

PLACE IN RETURN BOX to remove this checkout from your record.
TO AVOID FINES return on or before date due.
MAY BE RECALLED with earlier due date if requested.

DATE DUE	DATE DUE	DATE DUE

**GETTING THE BEST OF BOTH: TRANSFORMING MIDDLE LEVEL
EDUCATION TO MEET THE INTELLECTUAL AND PSYCHOSOCIAL NEEDS OF
EARLY ADOLESCENTS**

By

Glenda Ann Breaux

A DISSERTATION

**Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of**

DOCTOR OF PHILOSOPHY

Department of Counseling, Educational Psychology, and Special Education

2003

EDUCATION

THE

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

EDUCATION

ABSTRACT

GETTING THE BEST OF BOTH: TRANSFORMING MIDDLE LEVEL EDUCATION TO MEET THE INTELLECTUAL AND PSYCHOSOCIAL NEEDS OF EARLY ADOLESCENTS

By

Glenda Ann Breaux

This study explored five areas of education research to identify shared understandings that might promote consensus about the goals of middle level education and an organizing/guiding concept that might reinvigorate stalled transformation efforts. The study had archival and empirical components. The archival component involved content analysis of selected literature on Developmentally Appropriate Education, Middle Level Education, At-Riskness, Educational Resilience, and Structural and Instructional Reform. Analyses focused on similarities in descriptions of early adolescents' intellectual and psychosocial characteristics and needs, consequences of not meeting them, and effective approaches to meeting them. Results related to the implications of these similarities for three hypotheses. 1) Early adolescents are at risk for unnecessary academic and social difficulties if they attend schools with an unbalanced approach to addressing intellectual and psychosocial needs. 2) Reforms based on educational resilience could effectively address these risks. 3) Educational resilience could serve as an organizing concept in middle school transformation efforts. The general conclusion of the archival component was that these hypotheses were confirmed. In the empirical component these conclusions were tested against interview and survey data collected from researchers in the five areas. An interview was conducted with one researcher from each topic area, and three of the five also completed a survey. Interviews and surveys

focused on res

essence of

Results indicat

examined pro

approaches as

or focusing o

are rather th

psychosocial

berately. Th

collected at

interviews are

focused on researchers' perceptions of shared understandings between topics, imbalance as a source of risk, and educational resilience-based approaches as potential solutions. Results indicated that they articulated numerous connections between topics and viewed unbalanced programs as sources of risk, but viewed educational resilience-based approaches as a potential source of additional risk. Two researchers expressed concern that focusing on educational resilience could promote an emphasis on students' ability to cope rather than on matching learning environments to students' intellectual and psychosocial characteristics/needs. By contrast, they viewed intellectual autonomy more favorably. The general conclusion of the study was that among the five topics examined, intellectual autonomy appeared to be the most promising candidate for promoting consensus and progress towards middle school transformation.

This dis

inary people

be inspired, g

express my o

available. Fir

Jack Smith, for

past six years.

that offered

to work. I cou

I would

zing allowin

siding with m

and Pearson

will helped m

instructions to

stances that

and thank hi

search commi

I would

stable and gr

was involved

ACKNOWLEDGMENTS

This dissertation would not have been possible without the assistance and support of many people along the way. While I cannot individually acknowledge everyone who has inspired, guided, helped, and comforted me throughout this process, I feel compelled to express my deepest gratitude to the following people whose support has been invaluable. First and foremost, I would like to thank my advisor and dissertation director, Jack Smith, for his unwavering support, sage advice, and heroic feats of patience over the past six years. During my darkest hours and toughest struggles he always lent an ear and a hand, offered compassionate words of wisdom, and helped me get back on track with the work. I could not have done this without him.

I would like to thank my entire committee for always being there when I came calling, allowing me to break tradition and pursue my own interests in this work, and sticking with me through this very long process despite job changes and distance. P. David Pearson took me under his wing from the beginning, nurtured my budding research skills, helped me to understand the reform obstacles facing urban schools, and forge connections to the academic community. He has also provided employment and references that have allowed me to finance my existence and continue in the program. I cannot thank him enough for his role in helping me become a member of the academic research community.

I would like to thank Glenda Lappan for always having room for me in her busy schedule and greeting me with a beaming smile. She helped me understand the complex issues involved in curriculum reform, offered encouragement whenever I needed it, and

related co

highest sou

I wo

adherent

inspiration

aps and do

I an

participate

admission

King Chan

also made

work

Gra

by best fir

have strugg

should als

the sum

Las

been for

trial of the

for I wo

conscience

modeled competence, commitment, and caring. She has been my role model and my biggest source of inspiration.

I would like to thank King Beach for helping me think more rigorously about adolescent development. I would also like to thank him for agreeing to join my dissertation committee after the work had begun, and for staying with me throughout the ups and downs that have occurred during the course of the project.

I am deeply grateful for the assistance given by the five researchers who participated in the empirical component of the study. Their generous donations of time and insight made this study possible. Donations of financial support provided by the King/Chavez/Parks fellowship and other grants provided by the Graduate School have also made this work possible. Without that assistance, I could not have undertaken this work.

Graduate school can be an intense and isolating experience at times, but thanks to my best friend, Louise Davis, these have been six of the best years of my life. Although I have struggled and suffered from time to time, I have always known that I was not alone. I would also like to thank my boyfriend, Alan Vince, for giving so much, asking for so little, surrounding me with family, and infusing my life with a new sense of joy.

Last, but not least, I would like to thank my sisters, Eliska Lee and Kimberly Breaux, for always believing in me, encouraging me, sacrificing for me, and forgiving me for all of those times when I forgot to call or couldn't be there for special events in their lives. I would not be the person I am if not for them. They are my rocks—the cornerstones in the foundation of my life, and I dedicated this work to them.

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Method

The

Study

CHAPTER II

ARCHIVAL

Collection

Case

Comments

CHAPTER III

ENDINGS

EDUCATION

TABLE OF CONTENTS

LIST OF TABLES.....	x
LIST OF FIGURES.....	xi
CHAPTER 1	
INTRODUCTION.....	1
Methodological Overview.....	9
Archival Component.....	9
Empirical Component.....	10
The Five Topics and the Rationale for their Selection.....	10
Structure of the Dissertation.....	15
CHAPTER 2	
ARCHIVAL METHODS.....	18
Coding.....	19
Journal Articles.....	21
Books and Book Chapters.....	23
Categorization.....	24
The Guiding Questions.....	27
Comparison.....	31
CHAPTER 3	
FINDINGS RELATED TO DEVELOPMENTALLY APPROPRIATE	
EDUCATION.....	33
How does the literature on DAE describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?	34
How does the literature on DAE describe the consequences of failing to meet students' intellectual and psychosocial needs?.....	39
Consequences of Unmet Intellectual Need.....	41
Consequences of Unmet Psychosocial Need.....	43
How does the literature on DAE describe effective approaches to meeting students' intellectual and psychosocial needs?.....	47
General Recommendations for Meeting Students Intellectual and Psychosocial Needs.....	47
Recommendations for Meeting Early Adolescents' Intellectual and Psychosocial Needs.....	49
How does the literature on DAE describe the relationship between developmentally appropriate education and education reform (both in general and with specific reference to middle school)?.....	50
What explicit references, if any, does the literature on DAE contain that connect the concept of developmentally appropriate education to others included in the dissertation?.....	52

CHPT
END

END
END

END
END
END

CHAPTER 4

FINDINGS RELATED TO MIDDLE LEVEL EDUCATION.....	55
How does the literature on middle level education describe the intellectual and psychosocial needs of early adolescents?.....	69
How does the literature describe the consequences of failing to meet early adolescents' intellectual and psychosocial needs?.....	77
How does the literature describe effective approaches to meeting early adolescents' intellectual and psychosocial needs?.....	78
How does the literature describe the relationship between middle level education and education reform (both in general and with specific reference to middle school)?.....	83
What explicit references, if any, does the literature contain that connect middle level education to other topics/concepts included in the dissertation (or external to the dissertation)?.....	84

CHAPTER 5

FINDINGS RELATED TO AT-RISKNESS AND EDUCATIONAL RESILIENCE.....	86
How does the literature on risk and resilience describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?.....	92
How does the literature on risk and resilience describe the consequences of failing to meet these needs?.....	94
How does the literature on risk and resilience describe effective approaches to meeting students' intellectual and psychosocial needs?.....	98
How does the literature on risk and resilience describe the relationship between these concepts and education reform (both in general and with specific reference to middle school)?.....	102
What explicit references, if any, does the literature contain that connect risk and educational resilience to other topics included in the dissertation (or external to the dissertation)?.....	103

CHAPTER 6

FINDING RELATED TO THIRD-WAVE STRUCTURAL AND INSTRUCTIONAL REFORM.....	106
Third-Wave Structural Reforms.....	107
Third-Wave Instructional Reforms.....	115
How does the literature describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?.....	117
Structural Reforms.....	118
Instructional Reforms.....	121
How does the literature describe the consequences of failing to meet these needs?.....	126
Structural Reforms.....	126
Instructional Reforms.....	128

How does the literature describe effective approaches to meeting these needs?.....	129
Structural Reforms.....	129
Instructional Reforms.....	133
How does the literature describe the relationship between these particular structural and instructional reforms and education reform (both in general and with specific reference to middle school)?.....	147
What explicit references, if any, does the literature contain that connect the structural and instructional reforms to other topics included in the dissertation (or external to the dissertation)?.....	151

CHAPTER 7

ARCHIVAL SUMMARY.....	154
The Guiding Questions.....	157
Question 1: How does the literature across the five topics describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?.....	157
Question 2: How does the literature across the five topics describe the consequences of failing to meet these needs?.....	162
Question 3: How does the literature across the five topics describe effective approaches to meeting these needs?.....	166
Question 4: Implications for Middle School Transformation.....	173

CHAPTER 8

EMPIRICAL METHODS.....	181
The Participants.....	182
The SSCI Search.....	182
Alternative Search Processes.....	184
Procedures and Instruments.....	187
The Interview.....	187
The Survey.....	189
Data Analysis.....	197
Analysis of Interview Data... ..	198
Analysis of Survey Data.....	200

CHAPTER 9

EMPIRICAL RESULTS AND CONCLUSIONS.....	203
Interview Results.....	204
Developmentally Appropriate Education.....	204
Middle Level Education.....	207
Intellectual Autonomy.....	208
At-Risk Students.....	209
Educational Resilience.....	210

Themes in the Interview Data	212
Theme #1: Characteristics of Early Adolescents.....	212
Theme #2: Purposes and Scope of Schooling.....	214
Theme #3: Obstacles to Achieving Educational Ideals.....	217
Theme #4: Overcoming Obstacles.....	223
Conclusions Arising from Interview Data.....	225
Survey Results.....	228
Concept Definitions.....	229
General Perspectives.....	239
Conclusions Arising from the Survey Data.....	244
Congruence of Interview and Survey Responses.....	244
General Conclusions Arising from the Empirical Component.....	246
 CHAPTER 10	
DISSERTATION CONCLUSION AND DISCUSSION.....	250
The Archival Component.....	251
The Empirical Component.....	253
Overall Conclusion.....	255
Limitations of the Study.....	256
Implications of the Study	257
Suggestions for Future Research.....	258
 APPENDIX A	
INTERVIEW PROTOCOLS.....	260
 APPENDIX B	
SURVEY FORM.....	270
 REFERENCES.....	274

Table 1. General

Table 2. Anchor

Table 3. SSCI S

Table 4. Potenti

Table 5. Experts

LIST OF TABLES

Table 1. General Areas for Increased and Decreased Emphasis.....137

Table 2. Anchoring Topics for Summary of Connections.....156

Table 3. SSCI Search Categories, Variants, and Related Terms.....183

Table 4. Potential Participants.....185

Table 5. Experts and their Area(s) of Expertise.....187

LIST OF FIGURES

Figure A. Structure of the Summary Chapter vs. Findings Chapters.....155

CHAPTER 1: INTRODUCTION

For over 60 years our nation has articulated a need to define and implement an educational program appropriate for children between the ages of 10 and 14. For these 60 years, other issues—some related, some not—have clouded our objective...[M]any and diverse priorities and points of view affect the educational programs we deliver.

Judith Brough, *Education Young Adolescents*, (1995, p. 48)

Since at least 1920, literature on middle level education has exhorted educators to **increase** both the academic standards and the developmental responsiveness of schools **that** serve early adolescents. According to several historical accounts (Brough, 1995; George, Stevenson, Thomason, & Beane, 1992; Irvin, 1992), these have been the major **goals** of middle level education since early in the twentieth century when the first junior **high** schools (grades 7–9) appeared. With the emergence of middle schools (grades 6–8) **in the** mid-1960s, these were again asserted as the central goals in middle level education (**A**lexander & Williams, 1965; Blom, Gerard, & Kinsinger, 1979; National Middle **S**chool Association, 1982, 1992, 1995).

Although high academic standards and developmental responsiveness have been **emphasized** throughout middle level education literature, according to only a small **number** of junior high schools and middle schools have actually managed to provide **early** adolescents with educational programs that delivered either (George et al., 1992). **A**ccording to Cuban (1992) and Mac Iver and Epstein (1993), even fewer schools **managed** to provide students with programs that delivered both. Many advocates of **m**iddle level education bemoan the fact that despite exhortations and numerous attempts **to reform** educational programs, middle level schools still have not achieved the goals for **w**hich they were created (Beane, 2001; Brough, 1995; George et al., 1992). In the words of **T**ucker and Coddling (1998):

Mr.
lan
the
off

De

any obs

Dickinson

suggests th

behavior p

Research o

recognized

high midd

Bandlow

Si note

practices r

implemen

assessment

In

mission

not as lar

time of v

interventi

(T)

the

area

sche

in a

Middle schools are a wasteland of our primary and secondary landscape...Caught between the warmth of a good elementary school and the academic seriousness of a good high school, middle school students often get the least of both and the best of neither.” (p. 153)

Despite efforts to correct this situation, the typical middle school still contains **many** obstacles to healthy intellectual and psychosocial development (Brough, 1995; Dickinson, 2001; Irvin, 1992). Past and recent research on the concept of at-riskness **suggests** that these obstacles play an important role in early adolescents’ achievement and **behavior** problems (Hixson & Tinzmann, 1990; Rak & Patterson, 1996; Taylor, 1994). **Research** on the history of middle level education indicates that this role has been **recognized** for over 80 years (Briggs, 1920; Koos, 1927; Lounsbury, 1984), but efforts to **align** middle level approach with this understanding have met with limited success (Bandlow, 2001; Clark & Clark, 1993; Cuban, 1992). As Mac Iver and Epstein (1993, p. 530) note, “Currently, few middle grades schools have implemented many of the **practices** recommended for the education of early adolescents, and even fewer have **implemented** them well.” Viadero (1992) concurs with Mac Iver and Epstein’s **assessment** that reform progress is likely to continue to be slow.

In the quote that opened this chapter, Judith Brough describes this unfortunate **circumstance** as a result of competing priorities and points of view. Other researchers, **such** as James Beane (2001), emphasize the competition between specific priorities and **points** of view, such as those related to educational equity and academic excellence. In *Reinventing the Middle School* (2001), Beane describes the situation as follows:

[T]he middle school reform movement became especially vulnerable in the 1990s as some of its advocates began to push for more egalitarian arrangements in both the structures and curricula of schools. If middle schools were to provide more access to more knowledge for more children in a positive and nurturing climate, efforts would have to be made to

empha
heterog
middle
testing
xix)

Accor

product of a "

places for you

places that (d

early adoles

is a decision

ated in Ma

It's a
fend
horn
hum
to te

Stat

expressed b

to achieve

such as Be

is held b

videnced

schools (B

Wh

component

is, those

emphasize collaborative learning, get rid of tracking, [and] create heterogeneous grouping... Obviously, the push for such ideas put the middle school movement on a collision course with the standards and testing juggernaut. The progressive framework didn't have a prayer. (p. xix)

According to Dickinson (2001, p. 8) the "collision course" mention above is the **product** of a "false dichotomy" which asserts that "if middle schools [are] to be good **places** for young adolescents, nurturing environments, then they [are] 'soft' learning **places** that [don't] overtax or overburden students." In essence, the effort to provide **early** adolescents with psychosocially appropriate learning environments has been viewed **as a decision** to avoid challenging students intellectually. In the words of Chester Finn (cited in Manzo, 2000):

It's about time the emptiness and folly of the middle school movement [ends]...the rationale [is] that somehow, by virtue of that fact that the hormones are pumping, these kids can't learn real things. They must be humored, socialized, accommodated, and amused. That's ... an excuse not to teach prealgebra.

Statements such as this are a potent source of the concerns, such as those **expressed** by Dickinson, about the prohibitive role that "false dichotomy" plays in efforts **to achieve** full implementation of the middle school concept. Advocates of the concept, **such as** Beane and Dickinson, believe that the perspective underlying Finn's criticism is **also** held by many middle level educators, and that the prevalence of this perspective is **evidenced** by the unbalanced programs that are implemented in many of middle level **schools** (Beane, 2001; Dickinson, 2001).

While some unbalanced middle level programs emphasize the psychosocial **component** and neglect the intellectual, others emphasize the intellectual and neglect the **psychosocial**. Implementations such as these have been characterized, in the case of

psychosocial n

ase, that of in

(1961). Recent

is harmful to c

implement pr

(National Mo

complicated

implementat

student-cent

"fuzzy" imp

and uncertain

manieres w

In n

intellectual

that serve r

America, t

but as is

and wides

(Chubb &

specific m

particular

W

perspecti

psychosocial neglect, as sterile and uncaring (Eccles & Midgley, 1989). In the reverse **case**, that of intellectual neglect, they have been described as “soft” and “fuzzy” (Sykes, 1996). Recent literature on middle level education asserts that each of these approaches **is harmful** to early adolescents’ motivation and achievement, and encourages educators to **implement** programs that reflect a balanced emphasis on both aspects of learners’ needs (National Middle School Association, 1995). Unfortunately, reform efforts have been **complicated** by the tendency to extend negative characterizations of unbalanced **implementations** to the general approach with which they are associated. For example, **student-centered** approaches to middle level education are often equated with “soft” and “fuzzy” implementations, and subject-centered approaches are often equated with sterile **and uncaring** implementations. This is another example of the dichotomization that **interferes** with reform at the middle level.

In response to concerns about the apparent dichotomization of early adolescents’ **intellectual** and psychosocial needs and the appropriate emphasis of educational programs **that serve** them, as well as recent concerns about the quality of middle level education in **America**, there have been many additional calls for curricular and instructional reform. **But**, as is evident from the history of similar efforts, the simple desire to produce lasting **and** widespread positive change is an insufficient condition for realizing reform goals (Chubb & Moe, 1990; Tyack & Cuban, 1995). This history also suggests that having a **specific** reform plan that is closely aligned with the priorities and point of view of a **particular** group is also insufficient (Cobb, 1994; Gewirtz, Ball, & Bowe, 1995).

With regard to middle level reform, many researchers have argued that differing **perspectives** on the relative importance of equity, excellence, intellectual issues, and

psychosocial

1992), and fi

2001). How

In the

What

educ

rese

enne

sch

Dick

the academ

middle leve

1987; Lips

approaches

provides cl

Sikes, 1999

servic in t

According

support for

student-ent

frequent re

case refor

not appro

Acc

During this

psychosocial issues have led to far more debate than change (Brough, 1995; Cuban, 1992), and far more confusion than consensus (Beane, 1999a, 1999b, 2001; Dickinson, 2001). However, as of yet, the solution to the problem remains elusive.

