Interactive Discussions</td>
</tr>
<tr>
<td></td>
<td>Include Higher Order</td>
<td>Greeted Students</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thinking</td>
<td>Classroom Organized Inviting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Everyone Participates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Gage</td>
<td>Yes - Assignments</td>
<td>Yes – Class Size 21</td>
<td>Small Group</td>
</tr>
<tr>
<td></td>
<td>Include Higher Order</td>
<td>Greeted Students Classroom</td>
<td>Discussions</td>
</tr>
<tr>
<td></td>
<td>Thinking</td>
<td>Organized Inviting</td>
<td>Collaborative</td>
</tr>
<tr>
<td></td>
<td>Everyone Participates</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Byron Middle School.** Although only two teachers at Byron Middle School had rules posted in their classrooms, it was evident to the researcher that students were aware of the established rules in each classroom. Students were orderly, and the classrooms were safe. Teachers at Byron controlled the interactions between the students and teachers. The teacher called on students to respond to the questions being asked by the
teacher, and the students responded back to the teacher. Whole class task organization gave teachers total control of the lesson. Students were only required to copy the PowerPoint information that was presented by the teacher. Teachers controlled the discipline as they reminded students to “be quiet,” “raise your hand,” and “have a seat here.” Table 23 summarizes teachers’ control and discipline at Byron Middle School.

Table 23

*Byron Middle School Teacher Control and Discipline*

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Established Classroom Rules</th>
<th>Control Of Lesson</th>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Harper</td>
<td>Yes-Order in Classroom – Not Posted</td>
<td>Teacher - Whole Group Instruction</td>
<td>Teacher Controlled</td>
</tr>
<tr>
<td>Ms. Tracy</td>
<td>Yes - Posted</td>
<td>Teacher - Whole Group Instruction</td>
<td>Teacher Controlled</td>
</tr>
<tr>
<td>Mr. Klein</td>
<td>Yes - Posted</td>
<td>Teacher – Whole Group Instruction</td>
<td>Teacher Controlled</td>
</tr>
<tr>
<td>Ms. Bonofort</td>
<td>Yes – Order in Classroom - Not Posted</td>
<td>Teacher</td>
<td>Teacher Controlled</td>
</tr>
</tbody>
</table>

**Brentwood Middle School.** Brentwood Middle School classroom environments displayed a shared responsibility for discipline and control within the classroom. Classroom rules were established and were followed by the students. Teachers’ lessons allowed for discussions and interactions amongst the students. Students asked each other questions as well as discussed assignments and worked together to complete assignments. Students regulated their own behavior while they worked independently, in small groups, or in a whole group. Teachers at Brentwood released responsibility of the learning to the
students by allowing students to participate in small group discussions and assignments. Students shared their own thinking and analysis of a problem. Control of the lessons was shared between the teacher and the students. The researcher observed that students had to self-regulate their completion of the task since they had short amounts of time to finish the assignments they were given as a group. Table 24 summarizes the researcher’s observation of teachers’ control and discipline at Brentwood Middle School.

Table 24

*Brentwood Middle School Teacher Control and Discipline*

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Established Classroom</th>
<th>Control Of Lesson</th>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miss Lake</td>
<td>Yes – Posted by Door</td>
<td>Shared – Teacher/Student</td>
<td>Shared – Teacher/Student</td>
</tr>
<tr>
<td>Mrs. Moss</td>
<td>Yes – Posted by Door</td>
<td>Shared – Teacher/Student</td>
<td>Shared – Teacher/Student</td>
</tr>
<tr>
<td>Mrs. Palm</td>
<td>Yes – Posted by Door</td>
<td>Teacher – Participative</td>
<td>Shared – Teacher/Student</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Atmosphere</td>
<td></td>
</tr>
<tr>
<td>Mr. Gage</td>
<td>Yes – Established</td>
<td>Shared – Teacher/Student</td>
<td>Shared – Teacher/Student</td>
</tr>
<tr>
<td></td>
<td>Routines and Rules</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Student Assignments**

One rationale for the middle school structure is that departmentalized teaching is conducive to the learning of higher order cognitive process. One difference identified between the low performing school and the high performing school was in the area of student assignments. Descriptions of the differences observed are summarized in Tables 25 and 26.
Table 25

*Byron Middle School Student Classroom Assignments*

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Lesson Objective</th>
<th>Grade Level Appropriate</th>
<th>Differentiated Assignment</th>
<th>Monitor Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Harper</td>
<td>Yes - Verbally</td>
<td>No – Not 8th Grade Standard and Simplified Vocabulary</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ms. Tracy</td>
<td>Yes – Written and Verbalized</td>
<td>Yes – 8th Grade Standard</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Mr. Klein</td>
<td>Yes – Written and Verbalized</td>
<td>No – Not 8th Grade Standard</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ms. Bonofort</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Byron Middle School.** Evidence collected from Byron Middle School supported the research on the lack of cognitive demand in classroom assignments in middle schools. The student assignments did not include an understanding of the lesson objective. Students did not have a clear understanding of what they were supposed to be learning. Copying the teacher’s notes was not grade-level appropriate nor was it cognitively challenging. Students were not given opportunities to think; students were merely compliant to the teacher’s request. There was no evidence of differentiated assignments, and monitoring of student learning was not observed.