In the words of James Dickinson (2001):

What is ironic at this point in the evolution of middle schools as an educational entity is that we know what needs to be done and we have the research to support those decisions. What remains, however, despite this emerging evidence of what should be done, is a large number of middle schools mired in practices and programs that serve no one. (preface)

Dickinson's view of what should be done is closely tied to research that highlights the academic and psychosocial benefits of student-centered, developmentally responsive middle level education (Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997; Irvin, 1997; Lipsitz, Mizell, Jackson, & Austin, 1997). However, advocates of subject-centered approaches also assert that research on academic achievement supports their position and provides clear direction regarding what should be done (Bradley, 1998; Henry, 1994; Sykes, 1996). The fact that both of these claims about research support are true has served, in the larger sense, to further complicate matters in middle school reform. According to Clark and Clark (1993) and Becker (2000), the existence of empirical support for both approaches has lead to a series of implementations and reversals of student-centered and subject-centered middle level curricula. The upheaval arising from frequent reversals have added to the confusion and interfered with the realization of even those reform goals, such as high academic achievement, that are shared by advocates of both approaches to middle level education.

According to Larry Cuban (1992), this situation has persisted for over 80 years.

During this period, researchers have generated a number of interesting metaphors to

describe the

White Tyack

of pendulum

middle school

In the

sustained pr

(1992) call

school rest

level educ

published

education

practices

goals

In

investiga

Report on

implicatio

describe

strongly

that I fou

educatio

The ratio

portion o

describe the lack of consensus and forward progress in middle level education reform.

While Tyack and Cuban (1995) use a metaphor that likens this reform situation to a series of pendulum swings, Thomas Dickinson (2001, preface) describes it as a “log jam” where **m**iddle schools are “stuck” in a stage of arrested development.

In the past 10 years, several texts have been produced in an effort to promote **s**ustained progress toward full implementation of the middle school concept. While Irvin (1992) called for middle school transformation, Clark and Clark (1994) called for middle school restructuring, and Dickinson (2001) called for reinvention, the situation in middle level education remains much the same now as it did when the first of these works was **p**ublished. Although middle school reform has remained a priority issue in American **e**ducation, these schools have not been transformed, restructured, or reinvented. Diverse **p**riorities and points of view continue to interfere with the achievement of major reform **g**oals.

In the face of this enduring “log jam” it has become increasingly important to **i**nvestigate potential options for overcoming this impasse. In the chapters that follow, I **r**eport on my effort to do just this. While this dissertation does not present a ready-to-**i**mplement solution to the problem of reform stagnation at the middle level, it does **d**escribe an effort to identify ideas and perspectives that are shared by a set of researchers **s**trongly commitment to different, but specific, educational issues or concepts. The topics **t**hat I focus on in the dissertation are *developmentally appropriate education, middle level education, at-riskness, educational resilience, and structural and instructional reform*.

The rationale behind the range of topics included in this set is described in detail in a later portion of this chapter. What is important to mention at this point, is that the goal of this

activity was to

reform goals

subject center

educational e

Taken

challenge to

which the li

discontinua

potential of

psychosoci

perspective

practices o

methods u

is present

Before pr

major hyp

A

emphases

researche

preparati

support

dispute

activity was to search for connections—germs of shared perspective—that might lead to **re**form goals and emphases that could be embraced by advocates of student-centered and **s**ubject centered reform, as well as by those who are centrally concerned with issues of **e**ducational equity and academic excellence.

Taking the perspective that dichotomization has presented the most significant **ch**allenge to middle school reform, I designed this dissertation to investigate the extent to **wh**ich the literature and personal views of experts in various fields reflect **d**ichotomization as well as connection. This work was also designed to explore the **p**otential of a particular concept (*educational resilience*) to mitigate intellectual and **p**sychosocial dichotomization, to bridge student-centered and subject-centered **p**erspectives, and to promote constructive dialogue about the purpose, structure, and **p**ractices of schools that serve early adolescents. While a fully detailed description of the **m**ethods used to pursue these ends is reserved for Chapter 2, some detail on the methods **i**s presented in the “methodological overview” provided near the end of this chapter. **B**efore proceeding with any description of method it is important to first describe the **m**ajor hypotheses and claims to which the methods were applied.

As argued above, dichotomization, and the resulting imbalance in educational **e**mphases, has generated a significant degree of concern among middle level education **r**esearchers. While some worry that students do not receive adequate academic **p**reparation, and others worry that they do not receive adequate levels of personal **s**upport, many—such as Larry Cuban and myself—worry that they do not received **a**dequate levels of either.

As research

and academic de

Decision-Makin

has taken on gr

components in

educational set

1980, Worell &

long-term con

In this

adolescents' i

k students. S

multiple topi

early adolesce

risk for moti

What

progress. I a

begin address

identify pot

problems, re

focus discu

passed in

minence i

As researchers have come to rely, increasingly, on ecological models of personal and academic development (such as Worell and Danner's Theory of Adolescent Decision-Making, 1989) to explain variations in student outcomes, the issue of imbalance has taken on greater significance. Educational settings are no longer viewed as inert components in the developmental process. Along with person, family and community, educational settings are increasingly viewed as critical developmental contexts (Hill, 1980; Worell & Danner, 1989). With this in mind, it is important to attend to the possible long-term consequences of an unbalanced educational program.

In this dissertation I investigate the claim that imbalanced attention to early adolescents' intellectual and psychosocial needs is a significant source of potential harm to students. Specifically, in the dissertation I test the hypothesis that literature from multiple topic areas within education support the claim that middle schools that approach early adolescent education in an unbalanced manner place all students in those schools at risk for motivational, achievement, and social/behavioral problems.

While I believe that recognizing the nature of the problem is essential for reform progress, I also recognize that simply identifying the problem is not enough. In order to begin addressing current problems in middle level education, it is important to also identify potential directions in which to proceed. While this, alone, will not solve the problems, reducing the potential solution set to a smaller number of options could help to focus discussion, political will, and resources on a particular courses of action that can be pursued in concert. Toward this end, I nominate a particular concept (*educational resilience*) as a potential frame for reform.

In the d

designed to pro

consequences.

psychosocial c

adoption of co

reform could

achieve their

development

Methodolog

In th

opies conce

involves the

aspects in t

subsections

The Archi

In t

categorize

textual data

major acti

textual da

connectio

sympathic

instructio

In the dissertation I investigate the claim that middle school programs that are **designed** to promote *educational resilience* can help to address this imbalance and its **consequences**, thereby fostering robust development in both the intellectual and **psychosocial** domain. Specifically, in the dissertation I test the hypothesis that the **adoption** of *educational resilience* as a guiding concept in middle level education and **reform** could support efforts to transform middle schools into institutions that finally **achieve** their central, and long-pursued, goals of providing academically rigorous and **developmentally** responsive programs for early adolescents.

Methodological Overview

In this dissertation I rigorously examine the possible connections between five **topics/concepts** that are described in the section that follows. This examination process **involves** the use of 1) archival data and 2) interview and survey data obtained from **experts** in the five topic areas. The details of each process are presented in the **subsections** describing the respective archival and empirical components of the project.

The Archival Component

In the archival component I employed the method of *content analysis* to code, **categorize**, and classify literature in the five topic areas. This process gave rise to the **textual** data that was used in the comparison activities. The comparison process was the **major** activity of the archival component of the dissertation. It involved examining the **textual** data related to each area and using that data to draw conclusions about conceptual **connections** in literature related to students' intellectual and psychosocial needs, effective **approaches** to addressing these needs, and the possible role of each concept in promoting **constructive** dialogue and middle school transformation. The purpose of these

comparisons w
major claims o
of the interview

The Empirical

In the
standardized
the archival o
explore the p
transformati
conclusions
researchers
effort to gai
of education
alternative

The Five T

As
perspective
specific, ec
concepts o
topics. Th
and needs
ment and
reform co

comparisons was to generate answers to questions that bear upon the validity of the two major claims of the dissertation. The results of this process also influenced the contents of the interview and survey questions in the empirical component.

The Empirical Component

In the empirical component I employed semi-structured interviews and standardized surveys to gather additional information about the conclusions arising from the archival component. The data from the interviews and surveys was also used to explore the possible role of *educational resilience* in promoting middle school transformation. Through the interviews and surveys I attempted to examine the conclusions resulting from the archival component from the perspectives of prominent researchers in each of the five topic areas. The empirical component also represented an effort to gain more historical perspective and deeper insight into the process and progress of education reform. Through this activity, I also hoped to identify additional or alternative topics and concepts that may prove useful in transformation efforts.

The Five Topics and the Rationale for their Selection

As mentioned above, this dissertation describes an effort to identify ideas and perspectives that are shared by a set of researchers strongly committed to different, but specific, educational issues or concepts. While there are many possible issues and concepts on which I could have focused, in this work I chose to focus on five specific topics. The topics of focus in this dissertation relate to early adolescents' characteristics and needs, the goals and purposes of developmentally responsive education, the original intent and current status of middle level education, and the rationale behind many of the reforms connected to the *Standards Movement* and the *Restructuring Movement*.

For the

categories of

review. The

1. Develop

2. Middle L

3. Third-w

4. Educatio

5. Educatio

In C

literature an

conceptual

between con

archival con

De

student-cen

understandi

Education c

Principals.

needs are de

that relate to

emotional c

For term "Th
school and sub
emotional and

For the purposes of content analysis, these topics were translated into five categories of literature that were used to guide my efforts to identify relevant material for review. These categories are represented by the following phrases:

1. Developmentally Appropriate Education
2. Middle Level Education
3. Third-wave Structural and Instructional Reforms¹
4. Educational Risk
5. Educational Resilience

In Chapter 2, I explain how these phrases assisted my efforts to locate relevant literature and how that literature was used to investigate the claims and identify conceptual connections. In the paragraphs below I describe the perceived connections between concepts related to these phrases that motivated the major activities of the archival component of the dissertation.

Developmentally Appropriate Education (DAE) is a concept that emphasizes student-centered approaches to education that are based on varied and combined understandings of students characteristics and needs (National Association for the Education of Young Children, 1996; National Association of Secondary School Principals, 1989; National Middle School Association, 1995). These characteristics and needs are described in many ways, but of particular interest in this dissertation are those that relate to early adolescents cognitive, psychosocial, socio-psychological, and socio-emotional characteristics and needs.

¹ The term "Third-wave" refers to the period between 1989 and the present, during which large-scale school and subject matter reform was propelled by teacher empowerment initiatives and the production of curriculum and teaching standards for the core academic subjects.

Preliminary

level education and

suggested that DA

practices of "true"

1992, 1995). With

early adolescents

schooling (i.e., *M*

capacities associa

cognitive develop

In Piaget

described in term

probabilistic, and

ognition (or ad

higher-order cog

are based on mu

ivariate analy

operational) — c

Within

efforts, the pow

students' succe

development o

Kazili, 1985; K

affirms that em

Preliminary examination of documents related to 1) the expressed intent of middle level education and 2) position statements that define the middle school concept suggested that DAE is a concept that is deeply connected to the goals, structure, and practices of “true” middle schools (National Middle School Association, 1982; 1989; 1992; 1995). Within the goal of providing developmentally appropriate education for early adolescents exists an implicit—but often discounted—concern about the role of schooling (i.e., *Middle Level Education*) in promoting the development of intellectual capacities associated with formal operations (as described by Jean Piaget in his theory of cognitive development).

In Piaget’s theory (Piaget, 1976), these growing intellectual capacities are described in terms of early adolescents increasing ability to engage in abstract, probabilistic, and combinatorial thought processes which pave the way for executive cognition (or advanced metacognition) and synthetic/integrative mental action. These higher-order cognitive skills allow for increasingly accurate long-range predictions that are based on multivariate analyses of situations and of self, rather than on the simpler univariate analyses upon which younger—or less cognitively developed (i.e., concrete operational)—children must rely.

Within the field of education in general, and in many recent instructional reform efforts, the power of higher-order cognitive skills has been recognized as a contributor to students’ success in reading comprehension, algebraic thought, scientific literacy, and the development of high levels of skill in many other domains (De Corte, 1995; Duffy, 1990; Kamii, 1985; Kamii, 1991). This recognition has led to many subject-area instructional reforms that emphasize advanced (i.e., schematic, thematic, or predictive) organization of

information. It

informative—

The en

that aim to pr

confidence in

communicate

cornerstones

existing reas

Some

only academ

perform in c

in literature

intellectual a

recent instru

studies in m

Winter, 199

The

and social b

social risk?

component

or socio-ecc

International
the distribution

information, hypothesis formulation and testing, self-assessment practices, and informative—rather than judgmental—evaluations of students’ knowledge and skills.

The emphases described above are central in *Third-wave instructional reforms* that aim to promote conceptual understanding and intellectual confidence (i.e., confidence in one’s ability to reason effectively and reach—and appropriately communicate—sensible, defensible conclusions). In other words, these emphases are cornerstones in reforms designed to promote *intellectual autonomy* or *critical thinking/reasoning* among students.

Some researchers view the skills associated with *intellectual autonomy* as not only academic skills, but also as life skills (i.e., skills that influence how individuals perform in classroom learning situations, as well as how they behave in social situations). In literature on adolescent reasoning and decision-making, the skills associated with intellectual autonomy have been linked to students’ perceptions of and responses to recent instructional reforms, their adaptation to the cognitive demands of advanced studies in many subjects, and their reactions to instances of negative peer pressure (Hunter, 1998; Worell & Danner, 1989).

The suggested relationship between intellectual autonomy and students’ academic and social behavior has significant implications for determinations of educational and social risk.² Recent literature on “at-risk students” identifies a powerful psychosocial component to at-riskness that cannot be inferred by simple membership in a racial group or socio-economic bracket, and cannot not be discounted be simple membership in the

² Educational risk refers to the likelihood of poor academic performance or school failure. Social risk refers to the likelihood of engaging in anti-social or criminal activities.

Caucasian r

Parerson, 1

Ans

intervention

targeting sp

promote ov

riskness is

result of pe

circumstan

1991). Henc

ationale gr

riskness, an

learning en

Usi

maximize r

developme

Benard, 10

from sever

is effective

minority st

Veter, 199

1995). Of p

reform guid

Caucasian race, the middle-class, or the male sex (Hixson & Tinzmann, 1990; Rak & Patterson, 1996; Taylor, 1994).

Arising from recent research on at-riskness are an increasing number of interventions designed to address it, not by providing a smorgasbord of programs targeting specific risk factors, but instead by providing an integrated program designed to promote overall wellness. Programs such as these are based on the rationale that at-riskness is not simply a deterministic reaction to adverse circumstances, nor an inevitable result of personal deficiencies. Instead, risk is viewed as a product of challenging circumstances coupled with inadequate personal and institutional responses (Benard, 1991; Henderson & Milstein, 1996; Krovetz, 1999; Liddle, 1994; Werner, 1990). This rationale gives rise to risk-reduction programs that reflect a transactional view of at-riskness, and incorporate into their approach measures to improve both the quality of the learning environment and the adequacy of students' responses to stress.

Using the concept of educational resilience as a guide, these programs attempt to maximize the protective factors present in learning environments, and foster the development of traits common to highly adaptable (i.e., naturally resilient) individuals (Benard, 1991; Skinner & Wellborn, 1997; Wang, Haertel, & Walberg, 1994). Results from several implementations of resilience education programs suggest that this approach is effective in reducing the negative outcomes associated with risk factors such as minority status and low socio-economic status (Benard, 1991; Hawkins, Catalano, & Miller, 1992; Werner & Smith, 1992; Wolin & Wolin, 1993; Cooper & Henderson, 1995). Of particular relevance to this dissertation are results that suggest that education reform guided by this concept could yield a "pound of prevention" rather than the typical

source of

& Milstein

The

indirect co

concept th

but also a p

dialogue an

resilience

Structure

To

a brief out

consists of

ethnol. m

focus topic

and conclu

results, and

includes g

componen

more expl

Ch

methods o

content an

Findings I

“ounce of cure” that results from most risk-reduction programs (Fiske, 1992; Henderson & Milstein, 1996; Richardson, Neiger, Jensen, & Kumpfer, 1990).

The direct connection between educational resilience and at-riskness, and possible indirect connections to the remaining concepts suggest that educational resilience is a concept that may reflect not only a shared understanding of the problems in education, but also a path to the solution. I believe that this concept is the best candidate for promoting dialogue and transformation. For this reason exploring perspectives on educational resilience is the major goal of the empirical component.

Structure of the Dissertation

To assist the reader’s comprehension of the text that follows, this section contains a brief outline and basic description of the document’s contents. This dissertation consists of 10 chapters, the first of which is this Introduction. Chapter 2 describes the archival method, and Chapters 3-6 present the findings from the literature related to each focus topic. In Chapter 7, I revisit the two major claims and describe the comparisons and conclusions of the archival component. Chapters 8 and 9 present the methods, results, and discussion of the empirical component. And the final chapter, Chapter 10, includes general discussion and conclusions that integrate the findings from both components of the work. The paragraphs below describe the contents of these chapters in more explicit detail.

Chapter 2 (Archival Methods) provides a detailed description of the goals and methods of the archival component. It describes archival research and the process of content analysis, and explains how the process was implemented for this work. Chapter 3 (Findings Related to Developmentally Appropriate Education) presents the findings from

the literature

questions p

Education i

next two ch

Residence

critical co

down from

the implica

dissertation

Ch.

methods of

the design

administer

Results and

nd survey

the two m

explained

contents. I

each of the

Chapter 9

Ch.

conclusion

summary o

the *literature search* process described in Chapter 2, and presents answers to the guiding questions presented in Chapter 2. Chapter 4 (Findings Related to Middle Level Education) is similar in structure and purpose to Chapter 3. This is also the case for the next two chapters, which present the findings related to At-Risk Students and Educational Resilience (Chapter 5), and Structural and Instructional Reform (Chapter 6). Closing the archival component is Chapter 7 (Archival Summary) which presents the conclusions drawn from the answers to the major comparisons discussed in the chapter, and discusses the implications of these conclusions for the activities of empirical component of the dissertation.

Chapter 8 (Empirical Methods) provides a detailed description of the goals and methods of the empirical component. It describes the process of selecting participants, the design of the interviews and survey, the process of conducting the interviews and administering the survey, and major features of the data analysis. Chapter 9 (Empirical Results and Conclusions) presents the results derived from the analysis of the interview and survey data, and the conclusions drawn from those results. This chapter is divided into two major sections—one for interview results, and one for survey results. As will be explained in Chapter 8, the interview results and conclusions give rise to the survey contents. For this reason, all findings related to the interviews are presented first. Within each of the two major sections, results are presented both topically and thematically. Chapter 9 closes the empirical component.

Chapter 10 (Dissertation Conclusion and Discussion) integrates the findings and conclusions from both components of the work. This final chapter begins with a summary of the goals of the larger work—as well as those for each component—and

acquaints

to the goals

study, in ac

suggestion

reacquaints the reader with the major activities of the investigation and their relationship to the goals. This chapter also contains a section that describes the limitations of the study, in addition to a section that describes the study's implications and presents suggestions for future research.

At s
nece
that

The

identify po

Appropriat

and Structu

interest in c

in each are

emerging c

that these c

As

archival re

In this case

areas. How

content an

Co

organiza

are used, t

the proces

prevailing

Adherence

increases

CHAPTER 2: ARCHIVAL METHODS

At some point in the evolution of every research field, it becomes necessary to try to make sense of its sense-makers. This is the motivation that drives the conduct of meta-analytic research.

The primary goals for the archival component of the dissertation were: (1) to identify points of conceptual overlap between five research topics—Developmentally Appropriate Education, Middle Level Education, At-Riskness, Educational Resilience, and Structural and Instructional Reform; (2) to understand the ideas driving research interest in each topic area; and (3) to gain insight into the history of, and current thinking in, each area of research. My purposes in the archival component were to test my emerging conjectures that important conceptual connections exist between topics, and that these connections could be exploited to promote middle school transformation.

As stated in the Introduction, the primary method used for this component was archival research. Archival research is the analysis of previously gathered information. In this case, the archive was the body of educational research literature on the five topic areas. However, not all of the research in this archive was studied. The method of content analysis was used to select articles for analysis.

Content analysis is a method that requires the use of a predetermined set of categorization and classification procedures. When the procedures for content analysis are used, the standard for identifying and including relevant literature is higher than when the process is driven by adherence to a particular research tradition or when the prevailing interest of the researcher determines what background literature is selected. Adherence to the procedures of content analysis introduces an element of rigor that increases the validity of inferences made from textual data. This method is particularly

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

useful for research *on* texts, rather than *through* texts. The primary difference between these types of research is that in research *through* texts, the *empirical data* gathered by the researcher serves as the primary test of the theory or conceptual framework represented in the literature review. In research *on* texts, the *documents* that the researcher gathers serve as the *empirical data* for testing the hypotheses that drove the pursuit.

The five basic procedures for content analysis are:

1. Coding: determining the basic unit of analysis
2. Categorization: creating meaningful categories to which the unit of analysis can be assigned
3. Classification: verifying that the units can be unambiguously assigned to appropriate categories
4. Comparison: making significant comparisons between the categories and performing
5. Conclusion: drawing theoretical conclusions about the content in its context

In the following paragraphs, I describe how I used the coding, categorization, classification, and comparison procedures in this dissertation. The findings generated by this approach are presented in Chapters 3-6, and details on the process of drawing conclusions are provided in Chapter 7.

Coding

I preferred to use articles published in peer-reviewed journals as the basic unit of analysis in this study. This decision was based on the understanding that journal articles are the most popular means of disseminating academic research. The major advantages of using these works is that they are less text-intensive than books, evaluated more

rigorously

textual for

Al

disadvanta

the structu

demonstra

detail to al

uncertainties

underlying

limitation.

whose prin

chapters w

lie by the

Wh

the greatest

significant

read by a la

exposure" g

of professio

organizatio

1.

2.

3.

rigorously than monographs, and produced at a faster and more regular rate than other textual forms.

Although journal articles offer many advantages, there are also some disadvantages associated with reliance on these works. The primary disadvantage is that the structure and purpose of journal articles is basic. A text whose basic purposes are to demonstrate the scientific rigor of the empirical process, and provide enough contextual detail to allow for replication is not likely to allot a great deal of text to describing the intricacies of the conceptual framework. Due to my overriding interest in the ideas underlying the conceptual framework, my analysis was especially sensitive to this limitation. In an effort to overcome this limitation, I decided to include longer texts whose primary purpose was explanation rather than justification. Books and book chapters were the favored texts in this regard as their quality could be evaluated by proxy (i.e., by the reputation of the publisher or author).

While journal articles and books provided the majority of the texts used—and had the greatest assurances of quality—some texts were also included on the grounds of “significant exposure.” Significant exposure refers to the likelihood that a text would be read by a large number of people. Documents were only included on “significant exposure” grounds if they were published or officially endorsed on the official web sites of professional organizations with large and active memberships. The professional organizations that met the criteria included:

1. National Middle School Association (NMSA)
2. Association for Supervision and Curriculum Development (ASCD)
3. National Association of Secondary School Principals (NASSP)

4. N

5. C

6. N

Docu

included onl

from the NA

overview of

included for

In to

of analysis.

text", but a

books and cl

rationale for

criteria for s

below.

Journals A.

The

number of t

those that h

includes all

present. Be

The phrase "name popul
independent
and 1990s.

4. National Association of Elementary School Principals (NAESP)
5. Center for Research on the Education of Students Placed At-Risk (CRESPAR)
6. National Association for the Education of Young Children (NAEYC)

Documents (usually papers) from the first four professional organizations were included only if they were specific to middle level education and reform. Documents from the NAEYC were included only if they provided a general (conceptual or historical) overview of developmentally appropriate education.¹ Documents from CRESPAR were included for both reasons.

In total there were three types of documents that can be described as the basic unit of analysis. The general term (i.e., code) assigned to all approved document types was “text”, but as explained above, this group of documents was composed of journal *articles*, *books* and chapters, and *papers*—each of which had their own criteria for selection. The rationale for including each type of document is presented above, as was the specific criteria for selecting *papers*. The criteria for selecting *articles* and *books* are given below.

Journals Articles

The primary means of determining the significance of a journal article was the number of times a document was cited in subsequent research. Eligible documents were those that had been indexed in the Social Science Citation Index (SSCI). This index includes all articles that have appeared in peer-reviewed journals between 1977 and the present. Because I did not select articles to a specific frequency standard, in some

¹ The phrase “developmentally appropriate education” has its origins in early childhood education. It became popular in the 1960s with the introduction of Kindergarten programs. It borrowed from ideas of developmental responsiveness—an idea that serves as the foundation of the junior high philosophy of the early 1900s.

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

topic areas articles were included if they were cited on as few as two occasions. In other topic areas, some articles were excluded although they had been cited more than five times. This variation resulted from my decision to set the significance standard within-topic rather than across-topics. This decision was based on the recognition of each research area has a unique history. As a result, there were various differences between the archives across topic areas. Some of the major differences included the size of the archive, the number of researchers who specialize in the topic, and the recency of research interest in the topic field.

My decision to use *citation frequency* as the primary criterion presented certain limitations that necessitated the use of additional selection methods. A major issue that I needed to overcome was the lag time between the publication of a text, and the SSCI cataloging of a text that cites it. As one of my goals was to include texts that reflected the state of the field, it was particularly important to develop a method for including very recent articles that indicate new directions and paradigm shifts in a topic area. Texts meeting this description were included if they were written by well-known reputable authors, or in direct response to assertions by these authors; if they challenged established views and contained credible empirical evidence in support of the author's proposed view; if the author grounded the work within a well-established tradition or line of research; and if the work expanded upon—and was supported by—the findings of research that met the SSCI criteria. While I must admit that the inclusion of these texts introduced a larger element of subjectivity than the SSCI process, I considered this to be a risk worth taking as it increased the currency of the work.

Books and

Unit

described a

inclusion in

1) Search

search.

2) Exam

organiz

member

specific

3) Search

4) Search

and K

Alth

books inclu

relevance to

concepts ar

the concept

same the in

the compar

ans. Text

See Brown

Books and Book Chapters

Unfortunately, the SSCI does not index books and other media. For reasons described above, it was necessary to develop a procedure for selecting books for inclusion in the study. The procedure for selecting books involved:

- 1) Searching for books authored or co-authored by researchers identified in the SSCI search.
- 2) Examining reports, monographs, and manuscripts provided by the six professional organizations listed above for recommended books. These organizations have large membership rolls and provide materials that identify seminal works and recommend specific readings to those interested in their topics.
- 3) Searching the book review sections of refereed journals for endorsed texts.
- 4) Searching the brochures of reputable publishing firms, such as Lawrence Erlbaum and Kluwer.

Although these procedures were used to select the majority of the articles and books included in this research, some works were selected simply on the basis of their relevance to the topics. Included here were works that provided historical accounts of concepts and movements, and those that explicitly described educational applications of the concepts (e.g., *Resilience Education*²). These texts were used in the Introduction, to frame the interpretation of results, and in the discussion. Their contents were not used in the comparisons except as additional references in support of findings from approved texts. Texts selected by these means were not used as either primary or sole references.

² See Brown, D'Emedio-Caston, & Benard (2001) for a description of resilience education programs.

Categorization

The c
topics of inte
education, at
especially in
they were pi

Classification

- With
following se
- 1) Developm
 - a) Adole
 - b) Adole
 - c) Adole
 - d) Adole
 - e) Devel
 - f) Devel
 - g) Devel
 - 2) Middle Le
 - a) Midd
 - b) Midd
 - c) Midd
 - d) Midd

Categorization

The categorization stage involved placing works into their topic categories. The topics of interest included Developmentally Appropriate Education, middle level education, at-riskness, educational resilience, and structural and instructional reforms (especially intellectual autonomy). Because some works discussed more than one topic, they were placed in more than one category.

Classification

Within each category, a *General SSCI Topic Search* was conducted using the following search terms:

1) Developmentally Appropriate Education

- a) Adolescent characteristics (cognitive, psychosocial, and socio-emotional)
- b) Adolescent needs (cognitive, psychosocial, socio-emotional, and educational)
- c) Adolescent health
- d) Adolescent behavior
- e) Developmentally appropriate education for adolescents
- f) Developmentally responsive education for adolescents
- g) Developmentally appropriate practices for adolescents

2) Middle Level Education

- a) Middle level education movement
- b) Middle school concept
- c) Middle school philosophy
- d) Middle school movement

3) Educational risk

- a) At-Riskness**
- b) Academically at-risk**
- c) Educationally at-risk**
- d) Psychosocial risk**
- e) Socio-emotional risk**
- f) School failure**
- g) Underachievement**
- h) School violence**

4) Educational Resilience

- a) Resilience**
- b) Academic Resilience**
- c) Educational Resiliency**
- d) Academic Resiliency**
- e) Resilience Education**

5) Third-wave Structural and Instructional Reform

- a) Middle level reform**
- b) Middle school reform**
- c) Restructuring Movement**
- d) Standards movement**
- e) Intellectual Autonomy**
- f) Critical thinking**
- g) Critical literacy**

10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
 71
 72
 73
 74
 75
 76
 77
 78
 79
 80
 81
 82
 83
 84
 85
 86
 87
 88
 89
 90
 91
 92
 93
 94
 95
 96
 97
 98
 99
 100
 101
 102
 103
 104
 105
 106
 107
 108
 109
 110
 111
 112
 113
 114
 115
 116
 117
 118
 119
 120
 121
 122
 123
 124
 125
 126
 127
 128
 129
 130
 131
 132
 133
 134
 135
 136
 137
 138
 139
 140
 141
 142
 143
 144
 145
 146
 147
 148
 149
 150
 151
 152
 153
 154
 155
 156
 157
 158
 159
 160
 161
 162
 163
 164
 165
 166
 167
 168
 169
 170
 171
 172
 173
 174
 175
 176
 177
 178
 179
 180
 181
 182
 183
 184
 185
 186
 187
 188
 189
 190
 191
 192
 193
 194
 195
 196
 197
 198
 199
 200
 201
 202
 203
 204
 205
 206
 207
 208
 209
 210
 211
 212
 213
 214
 215
 216
 217
 218
 219
 220
 221
 222
 223
 224
 225
 226
 227
 228
 229
 230
 231
 232
 233
 234
 235
 236
 237
 238
 239
 240
 241
 242
 243
 244
 245
 246
 247
 248
 249
 250
 251
 252
 253
 254
 255
 256
 257
 258
 259
 260
 261
 262
 263
 264
 265
 266
 267
 268
 269
 270
 271
 272
 273
 274
 275
 276
 277
 278
 279
 280
 281
 282
 283
 284
 285
 286
 287
 288
 289
 290
 291
 292
 293
 294
 295
 296
 297
 298
 299
 300
 301
 302
 303
 304
 305
 306
 307
 308
 309
 310
 311
 312
 313
 314
 315
 316
 317
 318
 319
 320
 321
 322
 323
 324
 325
 326
 327
 328
 329
 330
 331
 332
 333
 334
 335
 336
 337
 338
 339
 340
 341
 342
 343
 344
 345
 346
 347
 348
 349
 350
 351
 352
 353
 354
 355
 356
 357
 358
 359
 360
 361
 362
 363
 364
 365
 366
 367
 368
 369
 370
 371
 372
 373
 374
 375
 376
 377
 378
 379
 380
 381
 382
 383
 384
 385
 386
 387
 388
 389
 390
 391
 392
 393
 394
 395
 396
 397
 398
 399
 400
 401
 402
 403
 404
 405
 406
 407
 408
 409
 410
 411
 412
 413
 414
 415
 416
 417
 418
 419
 420
 421
 422
 423
 424
 425
 426
 427
 428
 429
 430
 431
 432
 433
 434
 435
 436
 437
 438
 439
 440
 441
 442
 443
 444
 445
 446
 447
 448
 449
 450
 451
 452
 453
 454
 455
 456
 457
 458
 459
 460
 461
 462
 463
 464
 465
 466
 467
 468
 469
 470
 471
 472
 473
 474
 475
 476
 477
 478
 479
 480
 481
 482
 483
 484
 485
 486
 487
 488
 489
 490
 491
 492
 493
 494
 495
 496
 497
 498
 499
 500
 501
 502
 503
 504
 505
 506
 507
 508
 509
 510
 511
 512
 513
 514
 515
 516
 517
 518
 519
 520
 521
 522
 523
 524
 525
 526
 527
 528
 529
 530
 531
 532

- h) Critical reasoning
- i) Scientific literacy
- j) Executive cognition
- k) Self-directed learning

The five major classes were selected for the purpose of investigating the existence of conceptual links between the focus topics. The sub-classes were selected as a means to extend the search. The selection of these specific terms was based on my understanding that the “search” feature of the SSCI database is adept at locating similar terms, but not similar ideas. In addition, I attempted to account for the fact that researchers frequently express similar ideas using different phrasing. While I make no claim to have identified all of the important variations in expression, preliminary searches using the above terms indicated that these terms generated a range of relevant documents.

To account for differences in the frequency of using each term, I operated under the assumption that certain terms were roughly equivalent³, and selected the most frequently cited works using each variation of phrasing. This decision was based on my discomfort with ranking each sub-class. As I had no reason to believe that conceptual underpinnings of “educational resilience” are rendered less important because the author used the phrase “academic resilience,” I decided not to exclude the most cited “academic resiliency” works on the basis that they were cited less frequently than—for example—the fourth most frequently cited “educational resilience” work.

Overall, however, I attempted to select at least two of the most cited works in each sub-class. The exception to this rule occurred when the most cited work in one sub-

class was

event occu

the most c

education

resiliency

were cited

phrasing in

primarily i

phrasing.

The Guidi

With

relevant to

1. How do

(both in

2. How do

3. How do

4. How do

educatio

5. What exp

topic con

class was cited less frequently than the sixth work in another sub-class. When such an event occurred, I selected all works from a sub-class that were cited more frequently than the most cited work of another sub-class. For example, if the ninth work in the class “educational resilience” was cited four times, but the most cited work in “academic resiliency” was cited three times, I selected all works under “educational resilience” that were cited at least three times. In this way, I attempted to give equal weight to each phrasing in the sub-classes. This emphasis on parity was due to the fact that I was primarily interested in the popularity of the idea, not the popularity any particular phrasing.

The Guiding Questions

Within the literature related to each topic/concept, I searched for information relevant to answering each of the following questions:

1. How does the literature describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?
2. How does the literature describe the consequences of failing to meet these needs?
3. How does the literature describe effective approaches to meeting these needs?
4. How does the literature describe the relationship between the topic/concept and education reform (both in general and with specific reference to middle school)?
5. What explicit references, if any, does the literature contain that connect the topic/concept to others included in the dissertation (or external to the dissertation)?

³ This assumption of equivalence arose from investigative readings into concepts such as intellectual autonomy and critical thinking or educational resilience and academic resilience, which indicated that these phrases represented the same or very similar ideas.

I selected these questions to guide my efforts due to my interest in issues of risk and resilience. As mentioned in the introduction, recent literature on the concept of at-riskness describes it as a transactional processes where risk arises from a discrepancy between an individual's needs and personal resources, and the provisions and demands of the environment (Benard, 1991; Henderson & Milstein, 1996). Because the literature on each topic/concept in the dissertation presents it and its application as a potential solution to a specific problem or issue, it seemed essential to investigate the ways in which the literature on each topic/concept describes student needs and how to best address them.

The literature on each concept also presents a rationale that contains an explicit discussion of its benefits. In addition, or by extension, this literature also supplies information related to negative consequences. The expressed benefits describe what is lacking or needed, and why the students need it. The consequences express or suggest expected outcomes of allowing those needs to persist. The information gained by delving into these underlying beliefs is necessary for conducting comparisons and searching for connections that may be hidden by differences in terminology. It is for this reason that I refrained from phrasing the questions in terms of the focus topics/concepts. The generic phrasing used in the questions was an attempt to avoid creating a self-fulfilling prophecy with regard to conceptual connections between the five topics.

In the first phase of the archival analysis, the answers to guiding questions were compiled into focused summaries of the views expressed in each category of literature. These answers are referred to, in Chapters 3-6, as "the findings" related to each topic. With the exception of Chapter 5 (At-Riskness and Educational Resilience) each chapter presents the findings for only one topic, and the content is presented in order of the

guiding q

appropriat

structural

Al

presentati

temporal

the ongoin

topic was

order of p

of concep

and conte

follows:

In

designed

to identifi

character

identify

Riskness

needs are

Middle L

Develop

instructio

was imp

guiding questions. These chapters are arranged in the following order —developmentally appropriate education, middle level education, at-riskness and educational resilience, and structural and instructional reform.

Although the five bodies of literature are independent and lend themselves to presentation in any order, I decided to present them in an order that reflects a conceptual-temporal relationship between the reforms that I focus on in the dissertation. Because of the ongoing nature of education reform and my desire to ultimately speak on reform, this topic was placed in the final position with reference to the other “findings” chapters. This order of presentation is intended to help the reader begin to construct and explore the web of conceptual relationships that arose from the comparisons, and influence the structure and contents of Chapters 7 and 8. The basic rationale for the order of presentation is as follows:

In a conceptual sense, the needs of people precede the character of institutions designed to serve them. Since reform is more about responding to recognized needs than to identifying those needs, I chose to discuss concepts and topics that relate to identifying characteristics and needs before discussing reform. The dissertation topics that relate to identifying characteristics and needs are Developmentally Appropriate Education, At-Riskness, and Educational Resilience. The topics that relate to responding to recognized needs are Middle Level Education, and Structural and Instructional Reform. Although Middle Level Education is, itself, a reform, this topic is discussed immediately after Developmentally Appropriate Education rather than in close proximity to Structural and Instructional Reform. The reason for this is that Middle Level Education is a reform that was implemented in an effort to the developmental characteristics and needs of early

adolescent

it is not cu

below des

Riskness.

In

guide edu

why this t

Resilience

structural

taken plac

an import

reforms o

W

concept w

Many stru

Resilience

discussed

Education

fore in the

addition.

structural

TH

Third-way

adolescents. In addition, middle level institutions have existed for so many decades that it is not customary to discuss the institutions, themselves, as reforms. The paragraphs below describe the rationale for discussing Developmentally Appropriate Education, At-Riskness, and Educational Resilience in the order I have chosen.