**Brentwood Middle School.** At Brentwood Middle School, the high performing school, there was were stark differences in student assignments when compared with observed assignments at Byron Middle School. At Brentwood the students knew their lesson objectives. Teachers had the lesson objective posted on the whiteboard and
**Table 26**

**Brentwood Middle School Student Classroom Assignments**

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Lesson Objective Known</th>
<th>Grade Level</th>
<th>Differentiated Assignment</th>
<th>Monitor Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miss Lake</td>
<td>Yes – Written and Verbalized</td>
<td>Yes – 8th Grade Standard</td>
<td>Yes – Small Group</td>
<td>Yes – Progress</td>
</tr>
<tr>
<td></td>
<td>Grapple With Complex Problem</td>
<td></td>
<td></td>
<td>Posted in Classroom</td>
</tr>
<tr>
<td>Mrs. Moss</td>
<td>Yes – Written and Verbalized</td>
<td>Yes – 8th Grade Standard</td>
<td>Yes – Small Group</td>
<td>Yes – Progress</td>
</tr>
<tr>
<td></td>
<td>Grapple With Complex Problem</td>
<td></td>
<td></td>
<td>Posted in Classroom</td>
</tr>
<tr>
<td>Mrs. Palm</td>
<td>Yes – Written and Verbalized</td>
<td>Yes – 8th Grade Standard</td>
<td>No</td>
<td>Yes – Progress</td>
</tr>
<tr>
<td></td>
<td>Real Life Analysis</td>
<td></td>
<td></td>
<td>Posted in Classroom</td>
</tr>
<tr>
<td>Mr. Gage</td>
<td>Yes – Written and Verbalized</td>
<td>Yes – 8th Grade Standard</td>
<td>Yes – Small Group</td>
<td>Yes – Progress</td>
</tr>
<tr>
<td></td>
<td>Real Life Analysis</td>
<td></td>
<td>Use Of Notes</td>
<td>Posted in Classroom</td>
</tr>
</tbody>
</table>

verbalized the objective to the students at the beginning of class and often at the end of class. Students were observed articulating why they were doing the activity, and the instructional strategy allowed for students to discuss amongst themselves their thinking and ideas. The assignments observed were interactive and inquiry based; students were asked to grapple with problems and create solutions to that problem. Teachers used grade-level curriculum and adhered to the California Standards for the subject area. At Brentwood Middle School, monitoring of student progress was evident as each classroom had student progress posted on a bulletin board. The teacher also asked clarifying
questions and called on numerous students to hear their responses. Following her observations, the researcher wondered if the differences in classroom assignments between the low performing and high performing schools perhaps contributed to the academic gains each school was experiencing.

**Additional Finding**

For this study, teachers who participated in an inter-disciplinary team were included in the research. This middle school structure was designed to integrate English Language Arts, math, science, and history with the intent of maximizing learning for students. Under the inter-disciplinary structure, content is intended to be advanced and practiced wherever it applies rather than taught in isolation. Collaboration among the teachers is an essential component of a team. At both Byron and Brentwood Middle Schools this structure was said to be in place. Teachers met together two or three times a week to collaborate and ensure integration, and they shared common goals for the students, but the researcher did not find evidence to validate that this was occurring. Lesson plans did not identify integration of subjects nor was there any evidence in the classrooms. Teachers were not heard referring to other teachers or other subjects in their presentations or discussions.

**Summary**

This study examined the extent to which the classroom teacher’s knowledge of early adolescent development manifested itself in the classroom. Research Question 1 and Research Question 2 examined middle school teachers’ knowledge of the developmental characteristics of young adolescents and how they aligned this knowledge with their instructional practices and classroom environments to the standards of a
developmentally appropriate learning environment as proposed by Eccles and Midgley (1989). Research Question 3 explored the differences in classroom environments and instructional practices between a high performing middle school (Brentwood) and a low performing middle school (Byron).

A number of differences were identified between the two schools. While both schools strove toward academic excellence, they differed in how teachers set up their classroom environments and delivered instructional practices. Four themes emerged from analysis of the observation data, teacher survey, and collected artifacts that identified those differences: (a) whole class task organization, (b) learning climate based on high expectations, caring relationship, and active participation, (c) teacher control and discipline, and (d) student assignments.

The eight teachers in this study partially identified the developmental characteristics of young adolescents. The classroom observations provided insight on how the teachers created a developmentally responsive environment. All eight teachers used whole class task organization to deliver their lessons, but the teachers at the high performing school provided an interactive exchange of information while the teachers at the low performing school delivered the information in lecture format. The classroom learning climate at both schools offered a respectful environment, small class size, and some student participation, but differences were noted between the schools in the expectations teachers had for their students, the student-teacher relationships, and the amount of student participation offered by the teacher during the lesson. Teacher control was used to establish a safe environment and classroom discipline at both schools, but at the high performing school, teachers shared control with the students, allowing for
students to lead lessons, work individually and in small groups, and monitor their behavior.

Student assignments at the high performing school showed stark differences when compared with those at the low performing school. Students at the high performing school were given tasks that required higher levels of cognitive skills than those given at the low performing schools. Brentwood Middle School’s academic outcomes were much higher than those of Byron Middle School. Brentwood Middle School teachers considered students’ developmental need for active learning experiences by providing small group instructions and creating a learning climate that was based on high expectations, caring relationships and active participation.

This chapter reported the findings of the research study. Chapter 5 summarizes and discusses the findings, draws conclusions, offers implications, and poses additional questions and recommendations for further research.
CHAPTER 5—SUMMARY AND DISCUSSION

Chapter 5 discusses research that examined selected California middle school teachers’ knowledge of the developmental characteristics of young adolescents and investigated how they use this knowledge to create classrooms and instructional practices that “fit” young adolescents’ developmental needs. Additionally, the study examined whether differences existed in the classroom environments and instructional practices used by teachers at a high performing middle school versus those at a low performing middle school. Data were analyzed to show how these differences created a developmentally inappropriate learning environment for young adolescents. The chapter presents a summary of the study, discussion of findings as they relate to each research question, and implications for creating developmentally responsive classrooms and instructional practices. The chapter ends with recommendations for future research.

Summary of the Study

Little research exists documenting ways in which middle school teachers support the developmental needs of young adolescents in their classrooms and in the instructional strategies they use. In order to understand the importance of creating classroom environments that meet the needs of young adolescents, this study’s literature review focused on the historical perspective of the middle school concept to offer a valid model for organizing the schooling of young adolescents; the developmental characteristics of young adolescents and what they need in regards to instruction and the environmental structure of the middle school classroom; Stage-Environment Fit Theory, which proposes that negative outcomes often associated with young adolescents are due, in part, to the improper fit between the middle school environment and the developmental needs of
young adolescents; understanding the recommendations made in *Turning Points 2000* offered evidence for what is needed to improve schools for young adolescents.

The methodology used was a mixed methods study that applied Eccles and Midgley’s (1989) Stage-Environment Fit Theory to an investigation of classroom environments and instructional practices to determine whether teachers are providing an environment that moves the adolescent across the developmental continuum in positive ways. Differences among teachers and classrooms were presented using a thick, rich description of the eighth grade classrooms in a high performing middle school and a low performing middle school. Consequently, the study was an emerging process rather than a prefigured one, allowing for the development and expansion of theory.

Data collection included using teacher surveys, classroom observations, and collected artifacts such as web-based descriptions of the courses offered at each school, teacher credentials, teachers’ lesson plans, and student assignments. This researcher took the insider’s view of what was occurring in middle school classrooms by actually experiencing the environment and identifying ways in which teachers’ knowledge about the developmental characteristics of adolescents were reflected in their classroom environment and instructional practices (a proper fit or a poor fit between young adolescents and their middle school environments).

In this study, the researcher proposed that one reason for the suggested deficiency of fit between students’ developmental needs and their classroom environments is the lack of teachers knowledge of what is needed to provide a developmentally responsive middle school classroom. The findings indicated that the classroom environments at a high performing middle school and at a low performing middle school differed in the
following ways: (a) whole-class task organization, (b) learning climate of the classroom, (c) teacher control and discipline, and (d) student assignments. The findings suggested, according to Stage-Environment Fit Theory (Eccles & Midgley, 1989), that the low performing middle school classrooms offered poor stage-environment fit as they did not meet the developmental needs of young adolescents and that the classrooms in the high performing school offered a better fit for meeting the developmental needs of young adolescents. There has been few interventions designed to improve schools in line with the empirical evidence on adolescent development. This study finds that adolescent development is shaped by social structures and expectations in peer, home and schooling contexts. Adolescent behavior are a result of person-environment interactions across all environments and no one environment is responsible for challenges or successes of young adolescents. The contribution of educators to the construction of a positive developmental continuum must be informed by developmental science. If schools are designed without development in mind, student disengagement is likely to occur.

Discussion of Findings

The study’s three research questions guided the analysis of how middle school classroom environments and instructional strategies used by the teachers supported young adolescent development. Stage-Environment Fit Theory (Eccles & Midgley, 1989) was used as a standard for determining a developmentally appropriate environment. Data collected supported the three research questions of the study.

Research Question One

The Middle School Teacher Survey was developed by the researcher specifically to answer research question one: What do teachers know about the intellectual/cognitive,
physical, social, emotional/psychological, and moral developmental characteristics of young adolescents? The Middle School Teacher Survey consisted of items that measured teachers’ knowledge of these characteristics. Data analysis revealed that all eight teachers had partial knowledge in all five areas of early adolescent development. They had the most knowledge in identifying the physical characteristics of young adolescents. All eight teachers correctly identified all of the physical characteristics on the survey, perhaps because physical changes are easily seen in young adolescents. These gaps of knowledge may be important factors that influence teachers’ ability to successfully create developmentally appropriate classroom environments and instructional practices. Teachers may assume they are emulating the best practices of successful middle schools, when in fact; they may be missing critical elements.