In a temporal sense, Developmentally Appropriate Education has been used to guide educational approaches for much longer than the other concepts. This is the reason why this topic is discussed before At-Riskness, Middle Level Education, Educational Resilience, and reform. Middle Level Education is presented second because, although structural and instructional reforms (including the creation of middle level schools) have taken place throughout the history of American education, middle level education became an important concept in the early 1900s, long before the structural and instructional reforms of focus.

While the concept of at-riskness has been a focus since at least the 1970s, this concept was reconceptualized in the late 1980s and continues to be amended today. Many structural and instructional reforms (including those related to Educational Resilience) are designed to address issues of at-riskness. This is why At-riskness is discussed before Educational Resilience and structural and instructional reform. Educational resilience arose from the general conception of resilience that came to the fore in the 1980s. Among the five topics, Educational Resilience is the most recent. In addition, Educational Resilience is the topic/concept that frames my discussion of structural and instructional reform.

The reforms of interest in this dissertation are those that took place during the Third-wave (1980s and 1990s)—some of which focus on improving the developmental

appropriateness

education at

reforms pres

are not prese

with develop

instructiona

to follow, an

during the r

The

conduct the

below I des

Comparisc

In th

the search p

compare th

answers fro

addressing

These claim

educational

and promot

The

Agree:

appropriateness of educational approaches, and many of which have impacted middle education at the level. It would be difficult for the reader to follow the analysis of the reforms presented if developmentally appropriate education and middle level education are not presented beforehand. For these reasons, the presentation of the findings begins with developmentally appropriate education and ends with Third-wave Structural and Instructional Reform. It is my hope that this arrangement will make my argument easier to follow, and I encourage the reader to refer back to relevant sections of this chapter during the reading of the chapters to come.

The findings presented in Chapters 3-6 provided the textual data that was used to conduct the two major comparisons of interest in the archival component. In the section below I describe the role of these findings in answering the comparison questions.

Comparison

In the second phase of the archival component, I used the findings generated from the search process to look across the textual data related to each topic/concept and compare the answers to the guiding questions. For each guiding question, I compared the answers from each of the five “findings” chapters to find information relevant to addressing questions arising from the two major claims presented in the Introduction. These claims relate to the role of educational structure and practices in promoting educational risk, and the role of educational resilience in helping to address these risks and promote middle school transformation.

The specific comparison questions used to investigate the validity of these claims were:

1. Does the literature across the five areas reflect a shared understanding of the nature and sources of educational risk? What are the implications of this for the claim that all early adolescents in middle schools with an unbalanced approach are at risk for academic and social difficulties?
2. Does the literature across the five areas reflect a shared understanding of how to effectively address academic and social risk? What are the implications of this for the claim that resilience education addresses these risks?

The answers to these questions also gave rise to conclusions about the possible role of educational resilience in promoting middle school transformation. These conclusions were then tested in the empirical component of the dissertation.

CHAPTER 3: FINDINGS RELATED TO DEVELOPMENTALLY

APPROPRIATE EDUCATION

As educators, we cannot be content to simply allow adolescents to survive the transition to adulthood. We have a responsibility to assist them. Too often our only response to their need for guidance and sensitivity is to insist upon high academic achievement—a response that, according to Covington & Beery (1976), creates both anxiety and apathy, and does not speak to the tremendous variations in developmental status that adolescents present (Lipsitz, 1977).

Worell & Danner (1989, p. 10)

As is the case with each of the five focus topics/concepts, there is an extensive body of literature on Developmentally Appropriate Education (DAE). This body of literature, when analyzed as a collection (i.e., archive), communicates many implicit and some explicit connections between the characteristics and needs of American society, and the characteristics and needs of American students. Taken together, these two sets of characteristics and needs give rise to definitions of what it means to be well-educated (in the intellectual sense) and well-prepared (in the psychosocial sense). This literature also makes specific recommendations for achieving these intellectual and psychosocial goals and explains these recommendations in relation to students perceived characteristics and needs.

As stated in the Introduction, this chapter presents the findings that resulted from the *coding*, *categorization*, and *classification* processes described in Chapter 2. The findings are presented in five major sections, each of which corresponds to the one of the guiding questions. As a reminder to the reader, these questions are:

- How does the literature describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?
- How does the literature describe the consequences of failing to meet these needs?

- How does

- How does

education

- What ex

topic co

In e

These parag

body of lite

supporting

the flow of

form. To a

additional

section fou

How does

students (

De

learning an

social. Ad

one theory

Education

education n

identify the

- How does the literature describe effective approaches to meeting these needs?
- How does the literature describe the relationship between the topic/concept and education reform (both in general and with specific reference to middle school)?
- What explicit references, if any, does the literature contain that connect the topic/concept to others included in the dissertation (or external to the dissertation)?

In each section, the answers to these questions are presented in paragraph format. These paragraphs summarize the views that were commonly expressed in the particular body of literature. Due to the commonality of the views summarized, there are numerous supporting references that could be cited. In an effort to avoid excessive interruption to the flow of the summary, a maximum of three references is provided in parenthetical form. To accommodate guidelines for the formatting of dissertation documents, additional references, when deemed necessary for inclusion, are provided in the endnotes section found at the end of this chapter.

How does the literature on DAE describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?

Developmentally appropriate education is centrally concerned with promoting learning and enhancing development in all domains—cognitive, emotional, physical, and social. Advocates of DAE argue, “because development and learning are so complex, no one theory is sufficient to explain these phenomena” (National Association for the Education of Young Children, 1996, p. 1). For this reason, developmentally appropriate education relies on multiple theories and perspectives on development and learning to identify the intellectual and psychosocial characteristics and needs of students.

To assist educators in their efforts to promote robust development and learning, the literature on developmentally appropriate education offers a framework for integrating various theories, and highlights various student characteristics that educators should attempt to respond to. Drawing on the theories of Piaget, Vygotsky, Erikson, Dewey, Bronfenbrenner, Bruner, Maslow (Bredekamp, 1987; Bredekamp & Rosegrant, 1992; Caine & Caine, 1991), and various theories related to ethical development, motivation, affect, and resilience (see Novick, 1996), literature on DAE presents general principles of development and learning. These general principles assert that:

- Development and learning occur in and are influenced by multiple social and cultural contexts, and result from the interaction of biological maturation and the environment, which includes both the physical and social worlds that children live in.
- Children develop and learn best in the context of a community where they are safe and valued, their physical needs are met, and they feel psychologically secure.
- Development and learning proceed in predictable directions toward greater complexity, organization, and internalization; occur in a relatively orderly sequence, with later abilities, skills, and knowledge building on those already acquired; and proceed at varying rates from child to child as well as unevenly within different areas of each child's functioning.
- Development and learning advance when children have opportunities to practice newly acquired skills as well as when they experience a challenge just beyond their present level of mastery.
- Optimal periods exist for certain types of development and learning.

• Children

represent

These

NAEYC. W

appropriate e

The principi

span theories

learning, and

theories atte

generalizab

Whi

at different

Vygotsky e

needs for be

psychosoci

relationship

can cope w

work, fami

for students

arising from

as specific

Such

official state

- Children demonstrate different modes of knowing and learning and different ways of representing what they know (NAEYC, 1996, Part 3, p. 1-7).

These are the principles of development and learning as expressed by the NAEYC. While this is an organization dedicated to promoting developmentally appropriate early childhood education, these principles are not specific to that age group. The principles represent an effort to bridge the distance between stage theories and life span theories of development, between cognitive and social cognitive theories of learning, and between various epistemologies. The extent to which the contributing theories attend to the characteristics of students at different ages determines the generalizability of these principles to students at various grade levels.

While the theories of Piaget and Erikson present different descriptions of students at different periods of life, those of Dewey, Bronfenbrenner, Bruner, Maslow and Vygotsky emphasize the enduring nature of particular characteristics and needs. The needs for belonging, security, and personal relevance/meaning are among the enduring psychosocial needs. Takanishi (1993) describes these as the need to experience secure relationships, to be a valued member of a group, to become a competent individual who can cope with the exigencies of everyday live, and to believe in a promising future in work, family, and citizenship. When considering developmentally appropriate education for students in a particular age range, these enduring needs are superimposed on those arising from stage theories to produce translations and recommendations for practice that are specific to an age group.

Such age-specific translations of the general recommendations for DAE appear in official statements produced by organizations dedicated to developmentally appropriate

education at specific grade levels. For example, the National Middle School Association (NMSA) espouses the general principles presented above, and translates these principles by focusing on the relevant cognitive and psychosocial stages presented in Piaget's and Erikson's theories. This translation serves as the basis for recommendations that are designed to take both the specific and enduring characteristics and needs of early adolescents into account.

In general, DAE emphasizes an organismic/ecological perspective of development and learning such as that described by Bronfenbrenner (1974, 1979) or Hill (1980). According to the organismic/ecological perspective individuals are situated with a set of nested relationships from which they cannot be extracted or studied in isolation. These relationships give rise to the larger (and unique) context on an individual's development. This context contains features related to personal characteristics, as well as the small-scale and large-scale systems in which the individual functions. For example, personal characteristics of focus may include biological status (such as general health and physical development/pubertal status) and psychological status (such as cognitive, social, and emotional characteristics). Small-scale systems of focus may include communities, families, and peer groups (including classmates), while large scale systems of focus may include culture and society).

As a result of DAE's reliance on the organismic/ecological perspective, literature on DAE defines students' characteristics and needs in relation to their personal characteristics (such as cognitive level and knowledge base), and the expectations imposed by systems (namely, school and society) in which they function. According to

Manning (1

relation to:

- the gene
- the spec
- operative
- the spec
- inferior
- the feati

As a

range of ear

intellectual

- The cap

domain:

- Heighte

(Elkind

- The ten

and coh

1968, W

- The des

adults (1

Due

adolescents

simultaneous

Manning (1993) early adolescents characteristics and needs are frequently defined in relation to:

- the general principles of learning and development
- the specific characteristics associated with Piaget's stages of concrete and formal operations
- the specific characteristics associated with Erikson's stages of industry versus inferiority and identity versus role confusion, and
- the features of middle school learning environments

As a result of these foci, middle level educators are encouraged to consider a range of early adolescents' characteristics that relate to psychosocial as well as intellectual domains. Among these are:

- The capacity for abstract and hypothetical thought in intellectual and psychosocial domains (Piaget, 1959; Vygotsky, 1978)
- Heightened awareness of self and increased sensitivity to the opinions of others (Elkind, 1967; Milgram, 1992; Worell & Danner, 1989)
- The tendency to seek out information that can be used to define the self as a unique and coherent entity, and predict one's potential (Evans & Piaget, 1973; Erikson, 1959, 1968; Worell & Danner, 1989).
- The desire for increasing behavioral autonomy and emotional independence from adults (Erikson, 1959; Worell & Danner, 1989, Eccles & Midgley, 1989).ⁱ

Due to these characteristics and those expressed in the general principles, early adolescents' needs are often described, in global terms, as the need for environments that simultaneously build and integrate their academic, personal, and social knowledge bases

by promoting content mastery, conceptual understanding, self-understanding, self-determination, social belonging, and security. In more specific terms, these needs are often described as needs for:

- academic content that is authentic/realistic, intellectually challenging, and personally relevant/interesting (Simmons & Blyth, 1987),
- social contexts that communicate acceptance, and promote affiliation and belonging (George and Alexander, 1993; Havighurst, 1972; Simmons & Blyth, 1987), and
- interactions with adults that provide guidance and support, communicate respect for individual differences and potential for improvement, and offer opportunities for decision-making and autonomy (Manning, 1993, Takanishi, 1993; Worell & Danner, 1989).

Fulfilling the needs is considered essential for promoting both healthy intellectual and psychosocial development (NASSP, 1989, 1993; NMSA, 1995, Scales, 1991). Failure to fulfill these needs is associated with a number of negative consequences for development and learning (Eccles & Midgley, 1989; Lounsbury & Clark, 1990; NMSA, 1995).ⁱⁱ The following paragraphs describe these consequences as presented in the literature on developmentally appropriate education.

How does the literature on DAE describe the consequences of failing to meet students' intellectual and psychosocial needs?

According to the literature on developmentally appropriate education, early adolescents are in a state of developmental flux, during which, they are in the process of forming a self-concept that frames their future pursuits. In other words, they are using information about their strengths, weaknesses, and potential to refine their academic and

social identity

more unified

(1993) and

goal-setting

When

there is an

development

utility of ad

Eccles, Lor

inappropriate

proximal de

unbalanced

Manning, 1

For

adolescents

operational

they may h

self-evaluat

does not res

but instead

Caine, 1991

The

expressed in

social identities, and they are integrating these components of personal identity into a more unified self-view (Erikson, 1959, 1968; Marcia, 1980). According to Manning (1993) and Worell and Danner (1989) the early adolescent's self-view forms a basis for goal-setting and decision-making that is reflected in their academic and social behavior.

When learning contexts are not developmentally appropriate for early adolescents there is an increased likelihood of negative outcomes for cognitive, social, and emotional development, for learning and motivation in specific subjects, and for perspectives on the utility of additional education (Anderman & Midgley, 1997; Beane, 1990a, 1990b; Eccles, Lord, & Midgley, 1991).ⁱⁱⁱ According to the literature, developmentally inappropriate education either provides experiences that are outside of students' zones of proximal development in the intellectual or psychosocial domain, or reflects an unbalanced approach to promoting development in these domains (Dickinson, 2001; Manning, 1993; Novick, 1996).

For example, education that is developmentally inappropriate for early adolescents does not respond to the possibility that students may be in the concrete operational stage or the formal operational stage of cognitive development, and/or that they may have greater or lesser desires and capacities for autonomy, self-regulation, and self-evaluation (Manning, 1993). In addition, developmentally inappropriate education does not respond to both the intellectual and the psychosocial needs of early adolescents, but instead over-emphasizes one set of developmental needs over the other (Caine & Caine, 1991; Kostelnik, Soderman, & Whiren, 1993; Sroufe, Cooper, & DeHart, 1992).

The following paragraphs summarize the consequences of unmet need as expressed in the writings of individual researchers and national organizations that

advocate dev

Jacquelynn

Lounsbury f

literature on

reles heavil

literature on

organization

communicat

negative con

Consequen

Con.

based on Pi.

nature of lea

functioning

conceptual

involve soci

Joseph, 198

Whi

children (2g

(Kamii & M

education g

(Kamii, 199

& Howard,

advocate developmentally appropriate education. The work of Constance Kamii, Jacquelynne Eccles and her research associates^{iv}, Sally and Donald Clarke, and John Lounsbury figure prominently in the discussion of negative consequences expressed in literature on DAE. As a result, the discussion of negative consequences presented below relies heavily on the findings reported in the works of these authors. Also prominent in literature on DAE are the negative consequences emphasized by the national educational organizations cited above. As a result, the views expressed in the official communications of these organizations also figure prominently in the discussion of negative consequences presented below.

Consequences of Unmet Intellectual Need

Constance Kamii presents a description of students' intellectual needs that is based on Piaget's theory of cognitive development. She emphasizes the constructive nature of learning and the centrality of autonomous thinking in effective individual functioning. According to Kamii, students are active learners who construct their conceptual understandings through physical experience with objects and in contexts that involve social interaction with peers (Kamii, 1985; Kamii & Ewing, 1996; Kamii & Joseph, 1989; Williams & Kamii, 1986).

While Kamii's work focuses primarily on mathematics and elementary school children (ages 5-12), her work also incorporates other content areas, such as literacy (Kamii & Manning, 1999; Willert & Kamii, 1985), and broader issues such as national education goals (Kamii, Clark, & Dominick, 1994) and violence-prevention in schools (Kamii, 1995). Kamii's work also extends to older student groups (Moses, Kamii, Swap, & Howard, 1989) and higher educational levels (Kamii, 1990, 1991) when describing

algebra learning, the content-independent goals and purposes of education, and the roles of teachers and students during learning.

Kamii's work describes developmentally inappropriate education as learning interactions that promote "intellectual heteronomy" or excessive dependence on others when attempting to decide between truth and untruth in intellectual domains (Kamii, 1984a, 1984b, 1991). In essence, intellectual heteronomy is the inability to engage in effective self-monitoring and self-regulated cognition. According to Kamii, intellectual heteronomy is the result of excessive teacher control of methods and thought processes (Kamii, 1984b) and/or content that demands thinking that is beyond the student's cognitive zone of proximal development (Kamii & Clark, 1995; Kamii & Warrington, 1995).

While intellectual heteronomy is considered the primary negative consequence of developmentally inappropriate education, Kamii also describes the negative consequences that arise from intellectual heteronomy. According to several of her works, intellectual heteronomy leads to a form of learned-helplessness—a disposition that undermines intrinsic motivation, interferes with solving novel problems, and stifles the effectiveness of peer-interactions around learning (Kamii, 1984b, Nelson, Kamii, & Pritchett, 1996; Kamii & Ewing, 1996).

These consequences have significant implications for the effectiveness of recent reforms that emphasize cognitive flexibility, authentic problems, and group-based learning. The relationship between cognition and disposition is emphasized throughout the literature on developmentally appropriate education, and the ways in which educators respond to early adolescents' increasing desires for autonomy and self-determination

have been

school se

highlight

they conc

adolescen

Consequ

In

and theo

consequ

1975). D

personal

in Turni

Adolesce

A

appropri

(Eccles &

et al, 199

1988). th

increasin

Buchanan

A

middle le

have been the focus of many studies on motivation, affect, and achievement in middle school settings. The work of Jacquelynne Eccles and her research associates has highlighted the negative affective and achievement consequences of unmet needs, which they conceptualize as a “mismatch” between the characteristics and needs of early adolescents and the features of the school environment.

Consequences of Unmet Psychosocial Need

In their research, Eccles and her research associates draw on various perspectives and theories to define developmentally appropriate education and describe the consequences of unmet need. Among these are person-environment fit theory (Hunt, 1975), Dweck and Leggett’s (1988) social-cognitive approach to motivation and personality, and the description of early adolescents’ characteristics and needs expressed in *Turning Points: Preparing American Youth for the 21st Century* (Carnegie Council on Adolescent Development, 1989).

According to the writings produced by Eccles and her associates, developmentally appropriate education for early adolescents responds to issues of imaginary audience (Eccles & Midgley, 1989), the need for belonging (Eccles, Midgley, Wigfield, Buchanan, et al, 1993), the need for caring relationships with adults (Feldlaufer, Midgley & Eccles, 1988), the need for intellectual stimulation and challenge (Eccles & Midgley, 1989) and increasing desires for autonomy and decision-making in the classroom (Eccles, Buchanan, Flanagan, Fuligni, Midgley, & Yee, 1991).

According to the collective writings of the group, developmentally inappropriate middle level education displays several features. These include:

- excessive teacher control of classroom activities and limited opportunities for meaningful participation by students (Eccles & Midgley, 1989; 1988; Midgley and Feldlaufer, 1987),
- an emphasis on comparative performance (Eccles & Midgley, 1989),
- a lack of intellectual challenge and a decline in emphasis on critical thinking (Eccles & Midgley, 1989; Gheen, Hrudá, Middleton, & Midgley, 2000), and
- homogenous ability grouping (Fuligni, Eccles, & Barber, 1995).

According to Eccles and her associates, these experiences lead to declines in intrinsic motivation, increases in behavior problems, maladaptive patterns of learning, negative self-views, anxiety, apathy, and declines in academic achievement. These negative consequences have significant implications for content mastery, preparation for higher-level studies, long-term educational goals, and persistence/attainment.

Like the work of Eccles and her associates, the work Sally and Donald Clark, and the work of John Lounsbury focus specifically on early adolescents and the negative consequences of unmet need for their development and learning. Clark and Clark's (1993) work is grounded in John Hill's (1980)^v theory of socio-psychological development, and the work of Joan Lipsitz (1983, 1984) to describe the intellectual, social, and emotional developmental needs of early adolescents.

In their writings, they refer extensively to the descriptions of developmentally appropriate education that are presented in seminal texts on middle level education and on official statements produced by national organization that advocate developmentally appropriate middle level education. Examples of seminal works that they draw upon include: *The Exemplary Middle School* (Alexander & George, 1981), *An Agenda for*

Excellence

in the Mid

(Carnegie

Jo

developm

consequ

developm

describe

experien

increasing

comparis

changing

& Clark.

Ar

insensitiv

• under

• force

• assess

• place

• empha

Th

(1990) as a

achieveme

Excellence at the Middle Level (NASSP, 1985), the State of California's report, *Caught in the Middle* (Superintendent's Middle Grades Task Force, 1987), and *Turning Points* (Carnegie Council on Adolescent Development, 1989).

John Lounsbury also relies on these theories and works to describe developmentally appropriate education for early adolescents, and the negative consequences of inappropriate educational experiences for early adolescents' development and learning. The writings of Clark and Clark, and those of Lounsbury describe developmentally appropriate education for early adolescents as educational experiences that respond to early adolescents' growing capacity for abstract thought, increasing desire for interaction with peers, heightened tendency toward social comparison, need for support and guidance from caring adults, and concerns about their changing bodies (Clark & Clark, 1993, 1994; Lounsbury, 1978, 1984, 1992, Lounsbury & Clark, 1990).

According to these authors, developmentally inappropriate education reflects insensitivity to these developmental characteristics by engaging in practices that:

- under-emphasize higher-order thinking and personally relevant content,
- force students to work in isolation,
- assess students by comparing their performance other students',
- place teachers in the role of judges and/or adversaries, and
- emphasize homogenous ability-grouping.

The consequences of these practices have been described by Lounsbury and Clark (1990) as apathy, alienation, a negative outlook on the future, and academic under-achievement.

As a leader in the National Middle School Association, Lounsbury's views on developmentally appropriate education and the consequences of inappropriate education permeate the official statements produced by the NMSA. He serves as the senior editor of the NMSA's professional publications and has authored and/or edited the 1982, 1992 and 1995 versions of "This We Believe"—the NMSA's official position statement on developmentally appropriate education in the middle grades.

The NMSA is the foremost authority on developmentally appropriate middle level education. The organization produces a scholarly journal (*The Middle School Journal*), holds an annual conference, and maintains a website (www.nmsa.org). Through professional publications and research summaries published on the website, the NMSA presents descriptions of the negative outcomes associated with unmet intellectual and psychosocial need. In *Research Summary #5: Young Adolescents' Developmental Needs*, the NMSA, citing Stevenson (1992), describes early adolescents in the following way:

Every child wants to believe in himself or herself as a successful person; every youngster wants to be liked and respected; every youngster wants physical exercises and freedom to move; and youngsters want life to be just (Stevenson, 1992).

Immediately following this quote, the NMSA goes on to state:

Not meeting these needs often results in alienation from school, loss of general self-esteem and a sense of belonging, and destructive methods of coping, including delinquency and drugs. (www.nmsa.org)

Across individual researchers who focus on developmentally appropriate education for early adolescents, there is a high degree of consistency in their perspective on characteristics, needs, and consequences of unmet need. While the specific research is often motivated by varying issues—such as motivation, achievement, self-concept, or behavior—these works have at least one thing in common. At the root of the explanation

of the prob

developme

environme

following

How does

intellectu

B.

developm

practice.

groups ar

making. s

developm

behavior

non-acad

learning

recomme

effective

General

In

developm

and NMS

• Elimir

diagno

of the problem and the recommendations for solving it is a description of the developmental characteristics and needs of early adolescents and an emphasis on creating environments that respond appropriately to those characteristics and needs. In the following paragraphs, these recommendations are described in more detail.

How does the literature on DAE describe effective approaches to meeting students' intellectual and psychosocial needs?

Based on the general principles of development and learning, advocates of developmentally appropriate education make several general recommendations for practice. These recommendations are then further specified in relation to specific age groups and specific issues. Among the issues are grouping practices, classroom decision-making, school and classroom climate, and student behavior. While the tenets of developmentally appropriate education are also used to inform efforts that address social behavior in school (e.g., to promote conflict-resolution and prosocial interaction during non-academic activities) the following paragraphs focus on their application to classroom learning activities and evaluations. The content that follows presents the general recommendations and the age-specific translations described in the literature on DAE as effective approaches to meeting student needs.

General Recommendations for Meeting Students Intellectual and Psychosocial Needs

In response to the characteristics of learners described in the general principles of development and learning, individual researchers and organizations such as the NAEYC and NMSA exhort educators to:

- Eliminate assessments as tools of judgment and reconceive them as tools for diagnosis and opportunities for learning.

- Allow
lesson
- Create
which
where
comm
- Emp
their
- Crea
skill
to do
- Emp
anno
- Emp
pictu
- Dev
diff
- Emp
patie
appl
NAI
A
recomme

- Allow time for students to interact with peers in small groups to discuss the content of lessons.
- Create a caring community of learners by eliminating homogeneous ability groups—which create status hierarchies—and replace them with heterogeneous ability groups where differences in understanding are explored and resolved through communication.
- Emphasize self-assessment so students become aware of and proficient in identifying their own strengths and weaknesses.
- Create an intellectually engaging environment by emphasizing higher-order thinking skills such as reasoning, predicting, and planning so that students are better prepared to deal with novel problems in school and life situations.
- Emphasize exploration so students are aware that there are always options to choose among.
- Emphasize integrated and/or interdisciplinary studies so students learn to see the “big picture” as well as how the pieces fit together.
- Develop, refine, and use a wide repertoire of teaching strategies to help students with different learning styles develop conceptual understanding of the material.
- Emphasize extended explorations/investigations of problems so that students develop patience and persistence, learn strategies for dealing with frustration, and learn to apply lessons learned in school to the solution of problems faced outside of school (NAEYC, 1996, Part 4, p. 1-7).

As with the general principles for development and learning, these recommendations for practice also apply equally well to early adolescents because they

relate to en

students a

recommen

early ado

translation

character

Recomm

In

recommen

early ado

Teachers

the Inter

organiza

- Allo

test: t

scrut

prose

- Elim

frequ

rathe

- Allo

inter

relate to enduring needs, individual variation, and general competencies valued for students at all ages. It is not until the age-specific translation occurs that the recommendations for practice begin to reflect the unique characteristics and needs of early adolescents. In the sub-section below, I present some of the age-specific translations of the general recommendations and describe the developmental characteristics and needs to which they respond.

Recommendations for Meeting Early Adolescents' Intellectual and Psychosocial Needs

In relation to early adolescents and particular subject areas, these general recommendations have been translated into specific practices that guide approaches to early adolescent education. For example, groups such as the National Council of Teachers of Mathematics (NCTM), the National Council of Teachers of English (NCTE), the International Reading Association (IRA), and other subject-related educational organizations have recommended the following:

- Allow time for students to interact with peers in small groups so adolescents can 1) test their ideas in front of a small audience before opening themselves up to public scrutiny, 2) learn that they have something valuable to contribute, and 3) develop a prosocial disposition towards their peers.
- Eliminate the adversarial relationship between teachers and students by increasing the frequency of student-centered or student-led activities where teachers act as coaches rather than judges, and resources rather than knowledge authorities.
- Allow time for students to work alone so adolescents can explore topics of personal interest, practice skills, reflect, and develop a sense of independence/autonomy.

- Read l

especi

ideals

Th

developm

adolescen

with imag

efforts to u

and decide

Th

use of app

students w

that limit s

advocate th

specific co

educators i

students an

How does

appropriat

reference to

Adv

outreach act

educational i

- Read literature that evokes thought and discussion about issues faced by adolescents, especially issues related to identity development, major social issues, and utopian ideals.

These recommendations for practice relate directly to the general principles for development and learning as well as to the specific developmental needs of early adolescents. They are suggested as an appropriate response to early adolescents' issues with imaginary audience, their heightened tendency toward social comparison, their efforts to understand and define the self, and their efforts to make sense of adult society and decide upon a role.

This general framework for developmentally appropriate practice, encourages the use of approaches that acknowledge the intellectual and psychosocial variability in students without stigmatizing certain students, or constructing institutionalized barriers that limit students' development and learning. The framework does not, however, advocate the use of a single instructional or grouping method, nor does it prescribe specific content or materials. Decisions of this nature are left to the discretion of educators in possession of more detailed knowledge about the particular group of students and their specific characteristics and needs.

How does the literature on DAE describe the relationship between developmentally appropriate education and education reform (both in general and with specific reference to middle school)?

Advocates of developmentally appropriate education have engaged in extensive outreach activities and participated in many collaborative efforts to address a range of educational issues. They have worked in partnership with organizations that focus on

specific s
example.
collaborat
in ways th
(1996).

Ac
improve s
range of i
NMSA, a
learning.
authentic
training m
developm
outcomes
services a
efforts to
developm
schools to
school-lin
English pr

Tr
reform. S
include rec

specific subject areas as well as those that focus on pervasive problems in education. For example, the staff of the Child, Family, and Community Program (CFC) has worked collaboratively with schools in the Northwest in an effort to change pedagogical practice in ways that reflect “what we know about how children learn and develop” (Novick, 1996).

Advocates of DAE have participated in curriculum development efforts, efforts to improve school climate, efforts to diversify instructional practice, and efforts to address a range of issues associated with school failure. For example, the NAEYC, NAESP, the NMSA, and the NAASP have produced official statements endorsing student-centered learning, interdisciplinary curricula, learning centers, learning communities, and authentic assessment. These organization have also produced research summaries and training materials for administrators and teachers to assist their efforts to increase the developmental appropriateness of their programs, improve learning and achievement outcomes, and promote student well-being. These organizations also provide consulting services and professional development workshops designed to assist educators in their efforts to address particular challenges to implementing programs that are more developmentally appropriate. In addition, these organizations work with individual schools to help them identify state and community resources that could help provide school-linked services for students with learning disabilities, students with limited English proficiency, and students living in poverty (Novick, 1996).

These outreach efforts appear to have had a significant impact on education reform. Standards documents in the core and non-core school subjects have come to include recommendations that relate not only to the subject-area content, but also (as

discussed

and need

the section

standards

(NCTE II)

of recomm

The recon

document

(NAEA.

to address

relate to p

As

criteria for

of reform

reform eff

between e

findings re

level educ

What exp

concept of

dissertatio

As

explicitly c

discussed in the section on age-specific recommendations for DAE) to the characteristics and needs of students in general and in relation to that content. As will be illustrated in the section on reform, recommendations for instruction and assessment contained in standards documents related to mathematics (NCTM, 1989, 1991), English/language arts (NCTE/IRA, 1996), science (NAS, 1993), and social studies (NCSS, 1994) reflect many of recommendations contained in literature on developmentally appropriate education. The recommendations contained in literature on DAE also appear in the standards documents related to non-core subjects such as music (MENC, 1994), the visual arts (NAEA, 1994), and physical education (NAESP, 1995). In addition, programs designed to address the needs of at-risk students have also come to include recommendations that relate to promoting development as well as learning and achievement.

Advocates of DAE argue that most educational environments do not meet the criteria for developmentally appropriate education. As a result, they are strong supporters of reform and have attempted to influence the nature of instructional and structural reform efforts. It is not surprising, then, that there is a strong and explicit connection between educational reform and the concept of DAE. In the following paragraphs, findings related to the explicit connections between DAE and the other concepts—middle level education, at-risk students, and educational resilience are presented.

What explicit references, if any, does the literature on DAE contain that connect the concept of developmentally appropriate education to others included in the dissertation?

As mentioned above, the literature on developmentally appropriate education explicitly connects the concept to educational reform encourages reforms that increase

the develo

explicitly

levels. W

implemen

settings a

foster hig

Th

variability

literature

students in

connectio

Chapter 5

Endnotes

For more
and Mac I

¹ The follo
negative i
Council o
Leggett (1
Worell an

² Also see
(1986).

³ This larg
Buchanan.
Margaret C
Doris Yee

the developmental appropriateness of educational programs. This literature also explicitly connects the concept of DAE to students of various ages and in various grade levels. With specific reference to early adolescents' DAE emphasizes the importance of implementing and maintaining developmentally appropriate middle level educational settings and encourages educators to adopt challenging, interdisciplinary curricula that foster higher-order thinking and independent critical thinking.

The literature on DAE also emphasizes the importance of responding to student variability in the cognitive, social, emotional and physical domains. As a result, the literature encourages educators to think about the characteristics and needs of at-risk students in terms of the interaction between individuals and the environment. These connections will be discussed in more detail in subsequent chapters—particularly in Chapter 5 where I present the findings related to at-riskness and educational resilience.

Endnotes

ⁱ For more on autonomy see Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, and Mac Iver (1993), Eccles, Buchanan, Flanagan, Fuligni, Midgley, and Yee (1991).

ⁱⁱ The following also assert that failing to fulfill these developmental needs leads to negative intellectual and psychosocial consequences for early adolescents: Carnegie Council on Adolescent Development (1989), Clark and Clark, (1993), Dweck and Leggett (1988), Manning (1993), Superintendent's Middle Grades Task Force (1987), Worell and Danner (1989).

ⁱⁱⁱ Also see Beane (2000), Cohen (1999), Covington (1984,1994), Eccles and Jacobs (1986).

^{iv} This large and extended group of researchers centrally involves Eric Anderman, Christy Buchanan, Jacquelynne Eccles, Harriet Feldlaufer, Constance Flanagan, Andrew Fuligni, Margaret Gheen, Douglas Mac Iver, Carol Midgley, David Reuman, Allan Wigfield, and Doris Yee.

^v John Hill's theory of socio-psychological development integrates the theories of Piaget and Erikson, and describes the influence of school, home, and larger social contexts on adolescents' developmental outcomes.

CH

A
a
f
a
a
n

A

special i

part of th

early 196

not the in

schools

structure

or K-6 an

T

primarily

to deal ef

the low q

provision

needs of e

1920; Koc

linked to s

district an

grades.

CHAPTER 4: FINDINGS RELATED TO MIDDLE LEVEL EDUCATION

It seems apparent that the future of middle level education depends quite directly on its ability to break from the dominance of the high school and form its own identity and clarity of goals. But it is through the study of and attention to the needs and characteristics of the clients, young adolescents themselves, that we will ultimately succeed in building a truly responsive and responsible middle level program.

Judith Brough, *Educating Young Adolescents*, (1995, p. 48)

Although middle level education has a long history in American education, special institutions dedicated to the education of early adolescents have not always been a part of the American educational landscape. These schools came into existence in the early 1900s, but according to Hansen and Hearn, (1971, p. 4), educational innovation was not the initial impetus for the development of middle level schools. Rather, these schools were created in an attempt to solve the major problems of the existing school structure, which typically divided the student population between K-8 and 9-12 schools, or K-6 and 7-12 schools.

The idea of a separate school for early adolescents evolved slowly and was based primarily on concerns about the perceived failures of elementary and secondary schools to deal effectively with students in the 7th and 8th grades. The primary concerns related to the low quality of the curriculum, teachers' lack of content knowledge, the lack of provisions for addressing differences in learning ability, the unmet cognitive and social needs of early adolescents, and resulting high rates of retention and dropping out (Briggs, 1920; Koos, 1927). Many researchers and educators believed that these problems were linked to students' experiences in the 7th and 8th grades. As a result, they strongly urged district and school administrators to focus their attention on improving education in these grades.

Act

enthusiasti

schools pro

century. E

grew to m

nisen to m

A

expected

nature to

society a

transition

Wolockia

adolesce

explorati

training

C

opportur

Accordin

plans for

familiar

Stevens

early adv

T

an

Across the nation, educators and members of local school boards responded enthusiastically to calls for reform by establishing the first junior high schools. These schools proved to be very popular in the socially progressive climate of the early 20th century. Between 1910 and 1925, the number of junior high schools in the United States grew to more than 2000 (Koos, 1927). By 1947 the number of junior high schools had risen to more than 10,000 (Hansen & Hearn, 1971).

According to Briggs (1920, p. 327), in its essence the junior high school was expected to function as “a device of democracy whereby nurture may cooperate with nature to secure the best results possible for each individual adolescent as well as for society at large.” The original mission of the junior high school was to function as a transitional bridge between elementary school and high school (Tye, 1985; Kindred, Wolotkiewicz, Mickelson, Coplein, & Dyson, 1976). It was to be a place where early adolescents could explore various topics and roles—and be supported in their explorations and identity development—before embarking on serious and exclusive training for academic or vocational adult roles.

Overall, junior high schools were expected to socialize early adolescents through opportunities for exploration within an integrated curriculum and flexible schedule. According to the Association for Supervision and Curriculum Development (ASCD), plans for the first junior high schools contained components that would sound very familiar to today's middle school educator. In a book produced for the ASCD, (George, Stevenson, Thomason, & Beane, 1992) described the goals and functions articulated by early advocates of junior high schools in the following way:

The school was to be based on the characteristics of young adolescents and concerned with all aspects of growth and development. It would be a

scho
the c
emp
4)

As j

experience

knowledge

state depart

the prepara

establish o

were estab

by various

In

identifying

most com

by Gruhn

Junior H.

1. Inter

who

2. Disce

inter

3. Guid

their

4. Diffe

varied

school designed to provide learning skills while bringing more depth to the curriculum than had been the case in the elementary school. It would emphasize guidance and exploration, independence and responsibility. (p. 4)

As junior high schools grew in popularity, educators and legislators gained experience which suggested that junior high school teachers would need specialized knowledge and skills to achieve the goals articulated by early advocates. In response, state departments of education and major universities established criteria and courses for the preparation of junior high school teachers, and state legislatures passed laws to establish or regulate the operation of junior high schools (Koos, 1927). The laws that were established to regulate the operation of junior high schools were heavily influenced by various position statements put forth by junior high school educators.

In the 1920s, as the junior high school was gaining acceptance, major statements identifying important characteristics of the schools were published. The best known and most comprehensive restatement of the functions of junior high schools was developed by Gruhn and Douglass in 1947. The six functions reported in their text, *The Modern Junior High School* (as cited in Clark & Clark, 1993, p. 449) involved providing:

1. Integration of learning in ways that will become coordinated into effective and wholesome behavior.
2. Discovery and exploration opportunities for all pupils that are based on students' interests, aptitudes, and abilities.
3. Guidance to assist pupils in making wise choices educationally, vocationally, and in their personal and social lives.
4. Differentiation of educational facilities and opportunities that accommodate the varied backgrounds and needs of pupils.

5. Social

and to

6. Article

to ed

T

major fun

high scho

as is com

impleme

achieve

and grad

about the

school m

expresse

identified

of junior

socialize

developm

B

progress:

changes t

influence

5. Socialization experiences that prepare pupils to participate in the present social order and to contribute to future changes, and
6. Articulation through provision for a gradual transition from preadolescent education to educational programs suited to the needs and interests of adolescent youth.