Teachers at both schools reported they had not received any formal training, neither at the university level nor professional development, for meeting the developmental needs of young adolescents. Limited knowledge of the developmental characteristics of young adolescents could be attributed to this absence of teacher training on young adolescents’ development, which led the researcher to speculate that one reason for the deficiency of fit between students’ developmental needs and their classroom environments might be the lack of specialized training for most middle-level teachers. As previously documented, only 28 states require teachers to hold a middle-level license to teach at a middle school and California is not one of them (California Department of Education, 2011). Through specific professional preparation prior to teaching young adolescents and continuous professional development during their career, teachers might be able to better understand the developmental needs of this age group. In the present
study, teachers reported that the knowledge they did have was acquired through experience rather than formal study.

Ultimately, the reason for understanding early adolescent development is to create an overall learning environment that is developmentally appropriate for and responsive to young adolescents. All eight teachers were able to identify the physical characteristics of young adolescents but the teachers at the low performing school did not allow students time to move around and stretch. Although their knowledge level suggested they knew that adolescents need to move around and bones and muscles are growing this was not reflected in their environment. All eight teachers also identified that a caring environment was important for young adolescents, however, all classrooms did not show evidence that teachers valued and cared about students work, voice or what students were actually learning. The differences in how teachers’ knowledge was transferred to the classroom environment and instructional practices supported the idea that teachers may have knowledge regarding what young adolescents need, but may not know how to create a developmentally appropriate environment that supports young adolescents in positive ways.

**Research Question Two**

Research question two: How do teachers align their knowledge of the developmental characteristics of young adolescents with their instructional practices and classroom environments contained three sub-questions: (a) What evidence is found in the classroom organization and climate, (b) What evidence is found in the lessons, and (c) What evidence is found in student assignments?
This multi-part research question examined the classroom environment from the perspective of both the structural environment (i.e. student seating arrangement, general classroom organization, instructional structures) and the classroom climate (i.e. safety, cleanliness, expectations). Also examined were the instructional practices that teachers used and how they supported young adolescent learners. Through classroom observations and collection of artifacts, data were collected to determine teachers’ alignment of their knowledge of young adolescents and the use of this knowledge to create a developmentally supportive environment. Data analysis revealed that at both schools teachers had partial knowledge of the developmental characteristics of young adolescents, yet the alignment of this knowledge to the classroom environments and instructional practices were very different. These differences are summarized by school.

Mixed methods analysis of the data collected during the classroom observations at Byron Middle School and Brentwood Middle School revealed elements that corresponded positively with the developmental needs of adolescents as described in the literature. The alignment of teachers’ knowledge of the social, intellectual, physical, moral, and emotional/psychological development was revealed in the analysis of data collected. Several common elements were found in the classrooms of the high performing school. The first was an underlying theme of support for a student that was evident. Research suggests that adolescent wellbeing is enhanced when there is a positive relationship between the teacher and student (Blum & Mann Rinehart, 1998; Eccles, 2004). The researcher observed support for students demonstrated by positive regard for students’ abilities and examples of encouragement by the teacher. The second common theme was that of intellectual support where across the classrooms instructional
activities were rigorous and required students to discuss intellectually stimulating topics and provided time to grapple with complex problems. The final common theme classrooms were organized with opportunities for students to work in groups or individually allowing for students to share their learning and thinking with their classmates. This type of environment offered a better fit to the developmental needs of adolescents.

The results of this study revealed that there are differences in specific areas of stage-environment fit in high performing classrooms versus low performing classrooms. The literature in Chapter Two suggests that each of the areas of stage-environment fit have an effect on students. Using this study as a guide to the specific areas in which differences exist between the two schools, further studies should be conducted to see how these differences impact students. When students’ attitudes of school decline, this is a warning signal that their needs are not being met. Schools need to meet students’ immediate physical and emotional needs, strengthen their career identity and skills and incorporate opportunities to meet needs that are presently being met in peer context (like making choices in the classroom) in order to compete with the peer environment.

**Research Question Three**

Data analysis for research question three: What, if any, are the differences in classroom environments and instructional practices of a high performing middle school versus a low performing middle school, revealed that differences in stage-environment fit existed between Byron Middle School, the low performing school, and Brentwood Middle School, the high performing school. Levels of stage-environment fit were different between the two schools in the areas of delivery of instruction, level of student
interaction, and teacher use of instructional strategies. At Byron Middle School, the researcher observed teachers delivering directed lessons and using note taking as the way of engaging students. The school’s web site stated that the curriculum and the classroom environment would provide “the opportunity for students to improve their reading and writing skills in an atmosphere of academic rigor and exploration,” students would “take responsibility for their learning,” and “interactive classes will involve students making observations.” The researcher did not find any evidence to support these statements. Students were not provided opportunities to read or write on their own. The teacher-directed lesson did not allow students to take responsibility for their learning; the activity only allowed for memorization of facts. The four classroom settings did not provide an interactive environment. Data from classroom observations revealed that the alignment of the teachers’ knowledge of the social, intellectual/cognitive, physical, emotional/psychological, and moral development developmental characteristics of students was not evident in their classrooms and did not meet the developmental needs of middle school students (Eccles, 2004; Wentzel, 2002).