Throughout the nation there was widespread agreement that these should be the major functions of the junior high school. They served as a major force in guiding junior high school educators in the 1940s and 1950s (Van Til, Vars, & Lounsbury, 1961), but, as is common in large-scale reform efforts, there were differences in emphasis and implementation. According to Van Til et al., these differences did not interfere with the achievement of one of the major goals of the reform—reducing the number of dropouts and grade retentions. However, other researchers and educators were less enthusiastic about the performance of the new schools. In a historical account of the junior high school movement, Lounsbury (1992), indicates that many researchers and educators expressed concern that the other major educational needs of early adolescents that were identified by the early reformers remained unmet. Of particular concern was the ability of junior high schools to meet the special developmental needs of early adolescents and socialize students in ways that were conducive to participatory democracy and the development of an American identity.

By the early 1960s, many educators noted that what had evolved from the socially progressive junior high reform rhetoric of the 1920s were primarily administrative changes that led to the creation of miniature high schools where practices were heavily influenced by schedules. Scholars and practitioners began to question whether or not

these orga

needs of e

Ac

dissatisf

early 196

organizat

based on

alternativ

and instr

bermoane

latter's c

I

M

s

d

t

P

f

s

s

(

h

s

E

C

A

f

a

re

in

B

these organizational structures were functioning in ways that were responsive to the needs of early adolescents (Hansen & Hearn, 1971; Lounsbury, 1964).

According to a historical account written by Judith Brough (1995), growing dissatisfaction with the junior high school was the topic of much of the literature of the early 1960s. She states, “The criticisms were leveled not so much at the grade organization as they were at the programs” (p. 38). In other words, the criticism was not based on the fact that junior high schools served students in grades 7-9 as opposed to alternative grade arrangements. The criticism focused, instead, on the internal structure and instructional features of the schools. According to Brough, “repeated surveys bemoaned the fact that the junior high had turned into a miniature senior high, aping the latter’s curriculum, pedagogy, and schedule” (p. 38).

In greater detail, George et al. (1992) described the problem in the following way:

Many a junior high school steadily became more and more a little high school in virtually every way. Teachers were organized in academic departments rather than in the interdisciplinary core curriculum groups that the literature of the junior high school recommended. Students were promoted or retained on a subject-by-subject basis. Elective programs focused on specialization that would lead to quasi-majors at the high school rather than the exploration envisioned by other early junior high school educators. Rigid grouping patterns based on perceived ability (measured by IQ) or prior achievement became characteristic of the junior high school in many districts...The junior high school, in practice, was shaped by the high school, by the state university, by Harvard, and by European universities established five centuries earlier. (p. 6)

George et al., (1992) went on to state that:

As the structure of modern American society grew more and more flexible, more complex, more urban, and more pluralistic, the stresses on all levels of education increased. The conflict between the ideal and the real in the American junior high school stood out most glaringly. The inadequacies of many junior high schools became more and more obvious. Both liberal and conservative philosophical positions described the mid-

cer
urg

Th

many educ

in 1961, th

Petterson.

junior high

identity cr

grades ret

most stron

process fo

school ph

the junior

Th

that were

the best co

moderate

devoted to

time).

Th

levels, but

characteriz

end of a le

services, a

century junior high school in critical terms. Reform became increasingly urgent. (p. 6)

This description of the junior high school echoes the sentiments expressed by many educators and organizations that focused on middle level education. For example, in 1961, the ASCD published *The Junior High School We Need* (Grantes, Noyce, Petterson, & Robertson, 1961). In this document the authors described the contemporary junior high school as “a hybrid institution, a school with an identity crisis as severe as the identity crisis endured by many of the young students within it.” While the 7th and 8th grades retained some semblance of the elementary school, the 9th grade was influenced most strongly by the high school. This was especially so because the credit-counting process for high school graduation included the 9th grade. Advocates of the junior high school philosophy believed that moving the ninth grade to the high school would allow the junior high school to operate in accordance with its philosophy.

The 1961 ASCD report continued to describe the ideal junior high school in terms that were very different from actual practice. In this document, Grantes et al. identified the best contemporary junior high schools as characterized by—among other things—moderate size, block-of-time instruction, flexible scheduling, teachers prepared for and devoted to teaching young adolescents, and modern instructional techniques (for that time).

They predicted that the junior high schools of the future would have no grade levels, but would instead place students in multi-age classrooms. They would be characterized by integrated and exploratory lessons. No bells would ring to signal the end of a learning period. The schools would use modern technology, be rich in guidance services, and have the development of democratic values as their central commitment

(Grantes (

materializ

Gr

unique pl

young per

functions

most part

(1964). m

- increa

- increa

- overb

studen

- the ad

dance

- wides

Th

junior hig

departme

challenge

perceived

education

Pr

were ope

(Grantes et al. 1961, p. 19). The junior high school envisioned by Grantes et al. has never materialized.

Growing concern that junior high schools were not fulfilling their promise as unique places where early adolescents could be academically successful and develop as young people led many to challenge their efficacy. Many principals believed that the six functions of the junior high school, as described by Gruhn and Douglass, were for the most part not fully operational. According to Hansen and Hearn (1971) and Lounsbury (1964), many believed that this was due, in large part, to:

- increases tracking and ability grouping
- increases in departmentalization and specialization
- overburdened guidance counselors who failed to meet the needs of individual students
- the adoption of many activities that characterized senior high schools (e.g., formal dances, interscholastic competition), and
- widespread dissatisfaction of teachers with their assignments to junior high schools.

This suggests that the same organizational changes that early promoters of the junior high school believed would meet the special needs of early adolescents—departmentalization, teacher specialization, and ability grouping—were now being challenged as developmentally inappropriate for these students. As a result of this perceived failure, middle schools began to replace junior high schools as the primary educational institution for early adolescents.

Prior to the publication of *The Junior High School We Need*, "middle schools" were opening in many districts around the country. These schools were called middle

schools

high sch

Alexand

one that

school th

advantag

high sch

middle s

to adapt

B

and midd

effective

organizat

studies an

middle sc

and pract

G

school pro

schools in

programm

implement

whole mid

to early ad

schools primarily because they employed a different grade organization than the junior high school, but in practice, the schools were hardly distinguishable. By 1965, William Alexander and pioneers in the middle school movement were calling for a new school—one that would allow them to achieve the long-held goals of middle level education. The school that they envisioned would include grades 5 or 6 through grade 8, and would take advantage of structural and curricular freedom provided by moving the 9th grade to the high school. According to Alexander and Williams (1965), without the 9th grade, these middle schools would be less controlled by high school graduation requirements and freer to adapt to the real needs of older children and young adolescents.

By the late 1960s, as middle schools were growing ever more popular, junior high and middle school educators became embroiled in a debate as to which school was more effective in meeting the needs of early adolescent students. Debates about each organization's efficacy waged for the next two decades even though several comparative studies and surveys revealed that despite differences in grade organization, the new middle schools and the old junior high schools were still surprisingly similar in structure and practice (Lounsbury, 1991).

George et al. (1992) describe this outcome as a result of the way in which middle school programs were implemented. They argue that efforts to transform junior high schools into middle schools were often not accompanied by carefully planned, long-lived programmatic changes in the school environment. In their historical account of the implementation effort, they assert that, even in districts that attempted to implement the whole middle school concept—which advocated integration, exploration, and sensitivity to early adolescents' developmental issues—program planners knew little about the

concept

fundam

these ci

achieved

E

to coales

(Lounsb

adolesce

school ac

A

promotin

period, th

new emp

and the N

national a

In

document

advisemen

environme

and work

is well-kno

teachers an

concept and were unprepared for the challenges inherent in implementing a fundamentally different educational structure. They go on to argue that, as a result of these circumstances—and despite decades of effort—middle level schools still had not achieved the goals for which they were created (George et al., 1992).

By the 1980s, junior high and middle school proponents and practitioners began to coalesce into a single cause—the cause of improving early adolescent education (Lounsbury, 1991). Sharing this mutual goal, advocates of responsive schools for early adolescents threw off their distinct mantles as junior high school advocates and middle school advocates, and united under the banner of “middle level education” advocates.

As a result of this alliance, in the 1980s, the NMSA emerged as a major force in promoting developmentally responsive middle level education. During the same time period, the National Association of Secondary School Principals (NASSP) also placed new emphasis on middle level education. These two associations, along with the ASCD and the National Association of Elementary School Principals (NAESP), served as national advocates for early adolescents and the educators who worked with them.

In 1985 NASSP issued *An Agenda for Excellence at the Middle Level*. This document advocated adapting to students' developmental needs by including student advisement programs and variety in instructional strategies in the middle school environment. NASSP envisioned schools “organized around teaching teams that plan for and work with a clearly identified group of students, thereby assuring that every student is well-known by a group of teachers” (p. 10). They also envisioned schools where teachers and administrators were specifically trained to function in middle level schools.

These re

NMSA I

/

experien

and adm

accordan

academic

the distri

middle se

T

explore th

that prev

concept a

Californi

Middle (1

Also, in

schools a

grants fo

middle se

middle se

move to

W

these sch

These recommendations were congruent with those that middle level reformers and the NMSA had been advocating for decades.

According to George and Oldaker (1985a, 1985b), by the late 1980s, educators' experiences with the middle school had become increasingly positive. Many teachers and administrators were discovering that middle schools, when organized and operated in accordance with the middle school philosophy, were associated with improvements in academic achievement in middle and high school, and with increased graduation rates in the district. This discovery influenced a substantial number of school districts to create middle schools or reform existing middle schools in line with this philosophy.

These positive experiences also led many administrators and researchers to explore the middle school concept for its benefits, apart from the more practical issues that previously fueled their popularity. Entire states began to endorse the middle school concept and encourage their districts to move toward middle schools. For example, the California State Department of Education published a task force report, *Caught in the Middle* (Middle Grades Task Force, 1987), which strongly encouraged reorganization. Also, in Florida, the Speaker's Task Force (1984) encouraged legislation favoring middle schools and interdisciplinary teams. The state funded the process with enhancement grants for more than \$30 million annually. Georgia made similar moves to promote middle schools through funding initiatives. The funding that often came with these middle school initiatives led many school districts that previously had little motivation to move toward middle schools began to seriously consider it.

With so many new middle schools emerging, the NMSA worked to ensure that these schools had true middle school identities. At its 1989 annual conference, the

NMSA &

schools :

program

advocate

teachers

condemn

These re

grades e

1990s, a

1

middle l

develop

emphas:

academi

knowled

approach

I

to their e

increasin

had grov

education

S

to chang

NMSA adopted several resolutions highlighting the basic characteristics all middle schools should display. These resolutions reasserted the uniqueness of a middle level program. The report focused on the characteristics and needs of young adolescents, advocated interdisciplinary teaming as the most appropriate arrangement for middle level teachers and students, urged the preservation of exploration in the curriculum, and condemned tracking and rigid ability grouping (NMSA Resolutions Committee, 1989). These resolutions represent the concepts favored by the NMSA and leaders in middle grades education since the beginning of the junior high school movement in the early 1900s, as well as the concepts still favored today.

The NMSA is still a powerful force in the philosophy, structure, and practices of middle level education. Over the years, however, many criticisms of middle schools have developed. Various critics have described the middle school approach—with its emphasis on exploration and psychosocial development—as misguided and lacking academic rigor. The Back-to-Basics movement of the 1980s, which emphasized content knowledge and objective assessment, presented powerful opposition to the middle school approach.

During this period, even as middle schools were growing in popularity, opposition to their educational approach—which was often described as “touchy-feely”—was increasing. By the mid-1990s, opposition from advocates of subject-centered education had grown so strong that disagreements between them and advocates of student-centered education escalated, in public rhetoric, to the status of wars (e.g., California Math Wars).

Since the 1980s, teachers and students have been under almost constant pressure to change and improve. Their efforts to live up to society’s expectations have met with

little pra

intellect

of the m

assessme

Some cr

students

Strahan.

T

success-

adolesce

cies to t

challeng

held less

are held p

associate

W

acrimoni

education

the empti

such as Ja

school co

Ac

centered, c

little praise and a great deal of criticism. These criticisms have been leveled on intellectual grounds as well as on psychosocial grounds. Some of the strongest criticism of the modern middle schools resulted from American students' performance on assessments contained in the Third International Math and Science Study (TIMSS). Some criticism is also related to recent increases in mass-violence and other indicators of students' social and emotional maladjustment (Bosworth, Espelage, & Simon, 1999; Strahan, Smith, McElrath, & Toole, 2001).

The criticism arising from the TIMSS results cites to the middle schools' success—or lack thereof—in promoting robust intellectual development among early adolescents. That arising from incidents such as the Columbine High School shootings cites to the middle schools' failure to prepare students to deal with common psychosocial challenges that they will face as they approach adulthood. Although middle schools are held less responsible for students' reactions to the high school social environment, they are held primarily responsible for early adolescents' performance on achievement tests associated with TIMSS and the National Assessment of Educational Progress (NAEP).

Widespread dissatisfaction with the results of these assessments triggered acrimonious debate as to the adequacy and appropriateness of the middle school's educational approach. While some, such as Chester Finn Jr. argue that "It's about time the emptiness and folly of the middle school movement [ends]" (Manzo, 2000),ⁱ others, such as James Beane argue that improper or incomplete implementation of the middle school concept is the major cause of reduced achievement returns (Beane, 2001, p. xix).ⁱⁱ

Advocates of the middle school concept continue to describe it as a student-centered, developmentally responsive approach to educating early adolescents.

Accord

that stu

perform

ability

they ap

level m

implem

interest

of the m

terms. I

approac

a

s

R

1

emphasis

maximiz

nurturing

places. m

for reform

(Brundre

2000; Dic

fundamen

According to the NMSA (1982; 1989; 1992; 1995), the rationale behind this approach is that students are not simply intellectual beings, but are whole beings whose learning and performance are affected not only by the quality of the curriculum, but also by their ability to successfully negotiate the psychosocial and emotional issues that emerge as they approach maturity.ⁱⁱⁱ According to this rationale, effective instruction at the middle level must take the characteristics and needs of early adolescents into account, and implement programs and practices that meet the students where they are, respect their interests and concerns, and capitalize on their curiosity about social relationships. Critics of the middle school concept describe its approach and rationale in somewhat scathing terms. For example, Finn describes the rationale underlying students-centered approaches to middle level education in the following way:

...the rationale [is] that somehow, by virtue of that fact that the hormones are pumping, these kids can't learn real things. They must be humored, socialized, accommodated, and amused. That's ... an excuse not to teach prealgebra.

(Manzo, 2000)

These disparate views on the relative importance of intellectual and psychosocial emphases present considerable difficulties to middle school educators aiming to maximize the provision of both. In an effort to counter assertions that psychosocially nurturing learning environments must by necessity be intellectually “soft” learning places, many advocates of the middle school concept have produced documents calling for reforms so sweeping that they are referred to as “transformation” or “reinvention” (Brundrett, 1999; Jackson & Davis, 2000; Maryland Middle Learning Years Task Force, 2000; Dickinson, 2001). While terms like “transformation” and “reinvention” suggest a fundamental shift in the ideology of the middle school, the suggested reforms are not

designed

reinvent

school p

character

S

educatio

describe

and psyc

those ch

structure

A

coding.

findings

reminde

1. How

psyc

adole

2. How

failin

3. How

meet

4. How

educa

designed to alter the original intent of these schools. Rather, transformation and reinvention represent efforts to finally and fully implement a student-centered middle school program that responds appropriately to the psychosocial and intellectual characteristics and needs of early adolescents.

So far, this chapter has presented the historical development of middle level education in an effort to determine how the most influential literature defines and describes full implementation, a student-centered program, early adolescents' intellectual and psychosocial characteristics and needs, and an appropriate educational response to those characteristics and needs. In the sections that follow, the chapter conforms to the structure that I used to organize the content in Chapter 3.

As in the previous chapter, this chapter presents the findings that resulted from the *coding*, *categorization*, and *classification* processes described in Chapter 2. These findings are presented in five sections that correspond to the focus questions. As a reminder to the reader, these questions are:

1. How does the literature on middle level education describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?
2. How does the literature on middle level education describe the consequences of failing to meet these needs?
3. How does the literature on middle level education describe effective approaches to meeting these needs?
4. How does the literature describe the relationship between middle level education and education reform (both in general and with specific reference to middle school)?

5. WT

mi

ext

How d

psych

capaci

adoles

Specifi

are in t

stage o

school

master

begun

quantit

differen

deducti

stage re

adolesc

of forma

hypothes

5. What explicit references, if any, does the literature contain that connect the concept of middle level education to other topics/concepts included in the dissertation (or external to the dissertation)?

How does the literature on middle level education describe the intellectual and psychosocial needs of early adolescents?

Building from descriptions of early adolescents that highlight their increasing capacity for abstract thought, literature on middle level education describes early adolescents' intellectual needs in relation to Piaget's theory of cognitive development. Specifically, this literature emphasizes the strong likelihood that most early adolescents are in the stage of concrete operations (ages 6 to 12), but many are in transition to the stage of formal operations (ages 11 to adult). What this means is that during the middle school years (grades 6-8), students in the 6th grade (ages 11-12) have most likely mastered the tools of concrete operations, and students in the 8th grade (ages 13-14) have begun to use the cognitive tools of formal operations.

According to Piaget, students in the concrete operations stage can conserve quantity, classify objects/event in multiple categories simultaneously, and can differentiate their own perspective from those of others. In addition, they can reason deductively, reversibly, and about transformations. Students in the formal operations stage retain these abilities, but also acquire some additional thinking tools.

During the formal operational stage—which typically begins during early adolescence (age 11-14)—the most complex cognitive skills begin to develop. The stage of formal operations is characterized by the ability to think systematically and hypothetically (Evans & Piaget, 1973, p. 26). Piaget's formal operations include, among

others, th
probabil
cognitive
them, or

C
operation
mental o

1996, p.
thought a
the two c
emotion.

T
academic
follow, th
much bro
commun

1992: St

T
understan
not an ab
thought p
subdivid

others, the use of propositional thinking, combinatorial analysis, proportional reasoning, probabilistic reasoning, correlational reasoning, and abstract reasoning. With these new cognitive tools, adolescents build new theories about themselves and the world around them, or reconstruct old ones.

Children enter the stage of formal operations with an organized set of mental operations that can be applied to concrete events and objects. As the stage progresses, mental operations become increasingly abstract, complex, logical, and flexible (Muuss, 1996, p. 158). According to Piaget (1976), formal thinking is both thinking about thought and a reversal of relations between what is real and what is possible. “These are the two characteristics which are the source of the living responses, always so full of emotion, which the adolescent uses to build his ideals in adapting to society” (p. 64).

The transition to formal operational thinking is not confined to scientific or academic activities such as classroom work. As I will discuss in the paragraphs that follow, the changes in thought that are associated with formal operational thinking are much broader and affect the ways in which early adolescents think about themselves, communicate with others, and make decisions about what is right and wrong (Milgram, 1992; Steinberg, 1985, 1989; Thornberg, 1980).

The attainment of formal structures of thought opens up new ways of understanding the world, but according to Piaget, the attainment of formal operations is not an abrupt process. Considerable modification, systemization, and formalization of thought processes occur over the course of several years. For this reason, Piaget subdivided the stage of formal operations into two substages—III-A and III-B.

S

substage

compris

preparat

operatio

provide

14 or 1

adolesc

reach th

drawin

(Muuss)

analyti

thinkin

precurs

believe

through

be achi

early ad

conscio

1992).