At Byron Middle School, there was a minimal match between the classroom environments and young adolescents’ developmental needs, and in some classrooms there was none at all. The classroom structures were teacher-centered, and students were restricted to their desks. Most classrooms had tables for two, four tables across and four deep. Students faced towards the teacher with little or no interaction with one another; hence, the physical or social needs of the students were not addressed. The classroom climate at this school indicated the primacy of teacher control with few opportunities for student negotiation. Teachers appeared as if they were not interested in hearing student
voices when they answered their own questions if the students did not respond quickly.

The students were offered very few decision-making opportunities, demonstrating low teacher expectations. Instructional strategies were whole group and teacher-directed with few opportunities for student involvement. In three of the four observed classes the instructional practice used was directing the students to take notes as the teacher read from a PowerPoint presentation or wrote on the overhead projector. In the fourth class, the students read and outlined a chapter with no evidence of instruction. Both of the instructional practices observed, note taking and independent work, did not offer students curriculum that was relevant and did not allow students to connect to what they already knew nor encourage the students to begin to pursue answers to questions they might have. These instructional practices did not offer adolescents any learning opportunities other than copying. Copying from a teacher’s presentation is not a California Standard nor does it require higher-level thinking. The guiding premise of stage-environment fit theory is that “behavior, motivation, and mental health are influenced by the fit between the characteristics individuals bring to their environments and the characteristics of the environment” (Eccles, Midgley et al., 1993, p. 91). In Byron Middle School classrooms, the mismatch between the needs of the young adolescents and the instructional practices used by the teacher was clear. Such a mismatch may negatively impact young adolescents’ behavior, motivation, academic achievement, and mental health (Eccles, Midgley et al., 1993).

Instructional practices of the teachers at Brentwood Middle School, the high performing school, consisted of the following: whole and small group instruction, teacher use of students’ names, student-facilitated lessons, and alignment of teacher instructional
practices with students’ learning styles, needs, and interest. Teachers at Brentwood sought to actively engage the students in learning. Classroom structures involved use of round tables or grouping of tables, and teacher/student-directed lessons were observed. Compared with teachers at Byron Middle School, teachers at Brentwood used a greater number of informal methods to check for understanding during and after instruction. For example, students were asked to summarize what was previously learned and connect it to the new learning, and teachers gave adolescents opportunities to talk about what they were learning and to personalize it to their own lives.

The classroom structures and instructional practices at Brentwood Middle School better matched young adolescents’ developmental needs than the structures and environments at Byron Middle School. Brentwood’s classroom environments offered students autonomy, decision-making opportunities, and choices in classroom activities. The structure offered students opportunities for movement and cooperative learning. Students were not restricted to a desk or rows of tables: Most classrooms at this school used round tables or grouped tables of four, allowing for collaboration, thereby meeting the social, physical, emotional/psychological, and intellectual/cognitive needs of the young adolescents. The clean, orderly environments and student directed lessons suggested positive student-teacher relationships and high expectations for all students.

Although both schools offered a respectful environment, small class sizes, and some teacher-student interaction, there were stark differences in learning climates between the classrooms of the high performing school and of the low performing school. The learning climate within Byron, the low performing school, was that of compliance. Students did what they were asked to do. Learning was a passive activity; students
copied into their notebooks from the notes made by the teacher. Students did not have to participate in discussions since the teachers lectured and answered their own questions if the students did not respond quickly. Expectations for the students were represented by Mr. Harper when he said, “I want you to take notes on what is written here, but I will say it in a more friendly way so you can really understand what the prompt is about,” suggesting to students that they would not be able to comprehend what was written. In contrast, teachers at Brentwood, the high performing school, offered students lessons that maximized student learning through high levels of participation expected from each student. Students were given opportunities for discussion with the teacher and with their peers. Topics that were relevant to their lives were presented so they could grapple through the complexities of life. In all four classrooms at Brentwood the lessons presented by the teacher required that students use high level thinking skills in order to answer the questions presented to them.

A caring environment was evidenced at the high performing school in which classrooms observed were more inviting and interesting. The classrooms were clean, organized, and displayed current student work, motivational posters of encouragement, and posted progress monitoring charts. As students worked on their assignments, teachers checked in on students, offered assistance, and voiced expectations of what the students needed to complete. U.S. Secretary of Education, Richard Riley in 2002 said that the number one priority of schools should be making sure that every student is connected to a caring adult (California Department of Education, 2010). Teachers and adults at schools need to feel cared for and supported. School staff will care for others when they feel cared for themselves.
The low performing schools classrooms were sterile, with very little on the walls, and untidy, often with dirty floors and furniture. Teachers did not post student work or any evidence of what students were learning. The teachers did not care about creating a stimulating environment for their students. They had the belief that students could not do the work on their own. Students were allowed to sit back and copy from the board; checking for understanding was not observed. Technology use was not observed in the classrooms of the low performing schools, whereas computers and videos were a part of the lessons at the high performing school, indicating differentiated lessons and an interactive strategy. Teachers at this school gave a strong message that they did not care to engage students and that they did not care about what students had to say.

Three of the teachers at Brentwood reported spending some time reflecting on their ability to teach young adolescents while teachers at Byron reported that they rarely reflected on their ability to teach young adolescents. Smith (2003) defined reflective teaching as a process where teachers gain greater capacity and willingness to learn for themselves, leading to improvements in practice. The researcher surmised that teacher reflection at Brentwood could be is a reason why Brentwood Middle School students academically outperform Byron Middle School students.