Substage III-A indicates almost full formal function. Children usually enter this substage at age 11 or 12 years of age and remain here until age 14 or 15—the period that comprises early adolescence. During this phase, early adolescents appear to be in a preparatory stage where they can make correct discoveries and handle certain formal operations. “Their approach is still cumbersome, though, and they are not yet able to provide systematic and rigorous proof for their assertions” (Muuss, 1996, p. 158-9).

Substage III-B indicates full formal function. This substage usually begins at age 14 or 15, which some consider to be the transition point between early and late adolescence, and endures throughout adulthood once achieved. By the time adolescents reach this stage they have become capable of formulating more sophisticated theories, drawing more comprehensive conclusions, and further generalizing those conclusions (Muuss, 1996, p. 158-9).

These adolescents are not only able to think beyond the present, but can also analytically reflect on their own thinking. While this is a characteristic of fully formal thinking, researchers such as Byrnes (1988) assert that this metacognitive ability is also a precursor to formal operational thought. Early adolescents, who are in substage III-A, are believed to possess these metacognitive abilities. Byrnes (1988) also suggests that only through the early adolescent’s use of his or her metacognitive abilities can substage III-B be achieved.

According to Milgram (1992) and others, the ability to think abstractly enables early adolescents to think about their own thoughts, resulting in introspection, self-consciousness, and intellectualization (Adams & Gullotta, 1983; Hill, 1980; Milgram, 1992). According to (Elkind, (1978), introspection and reflection may also lead early

adolescents to a form of extreme self-absorption called “adolescent egocentrism.” This egocentrism is characterized in three ways: imaginary audience, personal fable, and pseudo-stupidity.

Imaginary audience refers to many early adolescents’ belief that their behavior is the focus of everyone else’s attention and that everybody notices everything they do (Elkind & Bowen, 1979). *Personal fable* refers to an early adolescent’s belief that his or her experiences are entirely unique, and that he or she is special, indestructible, and immortal. *Pseudo-stupidity* refers to the adolescent tendency to use newly developed intellectual abilities to generate overly complex solutions to simple problems (Elkind & Bowen, 1979).

Based on the work of Piaget and neo-Piagetians such as Elkind, Byrnes, and Milgram, the literature on middle level education describes early adolescents’ intellectual needs in a way that is very similar to the way the literature on DAE describes these needs. According to the literature, early adolescents need opportunities to use their metacognitive skills during learning activities that encourage critical thinking about authentic tasks and situations. They need learning opportunities that challenge them intellectually and scaffold the development of formal operational tools of thought. Due to their tendency towards adolescent egocentrism, they need experiences that encourage them to think about themselves in connection to others and the larger society, rather than as isolated entities within a given social context. In addition, they need opportunities to explain their thinking, discuss their ideas, and explore the solution processes envisioned by their peers and by experts in various disciplines.

With regard to early adolescents' psychosocial needs, the literature on middle level education highlights their quest for identity and belonging. These needs are frequently described in relation to Erikson's theory of psychosocial development (Erikson, 1959, 1968). According to Erikson, young adolescents must successfully resolve the conflicts associated with the first four stages of psychosocial development (trust vs. mistrust, autonomy vs. shame and doubt, initiative vs. guilt, and industry vs. inferiority) before they can develop a stable and coherent personal identity. While early adolescents may have successfully resolved the earlier conflicts to some degree, they are still sensitive to negative messages and experiences, which may lead them to revise their perspective and develop an identity that reflects confusion or a negative view of self and/or others. To prevent such outcome, Erikson (1968) argues that early adolescents' four key psychosocial needs must be addressed. These needs include:

1. People and ideas to have faith in.
2. An opportunity to decide for oneself on the types of activities one wishes to pursue.
3. A variety of self-images from which to choose and opportunities through which they can be expressed, and
4. Affirmation by peers that is confirmed by teachers and inspired by worthwhile ways of life.

These four needs have served as the basis for many subsequent descriptions of early adolescents' needs contained in the literature on middle level education. For instance, Mitchell (1974) reiterates and builds from Erikson's list to describe the five basic needs of young adolescents. According to Mitchell, these include the need for status and acceptance, independence, achievement, role experimentation, and positive

self-regard. Dorman (1984) further reiterates and builds on these when describing the seven major developmental needs of early adolescents. According to Dorman, these seven needs include the need for diversity and variety, self-exploration and self-definition, meaningful participation in school and community, positive social interaction with peers and adults, physical activity, competence and achievement, and structure and clear limits.

With each description we see increases in the number and types of intellectual and psychosocial needs recognized in the literature. By 1985 when the National Association of Secondary School Principals (NASSP) Council on Middle Level Education produced the seminal text, *An Agenda for Excellence at the Middle Level*, the number of recognized needs had increased to eleven. This list, unlike those of Mitchell and Dorman, makes an explicit effort to describe early adolescents' needs in relation to the program and practices of middle level schools. The primary function of this text was to identify the essential features of middle schools that respond to the full range of intellectual and psychosocial needs expressed in theories of development and learning up to that time. According to NASSP (1985, p 1-5), these include the following early adolescent needs:

1. The need to learn how to learn and how to adjust to their lives and the changes that surround them.
2. The need for high quality intellectual climates that foster the development of adaptive skills that they can use throughout their lives.
3. The need for opportunities to achieve and demonstrate excellence in a number of domains (i.e., the arts, athletics, academics, etc.).

4. The need for a caring and supportive atmosphere that tolerates and welcomes wide ranges of student diversity.
5. The need for experiences that emphasize the practice and mastery of personal and intellectual attributes and behaviors that contribute to success in school and realistic adjustment to adult life.
6. The need for advisement programs that assure each student regular, compassionate, and supportive counsel from a concerned adult regarding his or her academic progress, adjustment to school, and personal adjustment.
7. The need for opportunities to behave responsibly and demonstrate their growing capacity for self-control and self-management in a secure setting.
8. The need for sensitivity to and swift action to fulfill their expressed and unexpressed physical, intellectual, emotional, or social needs without fanfare or unnecessary peer attention.
9. The need for activities that allow students to explore their aptitudes, interests, and special talents, and to develop an accurate and positive self-concept.
10. The need for skills for continued learning, including those associated with the collection of information; the organization, manipulation, and expression of ideas; the evaluation of information and ideas, including their competent analysis and critique; and the production of new plans and proposals for action, and
11. The need to learn how to organize for action, both as individuals and as members of a group. This includes the development of planning, group process, management, evaluation, and self-evaluation and correction skills.

This description of early adolescents' needs was expected to guide educators attempting to determine an appropriate educational response to student characteristics such as heightened peer-orientation, heightened sensitivity to others (i.e., imaginary audience), growing desires for autonomy, and increasing desire for connection and meaning. In addition, the NASSP document encouraged educators to think about intellectual needs in terms of positive intellectual dispositions, cognitive flexibility, and global skills. For example, in item 10 the NASSP council emphasized the skills associated with life-long learning, information evaluation, competent analysis and critique, and productivity.

Building on NASSP's perspective of early adolescents' intellectual and psychosocial needs, the Carnegie Council on Adolescent Development produced *Turning Points: Preparing American Youth for the 21st Century*. This seminal text, published in 1989, is considered by many to be the most influential piece of literature on middle level education (Brough, 1995; Dickinson, 2001; Irvin, 1992). Similar to its predecessors described above, this work presents a familiar description of early adolescents' needs. Unlike NASSP, the list presented in *Turning Points* describes these needs in a more condensed form. According to the Carnegie Council, early adolescents need:

- Opportunities for intellectual and personal growth.
- Stable, close, and mutually respectful relationships with peers and adults.
- Opportunities to develop literacy, thinking skills, lead a healthy life, behave ethically, and assume responsibility in a pluralistic society, and
- Teachers who understand their developmental needs and have the power to make relevant educational decisions in response to those needs.

These needs are similar to those in the NASSP list that emphasize a high quality intellectual climate and critical thinking skills, opportunities to explore aptitudes and personal interests, caring and supportive interactions with adults, productive interactions with peers, and management and self-evaluation skills. Also, in the opinion of the Carnegie Council, middle level educational environments that meet these needs bring us closer to realizing the goal of producing “15-year-olds who are reflective intellectually, healthy, caring, ethical in behavior, good citizens, and well on their way to a lifetime of meaningful work” (1989, p. 15). Fulfilling this vision has been the goal of middle level education since its inception. Unfortunately, as many advocates of middle level education note, this goal has never been achieved on a large scale (Brough, 1995; Irvin, 1992; Mergendoller, 1993). According to authors such as Beane (2001) and Dickinson (2001) this failure to provide appropriate educational experiences for the majority of early adolescents has been linked to a number of negative consequences, both for the intellectual and psychosocial development. In the next section I present the findings from the literature on middle level education that describes outcomes for early adolescents when their intellectual and psychosocial needs are not met in the educational program.

How does the literature describe the consequences of failing to meet early adolescents’ intellectual and psychosocial needs?

The literature on middle level education describes the consequences of failing to meet students’ intellectual and psychosocial needs in ways that are much the same as the literature on DAE for early adolescents. This literature overlaps to a very significant degree because of the explicit link between the concept of middle level education and the concept of DAE. This link makes middle level schools ideal sites for exploring the

relationship between developmentally appropriate practice and outcomes for early adolescents. As a result, literature that describes the consequences of unmet intellectual and psychosocial need in middle level educational settings is the same body of literature that describes the consequences of developmentally inappropriate education of early adolescents.

According to the literature on middle level education, failing to meet these needs is associated with a range of negative consequences for intellectual development and achievement, as well as for psychosocial development and behavior. As presented in Chapter 3, this body of literature discusses consequences such as intellectual heteronomy, declines in intrinsic motivation, increases in behavior problems, maladaptive patterns of learning, negative self-views, anxiety, apathy, and declines in academic achievement.

In a similar vein, the body of literature on effective approaches to meeting students' needs also overlaps to a significant degree. Middle level education does, however, have a history that, although connected, is distinct from that of DAE. As a result, the literature on middle level education offers some specific suggestions for effective practice that are not contained in the body of literature on DAE.

How does the literature describe effective approaches to meeting early adolescents' intellectual and psychosocial needs?

Descriptions of effective approaches to middle level education are contained in original documents that describe the features of the junior high school program, as well as in modern texts that describe the features of "true" middle schools. According to these texts, effective approaches to meeting early adolescents' intellectual and psychosocial

needs involve school-level structure and policy as well as classroom-level practices and interactions.

With regard to school structure, effective approaches to middle level education are described as those that effectively involve students in participatory activities, personalize the quality of adult-student relationships, and reduce student anonymity and isolation (Lipsitz, 1984, p. 199). Literature produced by the Carnegie Council on Adolescent Development (1989), and the NMSA (1982) identifies structural arrangements that employ *interdisciplinary teams*, *schools-within-schools*, and *teacher advisory groups* (which empower teachers) as effective in these regards.

According to Tye (1985), interdisciplinary teams promote connections between content areas, increase interactions between teachers, and motivate students to re-engage with subjects they dislike. Schools-within-schools create pockets of intimacy in large institutions by reducing the size of the student body that teachers and students must navigate. With a smaller student body teachers can get to know individual students better and, as a result, can interact with them in a more responsive manner. With a smaller student body students can get to know their fellow students better, and also be known better by their fellow students. In addition, schools-within-schools can be organized around a particular theme (e.g., math-science, or the humanities) which students can sometimes “join” on the basis of interest (rather than by assignment)

With regard to classroom practice, effective approaches to middle level education are described as those that: (1) encourage active student involvement and engagement in the instructional process; (2) acknowledge diverse areas of competence; and (3)

emphasize self-exploration and physical activity (Carnegie Council, 1989; Lipsitz, 1984; NMSA, 1982; Tye, 1985).

According to Clark and Valentine (1981) the program content of middle schools should emphasize the acquisition of basic skills, and provide for both remediation and enrichment. Recommended strategies for achieving these goals are based on the various perspectives reflected in the general and age-specific recommendations of DAE. For example, in recognition of the variability in learning modalities, middle level educators are encouraged to provide multimedia resources in support of students learning. They are also encouraged to adapt the curriculum to concrete/formal learning needs of students^{iv}, provide for individualized/personalized programs that include diagnosis of skills and learning styles, prescriptions for remediation and enrichment, and evaluation of the impact of focused efforts to meet individual students' intellectual needs (Lounsbury & Clark, 1990; Manning, 1993; Simmons & Blyth, 1987).

In recognition of students' psychosocial needs, and in accordance with the recommendations of DAE, middle level educators are encouraged to reduce the use of homogenous ability grouping and other practices that communicate predictive assumptions about student ability (Lounsbury & Clark, 1990; Manning, 1993; Simmons & Blyth, 1987). Heterogenous grouping and flexible grouping practices are considered more effective for students during this developmental stage, where development is highly variable both within and between students (Braddock, 1990; Oakes, 1985; Worell & Danner, 1989).

In addition, effective approaches to middle level education are described as those that have a socialization curriculum as well as an intellectual one. According to Johnston

(1994, p. 55) at a minimum, these curricula should focus on several major domains.

Among these domains are membership, learning to work, social heterogeneity and urbanization, and collaboration and collective action. Through the socialization curriculum, schools are expected to promote the four elements of social bonding as described by Hirschi (1969). These include attachment, commitment, involvement, and belief.

Attachment refers to the social and emotional bonds to others, characterized by whether an individual cares what others think of him and his behavior. According to Hirschi, attachment is reciprocal in that an individual will not care about others if he or she believes others do not care about him or her (Also see Rumberger, 1995). While attachment is the socio-emotional component of bonding, *commitment* is the logical part. Commitment is the belief that remaining connected to a group is the rational thing to do to preserve one's own self-interest. According to Hirschi commitment can be based on immediate needs or on long-term, internalized goals, where remaining with the group will help one achieve some desired end for one's self. In the absence of obvious short- or long-term benefit, continued membership in a group is irrational.

According to Hirschi, *involvement* describes the extent of an individual's participation in the activities of the group or institution. For students, this means participation in school activities, academic, social, and leisure time. Failing to become engaged, or withdrawing from engagement, often predicts school failure and early school leaving (Hardre & Reeve, 2001).

Belief, according to Hirschi, is the final component of social bonding. Belief is defined as faith in the institution or group's legitimacy, efficacy, potency, and continued

benefit to the individual. It is the personal feeling that the group is good for me and that I am good for the group. In short, it determines if a student believes that commitment to and involvement with the school will lead to his or her desired goals (Hardre & Reeve, 2001; Steinberg, 1984).

The above description of the roles of attachment, commitment, involvement, and belief are similar to the needs identified by Erikson (1968) as the need for *people and ideas to have faith in*, and the need for *affirmation*. These are considered important components of effective middle level education because, as students struggle with their changing selves, and changing expectations they are especially vulnerable to confusion and disillusionment (Milgram, 1992; Steinberg, 1984). Without the atmosphere of support and belonging that membership provides, students are less likely to respond positively to the intellectual and social demands they face as they approach adulthood (Covington, 1992; Worell & Danner, 1989). According to Johnson (1994), it is this membership—based on social bonding—that will socialize children into productive adult roles. Without this, students become less motivated to strive and achieve the academic and social goals valued most highly in school and the larger society (Eccles, Midgley & Adler, 1984; Takanishi, 1993).

Unfortunately, the majority of early adolescents are not educated in environments that fulfill the requirements of an effective approach (Beane, 2001; Mac Iver & Epstein, 1993). However, in spite of the “volatile mismatch” between the needs of students and the programs and organization of the middle level school, it is still considered “the last best change for success” for many early adolescents (Carnegie Council, 1989). Although it falls short of its lofty goals, the middle level school has remained committed to meeting

the needs of early adolescents, and there is evidence of slow but continuing reform (Lounsbury & Clark, 1990; Viadero, 1992). In the next section I discuss the literature that describes efforts to reform middle level schools and literature that describes the challenges faced by educators attempting to improve the effectiveness and developmental responsiveness schools that serve early adolescents.

How does the literature describe the relationship between middle level education and education reform (both in general and with specific reference to middle school)?

In response to students' performance on assessments such as the National Assessment of Educational Progress (NAEP) and TIMSS, school reform efforts of the last decade have focused primarily on improving student achievement. To achieve this goal, many reform efforts have emphasized practices such as block scheduling, and decentralization. Many have also encouraged the adoption of curriculum standards, teaching standards, and evaluation/assessment standards. These will be explored in some detail in the Chapter 6, but at this point it is important to note that many recent reforms related to school structure and scheduling were advocated in documents on middle level education that date back to the 1920s. For example, teacher empowerment, detracking, learning communities, integrated/interdisciplinary curricula, and block scheduling are all educational ideals expressed in early position statements on middle level education. In addition, and in conjunction with the tenets of DAE, the literature on middle level education has also encouraged educators to reduce reliance on standardized testing, and incorporate performance and discussion-based evaluation into the assessment program.

What explicit references, if any, does the literature contain that connect middle level education to other topics/concepts included in the dissertation (or external to the dissertation)?

Beginning with the creation of junior high schools in the first decade of the 20th Century, advocates of developmentally appropriate education for early adolescents have attempted to design, implement, and maintain educational programs that respond to the unique characteristics and needs of these students (Brough, 1995; Clark & Clark, 1994; Dickinson, 2001; Irvin, 1992). Given this motivation it is not surprising that there is a strong and explicit connection between the concept of middle level education and the concept of developmentally appropriate education. Literature that describes the goals and rationale of the middle school movement emphasizes this connection (NMSA 1982; 1992; 1995). And much of the literature on effective practice at the middle level explicitly advocates most of the general and age-specific recommendations of DAE for early adolescents.

Within the literature on middle level education there is also an explicit emphasis on many of the same intellectual and psychosocial issues that are commonly identified as important factors in risk and risk-prevention (See Chapter 5). For example, according to Wehlage, Rutter, Smith, Lesko, and Fernandez (1989) the most successful schools for at-risk youth are those that give explicit attention to creating a sense of membership. The larger bodies of literature on at-riskness and resilience also emphasize the importance of critical thinking skills, positive peer interactions, caring and supportive relationships with adults, and active involvement/engagement in learning activities (Benard, 1991; Wang, Haertel, & Walberg, 1994; Waxman, Huang, Knight, & Owens, 1992). In Chapter 5, I

focus in more detail on these and other findings related to at-risk students. In the later sections of that chapter, I provide a more extensive description of the connections between the literature on at-riskness and resilience, developmentally appropriate education, middle level education, and structural and instructional reform.

Endnotes

ⁱ See Bradley (1998), Henry (1994), and Sykes (1996) for concurring opinions.

ⁱⁱ See Felner et al. (1997) and Hargreaves et al. (2001) for concurring opinions.

ⁱⁱⁱ Also see Alexander (1965), Association for Supervision and Curriculum Development, (1975), Blom (1979), Casteel (1981), Clark (1986), Dickinson (2001), Hoy, Sabo, Barnes, Hannum, & Hoffman (1998).

^{iv} Also see Milgram, 1992, p. 25.

CHAPTER 5: RISK AND RESILIENCE

All youngsters must have the capacity to avoid problem behavior, but to thrive in a global economy young people must do more than that. They must also acquire basic knowledge and skills and develop a life-long learning process, so that each may continually respond to today's fast-paced, changing world...Today's education demands that all young people learn to be resilient in the face of challenging conditions.