**Additional Findings**

The eight teachers participating in this study all were members on an interdisciplinary team where teachers shared a common group of students. An interdisciplinary team structure allows for a common planning period, which these teachers all had. The support in the interdisciplinary teaming is to integrate the curriculum across core subjects and to work collaboratively to identify supports for
students throughout the day. The researcher observed that the majority of students at Brentwood Middle School were grouped together as a cohort throughout the day and shared four teachers, but the researcher did not find evidence in the classroom environments, lesson plans, or instructional strategies to support a finding that the teachers had been collaborating or integrating subject matter across core subjects. Although the teachers at the high performing school used different instructional strategies, integration of subject matter was not noticed. There was failure to fully implement the features of an Interdisciplinary Team approach in ways that would benefit students.

**Implications**

The results of this study have implications for educational policy and practice. Knowledge about adolescent development and the elements of developmentally appropriate practices needs to be conveyed to teachers, state legislators, local school districts, and secondary teacher education programs. “All stakeholders must recognize that middle level education serves a distinct developmental period, one in which youth undergo major changes in every aspect of their being.” (AMLE, 2010, p. 43). One of the major underpinnings of Stage-Environment Fit Theory is that an environment that does not offer the correct fit for young adolescents’ developmental needs is one reason for the decline in academic performance in middle school (Eccles, Midgley et al., 1993). It is necessary to identify and create teacher education programs that produce teachers who can create developmentally appropriate classroom environments and implement instructional practice that are a match for young adolescents. Students begin their school career with the assumption that they belong in the learning environment. Teachers have
the ability to help students sustain that feeling of belonging, thus ensuring that the needs of all students are met.

Recommendations made in *Turning Points 2000* argue that teachers must provide adolescents with appropriate structures, but to date these structures remain fragmented. Interdisciplinary teaming, developmentally responsive classrooms, challenging class work and curriculum, and empowering students are structures that have been talked about for years but remain ineffectively implemented in our schools. Pre-service teachers would benefit from observing high-performing institutions that have implemented the recommendations made in *Turning Points 2000*. School administrators must investigate carefully the structures that are in place at schools and ensure that they are completely implemented.

Because it is imperative that teachers know the appropriate instructional strategies for middle level students, school districts and school-site administrators should consider planning professional development in this area for California’s middle school teachers. Continuous professional development might help ensure that teachers fully understand the developmental uniqueness of this age group.

The findings from this study have practical implications for teachers and their students’ motivation, engagement, and academic achievement. Students tend to engage in behaviors that produce high academic gains when they believe that they are encouraged to know, interact with, and help classmates during a lesson; when they feel respected, when they perceive their teacher to be supportive and understanding; and when their performance is seen as progressive (McEwin & Greene, 2010). With this
knowledge teachers can evaluate the stage-environment fit of their classroom practice, which may lead to positive outcomes for young adolescents.

**Recommendations for Future Research**

This study examined California middle school teachers’ knowledge of early adolescent development in one high performing middle school and one low performing middle school with similar demographics. Future research that extends this investigation by using a larger participant pool with like criteria is recommended. In this study, teachers’ knowledge was not connected to student achievement. A future study could include achievement data measured by the California Standards Test to investigate whether a correlation exists between an individual teacher’s knowledge of adolescent development and student achievement.

Future research could compare middle school teachers prepared in California with teachers prepared in states that do require a middle grades license or endorsement. Do instructional practices of teachers with a middle grades license differ from practices of non-licensed teacher? In schools that require middle level license/endorsement, are the classroom environments more appropriate for young adolescents compared to classroom environments created by teachers without specialized training? Do teachers who possess a middle school license/endorsement have higher academic outcomes?

Also receiving little attention to date is the role the teacher plays in creating the social environment within the classroom that supports or undermines changes in adolescents’ motivation and engagement. This area would benefit from additional research.
Although this study touched on the classroom structure, it did not have the depth to examine an appropriate and responsive classroom. Knowledge of developmental characteristics and appropriate implementation should be reflected in pedagogy, curriculum, relationships with students, teachers’ expectations, and the classroom environment.

The lack of empirical evidence and large-scale studies comparing the performance of middle school teachers is highly problematic. Given the tenuous levels of achievement among middle school students, studies are needed to assess differences in both academic achievement and the classroom practices of middle school teachers. Such data could be used to inform hiring practices, teacher certification, and professional development with the outcome of improving teaching and learning for young adolescents.

Conclusion

There have been few interventions designed to improve middle schools using empirical evidence on adolescent development. Data from this study, though limited in scope to the knowledge and instructional practices of eight teachers at a high performing and a low performing middle school, add to the understanding of what is needed to keep young adolescents motivated and engaged in school. For adolescents to develop the attitudes and competencies that are characteristic of healthy development and successful learning they must have opportunities to be heard, to voice their opinion, to make choices, to have responsibilities, to engage in active problem solving, to express their imagination, to work with and help others, and to give back to their family, school, and community (Brown & D’Emidio-Caston, 1998). It is the responsibility of the adults in families, schools, and communities to provide adolescents with these developmental
supports and opportunities. When middle school educators consider ways to support adolescents, the middle school environment has opportunity to contribute to healthy developmental outcomes, and youth can be empowered to think critically and make decisions around important issues in their lives.

Field studies of successful middle schools provide examples of classrooms that have positive and developmentally appropriate learning environments. Middle schools can create classroom environments that promote climates and teaching practices that align to the resilience factors that support positive life outcomes within its social system. Years of research have found a strong relationship between healthy behaviors and successful learning (Jessor & Jessor, 1977). Schools that establish high expectations for all youth and provide the support necessary for meeting expectations have high rates of academic success. When middle schools give the message that students have everything they need to be successful, students learn to believe in themselves and in their futures. Schools need to organize themselves in a system that promotes high expectations by having a rigorous curriculum that is experiential, challenging, and comprehensive. Instructional strategies that support resilience focus on learning styles, build upon students’ strengths, and allow for self-reflection, critical inquiry problem solving, and dialogue. Grouping practices that support resilience promote heterogeneous grouping and inclusion, cooperation, and shared responsibility and create a sense of belonging. Assessment must focus on multiple intelligences, utilize authentic assessments, and allow for self-reflection. Giving adolescents opportunities to participate in meaningful activities in the classroom and school community will help engage their intrinsic motivation and ability to learn. This process does not need a program; what is needed is
for teachers to share their power with students and base classroom activities on reciprocity and collaboration instead of control and competition.

Eccles, Midgley et al. (1993) stated that there are few empirical studies that have focused on differences in the classroom environment and instructional practices across grades or schools. More research is needed in order to bring to light Eccles et al.’s classic research on Stage-Environment Fit Theory and empower teachers to have the knowledge to tailor the fit of the classroom environment for young adolescents.
REFERENCES


Association for Middle Level Education [AMLE]. (2010). This We Believe: Keys to educating young adolescents. Retrieved from http://www.amle.org


Blum, R., & Mann Rinehart, P. (1998). *Reducing the risk: Connections that make a difference in the lives of youth*. Minneapolis, MN: Division of General Pediatrics and Adolescent Health, Department of Pediatrics, University of Minnesota.


evidence of protracted frontal lobe development. *Developmental Neuropsychology, 31*(1), 103-128


Professional preparation and development of middle level teachers and administrators (pp. 3-26). Westerville, OH: Author.


Roney, K. (2001). The effective middle school teachers: Inwardly integrated, outwardly connected. In V. A. Anfara, Jr. (Ed.), The handbook of research in middle level education (pp. 73-105). Greenwich, CT: Information Age.


PART A: Adolescent Development: (Circle all that apply)

1. Identify the intellectual/cognitive characteristics of young adolescents.
   a. Transition from concrete to abstract thinking
   b. Need active learning experiences involving peer interaction
   c. Maturity - Girls mature faster than boys.
   d. Prefer same sex friends.
   e. Want independence, sense of belonging, still need guidance.
   f. Begin to understand people who care about them.
   g. Highly curious, broad array of interest.

2. Identify the physical characteristics of young adolescents.
   b. High achievement when challenged and engaged.
   c. Need to be accepted by others
   d. Preoccupied with themselves (sensitive) physical growth and maturity
   e. Personal problems, feelings and experiences are exclusively their own.
   f. Interested in the present – instant gratification.
   g. Ravenous appetites and peculiar taste – improper nutrition

3. Identify the emotional/psychological characteristics of young adolescents.
   a. Idealistic and possess a strong sense of fairness in human relations.
   b. Improved fine and gross motor skills.
   c. Peer groups important – want to fit in, not appear different.
   d. Psychologically vulnerable because of so many differences in themselves.
   e. Aware of the rights and feelings of others
   f. Seeking independence, searching for adult identity and acceptance.
   g. Positive outlook for their future make adolescents psychologically resilient (unrealistic, interest-rock stars, astronaut, etc).

4. Identify the moral characteristics of young adolescents.
   a. Begin to consider complex moral and ethical questions, yet are unprepared to cope with them.
b. Hormonal changes – Cause students to feel restless, moody and fatigued. (need to
release energy often).
c. Abstract thinking-ability to develop and test hypotheses, analyze and synthesize
data, grapple with complex concepts and think reflectively.
d. Development of personal values. Rely on parents or adults for advice.
e. Reasoning skills and decision-making abilities increase.
f. Seek autonomy
g. Aware of flaws of others, but remain quiet about their own.

5. Identify the social characteristics of young adolescents.
   a. Moral issues seen in “shades of gray” instead of just black and white.
   b. Look for new adults to confide in.
   c. Independent thought increases-ability to self-reflect.
   d. Much rather be with their friends than their family.
   e. Self-conscious and highly sensitive to personal criticism.
   f. Desire recognition for their positive efforts and achievement.
   g. Attracted to “bad behavior” (act out or join gangs). Invincible, vulnerable

PART B: Identify as: Intellectual/Cognitive; Physical; Social; Moral or

   Emotional/Psychological Characteristic.

1. __________________________ Easily discouraged.

2. __________________________ Peer approval important (will suffer embarrassment, mockery, and
   rejection)

3. __________________________ Respond greatly to opportunities for participation in real life situations.

4. __________________________ Puberty, aware of their sexuality – preoccupied by changes and are magnified when compared to peers.

5. __________________________ Development of personal values. Rely on parents or adult for advice.

6. __________________________ Test parent values – take opposite view on issue but strongly
dependent on parental values.

7. ________________ Prefer active learning experiences involving peer interaction

8. ________________ Exhibit intense concern about physical growth and maturity.

9. ________________ Empathy and compassion for moral issues (animal rights, environmental problems)

10. ________________ Consider academic goals as a secondary level of priority

11. ________________ Interested in and watch adults intensely.

12. ________________ Developing value system (exposed to negative values from media and cultural influences such as beauty, fame and wealth) which may compromise their ideas and values

PART C:

How much training have you had in meeting the intellectual/cognitive, physical, moral, social and emotional/psychological needs of young adolescents?

a. None c. 1 full quarter or semester course

b. 1-5 day workshop or training d. More than 1 full quarter of semester

1. How comfortable do you feel with the content you are teaching?  
a. Completely comfortable
b. Mostly comfortable
c. Slightly comfortable
d. Slightly uncomfortable
e. Mostly uncomfortable
f. Completely uncomfortable

2. How comfortable do you feel with teaching young adolescents?
   a. Completely comfortable
   b. Mostly comfortable
c. Slightly comfortable
d. Slightly uncomfortable
e. Mostly uncomfortable
f. Completely uncomfortable

3. How much time do you spend reflecting on your ability to teach young adolescents?
   a. Always
   b. Very Often
c. Sometimes
d. Rarely
e. Never

4. In your credential coursework did you receive training related specifically to young adolescents (age 10 – 15 years) development?
   a. Yes
   b. No

PART D:

5. What other coursework or training related specifically to the middle school have you had?
6. What professional training have you had regarding young adolescent development?
## Appendix B

### Classroom Observation Checklist

**Susie Fahey – San Diego State University**

<table>
<thead>
<tr>
<th>Classroom Environment</th>
<th>Instructional Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>o Classrooms are ___clean ___safe ____organized for teaching and learning ___clutter free</td>
<td>o Use of California content standards</td>
</tr>
<tr>
<td>o Multiple products of current work displayed ___grade level appropriate ____see results of their efforts</td>
<td>o Objectives given verbally or written at beginning of class – gain interest of students, students know what they are learning and why</td>
</tr>
<tr>
<td>o Curricula around real world concept</td>
<td>o Objectives discussed at end of class (reflection time, feedback)</td>
</tr>
<tr>
<td>o Rules and procedures established (options of behavior/consequences to options)</td>
<td>o Lesson delivery paced to students’ need</td>
</tr>
<tr>
<td>o Environment of trust (free from harsh criticism, humiliation and sarcasm)</td>
<td>o Lesson offered “real world” applications</td>
</tr>
<tr>
<td>o Student equity – everyone gets air time</td>
<td>o Students are working:</td>
</tr>
<tr>
<td>o Purposeful print rich environment charts that are relevant and current</td>
<td>o Working alone</td>
</tr>
<tr>
<td>o High levels of academic expectations- Exemplars of high quality work displayed</td>
<td>o Small group (3 or more)</td>
</tr>
<tr>
<td>o Room arrangement – direct instruction, cooperative, whole &amp; small group instruction areas</td>
<td>o Whole class</td>
</tr>
<tr>
<td>o Evidence of Fair &amp; Equitable Application, Caring, Respectful &amp; Proactive</td>
<td>o Pairs of students</td>
</tr>
<tr>
<td>o Supportive learning community where all students are valued</td>
<td>o Choices offered to students</td>
</tr>
<tr>
<td>o Opportunities for movement</td>
<td>o Teacher Role</td>
</tr>
<tr>
<td></td>
<td>o Directing whole group (lecture)</td>
</tr>
<tr>
<td></td>
<td>o Interactive/Modeling whole group</td>
</tr>
<tr>
<td></td>
<td>o Student/Teacher conferences</td>
</tr>
<tr>
<td></td>
<td>o Facilitating / coaching</td>
</tr>
<tr>
<td></td>
<td>o Small group directed lesson</td>
</tr>
<tr>
<td></td>
<td>o Opportunities for student participation</td>
</tr>
<tr>
<td></td>
<td>o Inquiry based lessons- discover information rather than fed information</td>
</tr>
<tr>
<td></td>
<td>o Decision making opportunities</td>
</tr>
<tr>
<td></td>
<td>o Teacher responsiveness to students</td>
</tr>
<tr>
<td></td>
<td>o Teacher paying attention to</td>
</tr>
<tr>
<td>Teacher and students are interested and enthusiastic</td>
<td>boredom</td>
</tr>
<tr>
<td>Teacher uses student names</td>
<td>o or confusion</td>
</tr>
<tr>
<td>Participative atmosphere</td>
<td>o Teacher encourages questions</td>
</tr>
<tr>
<td>Teacher use eye contact with students</td>
<td>o Challenging lesson – opportunities to think critically</td>
</tr>
</tbody>
</table>

**Notes:**