Brown, D'Emedio-Caston, & Benard, *Resilience Education*, (2001, p. 9)

In many recent analyses of American schools, researchers and policy-makers have consistently expressed concern about the number of students who leave formal education with depressed achievement levels and life chances (Catterall, 1998; Murdock, 1999).

While specific definitions vary, students who appear likely to leave school without developing the academic and social skills and dispositions that are valued in adult society are often described as “at-risk” (Covington, 1992; Jens & Gordon, 1991; Goleman, 1995). According to Elias, Zins, Weissberg, Frey, Haynes, Kessler, Schwab-Stone, and Shriver (1997), these are students whose profile contains one or more characteristics that are statistically correlated with a failure to develop the skills needed to manage life tasks such as working cooperatively, solving everyday problems, and controlling impulsive behavior.

Empirical studies of at-riskness, repeatedly identify a particular set characteristics as correlates with problematic outcomes. Reviews of the literature on at-riskness produced by Pallas, Natriello, and McDill (1996), Rak and Patterson (1996) and Wells (1990)ⁱ cite these as

- living in poverty
- being a member of a racial or ethnic minority group
- residing in a violent community

- being a member of a non-traditional family (usually headed by a single mother)
- having learning disabilities
- speaking English as a second language, or having limited English proficiency, and
- having below average grades and achievement test scores.

In study after study, these characteristics have been found to be related to school failure, juvenile delinquency, teen parenthood, and dropping out of school, but as Pallas, Natriello, and McDill (1996) astutely note:

... these indicators are useful for discussing the needs of groups of children, they do not characterize the educational fates of individual children at all precisely. Not all poor children are educationally disadvantaged, nor are all non-white children or all children from single-parent households. On average, though, each of these measurable characteristics is associated with low levels of educational achievement. (p. 17)

The lack of precision with which these indicators predict outcomes for individual students has led many researchers to the recognition that risk is a very complex issue. Many have come to believe that negative academic and social outcomes are not the simple, or inevitable, result of personal challenges or adverse environments. Instead, much of the recent characterizes risk as the result of a transactional process that centrally involves an imbalance between the emotional, social, and academic needs of students, and the resources that are available to them (Brown, D'Emedio-Caston, & Benard, 2001; Skinner & Wellborn, 1997; Werner & Smith, 1992). For example, in some schools, the environment offers few resources to students with certain characteristics and needs, in others, poverty of various sorts limits the support and assistance that the environment is capable of offering. Environments such as these are often associated with poor student outcomes—especially among students with limited English proficiency or learning

disabilities. Although some students are manage to “make do” or even thrive in the most resource-poor environments, the literature suggests that constraints arising from unresponsive attitudes or limited resources are common in many schools with large numbers of at-risk students.

While unresponsive environments are often cited as powerful risk factors, there is also another type of unresponsiveness that is associated with poor academic performance. This situation is somewhat different because the constraints are not necessarily due to what is available in the environment. According to the literature, some students seem to flail and flounder in environments that seemingly offer them the greatest of advantages. In these cases students are placed at-risk because they fail to capitalize on the abundant resources that are available. This is a response that Midgley, Arunkumar, and Urdan (1996, p. 423) refer to as “self-handicapping” or help-avoidance.ⁱⁱ According to this literature these maladaptive self-regulatory strategies often develop in situations where students hold negative self-perceptions and feel more pressure to perform well than to learn meaningful content—and learn from their mistakes (also see Covington, 1992).

Based on these findings, many researchers have focused their attention on the ways in which students respond to the circumstances in which they find themselves (Waxman, Huang, Knight, & Owens, 1992; Werner, 1990). As a result, the role of students’ perceptions has taken a more central position in investigations of risk and resilience. Much of this research suggests that affect is a key factor in risk (Covington, 1992; Goleman, 1995; Ryan, Hicks, & Midgley, 1997). For example, a number of recent studies support the claim that affective characteristics such as alienation and disaffection are more predictive of a particular individual’s educational outcome than are group-level

characteristics (such as race and socio-economic status) that are often used to identify students who are potentially at risk (Catterall, 1998; Hixson & Tinzmann, 1993; Murdock, 1999; Newman & Newman, 2001; Yair, 2000).

Many of the negative educational and social outcomes associated with being at-risk are strongly related to students' feelings of futility, inferiority, isolation, and alienation (Hunter, 1998; Mitchener & Schmidt, 1998; Turner, Thorpe & Meyer, 1998). On the other hand, many studies that examine the characteristics of students who "make do" or succeed despite living in impoverished and/or violent communities, having minority status, and/or speaking English as a second language, note that these "resilient" students consistently report feelings of efficacy, belonging, and autonomy (Brown, D'Emedio-Caston, & Benard, 2001; Henderson & Milstein, 1996; Wang, Haertel, & Walberg, 1994).ⁱⁱⁱ

According to a literature review produced by Wang, Haertel, and Walberg (1994), studies that focus on students who succeed despite adversity consistently report that these students also tend to construe difficulties and failings in positive and constructive ways. In addition, they tend to take a proactive (rather than a reactive or passive) approach to solving problems. Resilient students also tend to recognize the interconnectedness of ideas and the connection between actions and consequences (both in the short- and long-term). This generates a sense of coherence, which, in turn, supports the development of an internal locus of control, goal-directed behavior, and self-regulation (Also see Miserandino, 1996; Skinner & Wellborn, 1997; Wentzel, 1997, 1998).

In short, resilient students recognize that some of their life circumstances are less than ideal, but feel empowered to change this situation. Many of these students respond

to this recognition by devoting themselves to developing one or more skills that they view as valuable (Skinner & Wellborn, 1997; Wang, Haertel, & Walberg, 1994). While some of these students focus their efforts in the athletic arena, most students view education as the most likely avenue to future prosperity (Krovetz, 1999). These education-oriented students seek out opportunities to accelerate and enhance their learning, and they also tend to persist through academic difficulty. As a result, these students are often perceived as highly motivated, and tend to elicit helpful responses from teachers and other adults with whom they regularly interact (Skinner & Wellborn, 1997; Wang, Haertel, & Walberg, 1994).

Findings such as these have helped to transform the conception of at-riskness in ways that account for resources and interactions, rather than simply attend to demographic characteristics. The literature on at-riskness began to increasingly discuss students' affective states and behaviors. In addition, researchers began to examine environments more closely in an effort to discover ways in which the features learning environment might influence student affect and behavior. Many of these studies attempted to determine which features of the environment were highly correlated with resilient and non-resilient outcomes. In their review of the literature, Wang et al. (1994) present the findings of empirical studies that compared the learning environments of resilient and non-resilient (i.e., at-risk) students. According to their synthesis of the findings, features that distinguished schools with large populations of resilient students from schools with large populations of at-risk students possess a range of "characteristics that foster student resilience" (Wang et al., 1994, p. 50). Among these are:

- clearly defined goals

- a core curriculum for all students, and
- flexible scheduling arrangements

Wang et al (1994, p. 50) also reported that schools that foster resilience were more likely to engage in practices such as:

- organizing students into small units to reduce anonymity and provide a close relationship between each student and a mentor
- having and evaluating programs that encourage students to take responsibility for helping each other learn and that help to make the school a friendly and orderly place
- using assessment results to guide curriculum and instruction
- encouraging and evaluating teaching innovations, and
- connecting with community institutions and outside agencies to enrich the learning possibilities and support of students

According to Maton (1990), these features of school environments promote self-esteem, autonomy, positive social interactions, and mastery of tasks; all of which have been shown to enhance life satisfaction and general well-being among teenagers, even among those from the most troubled communities. The Carnegie Foundation for the Advancement of Teaching (1988) reported that even in troubled urban schools these characteristics were associated with reduced drop-out rates and higher numbers of students seeking post-secondary education. Among students who did not continue their education, larger number of students obtained employment after graduation.

These encouraging findings triggered the development of reform initiatives designed align the school practices with those described above in order to foster positive affect and help students develop the skills and dispositions displayed by naturally

resilient students. Initiatives such as these are often described as *resilience education* programs (Brown, D’Emedio-Caston, & Benard, 2001; Henderson & Milstein, 1996; Krovetz, 1999). I discuss the common features of some of these programs in the section of this chapter that described the literature on effective approaches to meeting students intellectual and psychosocial needs.” Before discussing those programs, I will discuss the literature on risk and resilience that describes students’ intellectual and psychosocial needs, and the consequences of unmet need.

How does the literature on risk and resilience describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?

According to the literature on risk and resilience, students have four basic and enduring needs. These include the need for competence, relatedness/connectedness, autonomy, and a sense of purpose and future (Benard, 1991, 1995; Werner & Smith, 1992). These needs contribute significantly to students’ perceptions of:

- their ability to meet the demands of the intellectual and social environment,
- the meaning or importance of their activities and interactions with adults and peers, and
- their power influence their own behavior and make decisions that produce desirable outcomes.

When these needs are fulfilled, students feel more confident in their ability to solve important academic and social problems that they face. In addition, they feel more connected to others in the environment, and are more likely to share the values and goals emphasized in the environment and to believe that others are willing to help them if they

need assistance (Werner, 1989). In such environments, students feel safer and more secure. They have higher self-esteem, a more positive self-concept, are more optimistic about the outcomes of their efforts, and more willing to take on challenges and try new things. In essence, they are more likely to feel like valuable members of a community where reciprocal support, effort, and persistence pay off for everyone.

To reduce the risk for poor performance and dropping out, the literature also asserts that students need to develop caring and supportive relationships with teachers and peers (i.e., bond or connect with others in the school environment). In addition they need an internal locus of control and opportunities to develop independence and exercise autonomy. According Noddings (1992) and Mitchener and Schmidt (1998) when students are allowed to make decisions about their behavior and learning (i.e., greater autonomy), they feel respected, are more receptive to the advice and guidance of adults, and are more motivated to learn additional information and skills. But in addition to increased autonomy, students need to be held to high but realistic standards; they need clear and consistent boundaries that communicate expectations and consequences; and they need to develop skills for social and intellectual competence, such as those for problem solving, critical thinking, and communication (Benard, 1991; Skinner & Wellborn, 1997; Wang, Haertel, & Walberg, 1994).

When these needs are fulfilled, students tend to develop a greater sense of academic and social efficacy, and tend to behave in more and proactive ways. In other words, they believe that they are able to meet the demands of the intellectual and social environment, they construe their schoolwork and relationships in as positive and meaningful, and they take responsibility for their actions and their futures. In short, they

feel competent, connected, and empowered. In the next section, I discuss the literature that describes common student outcomes when their learning environment do not meet their needs for competence, relatedness/connectedness, autonomy, and a sense of purpose and future.

How does the literature on risk and resilience describe the consequences of failing to meet these needs?

Much of the literature on risk and resilience describes the consequences of failing to meet students' needs in terms that are both academic and psychosocial. For example, Jacquelynne Eccles and many of her colleagues draw on Person-Environment Fit Theory (Hunt, 1975), to describe risk and the consequences of unmet need (Eccles & Midgley, 1989). Within this body of research on mismatch, the authors describe early adolescents' characteristics in terms similar to those described in the section above. For example, Eccles and her colleagues highlight early adolescents' increasing desire for autonomy^{iv}, continuing need for caring interpersonal relations with their teachers^v, and tendency towards peer comparison^{vi}. Most of their writings discuss risk in terms of negative impact of unmet need on students' motivation, self-concepts, and perceptions of ability (see Eccles, Wigfield, Midgley, Reuman, Mac Iver & Feldlaufer, 1993 for a review).

From this perspective, students are placed at-risk when they experience a significant mismatch between their circumstances and needs, and the capacity or willingness of the school and the teacher to accept, accommodate, and respond to those needs in a manner that supports and enables their maximum social, emotional, and intellectual growth and development. For example, Midgley, Feldlaufer, and Eccles (1989) and Eccles, Lord, and Midgley (1991) found that traditional middle school

environments that are characterized by teachers' distrust of and desire to control students thoughts and actions, tracking and homogeneous ability grouping practices, instructional practices that emphasize learning outcomes over learning processes, and instructional content that is perceived by students as less interesting and less challenging than content covered in earlier grades all created conditions of mismatch that placed early adolescents at-risk for motivational problems.

Although Eccles, Lord, and Midgley (1991) and (Eccles, Midgley, Wigfield, Buchanan, & et al., 1993) attempted to emphasize that the real issue is the compatibility between selected practices and the needs and learning orientations of students, the overall tenor of the work lent itself to the interpretation that simply replacing the offending practices with the opposite practices would correct the problem. For example, early adolescents generally tend to desire greater levels of autonomy than they did in previous years. However, this is not the case for all early adolescents. Imposing autonomy on students who do not desire and are not prepared for it creates as much mismatch as excessively restricting students who desire and are ready for greater independence. The solution to mismatch lies in assessing students' needs and responding appropriately. In some cases, this may mean leaving in place certain practices whose use is generally discouraged. Recent studies conducted by Carol Midgley and her colleagues found this to be the case regarding goal emphases. While an emphasis on performance goals is generally not recommended, Midgley, Kaplan, and Middleton (2001) note that for some students, in some circumstances, for some outcomes, performance goals may be facilitative. This work on goal theory preserved the emphasis on educational contexts

that was raised in the mismatch work, while also reasserting the importance of responding to student variability.

According to the larger body of research on achievement goals, student can develop goal structures that are learning-focused (Ames & Archer, 1988), mastery-oriented (Clifford, 1984), ability-focused or performance-focused (Covington, 1992). According to Ames and Archer (1988) and Dweck and Leggett (1988), students who adopt learning-focused goals define success as developing new skills, understanding content, and making individual progress. These students are more likely to use of effortful self-regulatory behaviors such as cognitive and metacognitive strategies, and they believe that increased effort will lead to greater understanding and academic success. Clifford (1984) defines mastery-oriented goals in a similar way and suggests that, as a result, mastery-oriented students regard errors as constructive rather than debilitating. According to the literature on educational resilience, these traits and behaviors are associated with an increased likelihood of success in school and other life accomplishments despite adversities presented by circumstances such as poverty and other group-level indicators of risk.

On the other hand, ability-focused and performance-focused achievement goals are associated with less desirable learner characteristics. According to Covington (1992), students who adopt ability-focused goals interpret success as a reflection of their scholastic ability and a comment on their self-worth. They regard learning as a vehicle to public recognition rather than as a goal in itself, and they tend to view effort as an indication of low ability, even when it leads to success. When effort does not lead to success, students with ability orientations perceive this as confirmation of low ability.

Students with this goal orientation want to appear to have succeeded with little effort, and they are less likely to use effortful cognitive and metacognitive behaviors like planning, organizing, asking questions, seeking help when needed, and reviewing mistakes (Ryan, Gheen, & Midgley, 1998; Ryan & Pintrich, 1997; Ryan, Hicks, & Midgley, 1997). As a result, rather than seeking out challenging content and striving for achievement, students with ability orientations are more likely avoid challenge and possible failure (Covington, 1992). Students with performance-oriented achievement goals display similar avoidance. They show lower preference for difficult tasks, are less likely to try to resolve misunderstandings, and report negative affect in response to making mistakes in schoolwork (Covington, 1992; Clifford, 1988). According to Goleman (1995), these characteristics and behaviors are associated with feelings of frustration, low self-esteem anxiety, depression, and alienation as well as with self-handicapping behaviors—all of which increase the likelihood of academic difficulties and motivation problems, and many of which often persist into adulthood.

The achievement goal orientations that students adopt are influenced by their experiences in school (Midgley et al., in press). In elementary schools, teachers tend to use more learning- and mastery-approaches, while in middle school and high school, teachers tend to use more performance-focused approaches. In terms of mismatch, students are more likely to enter middle school with learning- or mastery goals, and find themselves in environments that emphasize performance. At this time in their development when early adolescents are also more likely to engage in social comparison and to develop self-perceptions that influence their academic and personal identities for

years to come, the existence of this mismatch places many students at-risk for disaffection and related decreases in academic achievement and educational aspirations.

While stage-environment fit and achievement goal approaches to educational risk emphasize the impact that negative educational interactions have on students' academic success, researchers investigating risk from a socio-emotional perspective, also discuss the impact of mismatched environments on students' psychological development. In the work of Elias et al. (1997), mismatch is also considered to be a powerful source of potential risk. Their findings suggest that students educated under such circumstances are more likely to perceive their learning environments as more demanding than responsive, more competitive than cooperative, and more ability-focused than learning focused. Such perceptions and common student responses to these are associated with failure to develop valuable academic and social skills, adaptive self-regulation strategies, and a strong work ethic.

In the next section I present the finding from literature on risk and resilience that describes effective approaches to meeting students' intellectual and psychosocial needs. In that section I focus on approaches described in the literature on resilience education.

How does the literature on risk and resilience describe effective approaches to meeting students' intellectual and psychosocial needs?

Early work on the concept of resilience focused exclusively on psychosocial issues in development, but the recent application of this concept to education integrates research on development with research on academic achievement. Implicit in the concept of *educational resilience* is the recognition that students are multi-dimensional beings

whose psychosocial and intellectual development must be considered during the educational process.

Wang, Haertel, and Walberg (1994, p. 45), describe *educational resilience* as a “productive construct that relates the psychological characteristics of at-risk children to features of schools, families, and communities that foster resilience and schooling success.” In the text, the authors define *educational resilience* as “the heightened likelihood of success in school and in other life accomplishments, despite environmental adversities, brought about by early traits, conditions, and experiences.” While the environmental adversities can arise from the circumstances in families, communities, or schools, researchers such as Benard, (1991) have demonstrated that school experiences can counteract some of the risk conditions imposed by adverse family and community environments when the educational program fosters the development of particular student traits. Wang et al. present the following list of such traits:

- taking a proactive rather than a reactive or passive approach to problem solving
- being socially adept enough to get appropriate help from adults and peers
- having social support
- being able to construe difficulties and failings in positive and constructive ways
- establishing a close bond with at least one caring adult
- viewing life as coherent
- having an internal-locus of control
- being motivated by a challenge
- persevering at tasks
- exhibiting autonomy

- possessing valuable skills
- being “other-oriented” (i.e., concerned about and helpful to others in need), and
- being cognitively flexible in approaches to problem solving

The work of Wang, Haertel, and Walberg summarizes a great deal of the early work that helped to develop and expand the concept of educational resilience. The concept described in that piece was improved upon in later work, such as the piece by Skinner and Wellborn (1997). In this piece educational resilience was termed academic resilience and the major focus was on specific practices that promote the development of educational resilience, and the benefits of being educationally resilient.

According to Skinner and Wellborn, possessing *educational resilience* is important for all students because educationally resilient students are least likely to experience school failure, are less likely to allow negative influences from the home and community to adversely affect their education, are more likely to persevere in the face of academic difficulty, and are more likely to take an active role in planning their course in life. In other words, *educational resilience* can serve as a protective factor against many conditions of risk.

It is evident from the list of traits that *educational resilience* can be thought of as both an outcome of an intervention and a trait. This is a consequence of the way in which the concept was developed. Resilience, in its original sense, was observed to be a natural process of positively adapting to negative features of the environment. Later, researchers found that the coping skills used by naturally resilient individuals could be taught to non-resilient individuals, thereby producing resilience where it did not previously exist.

stressed

intellec

student

varying

opportu

(Como

believe

explain

used by

to use to

- mar

term

- prov

- prov

- vary

oppo

go b

- vary

the l

- enha

prom

The importance of external support systems as protective mechanisms has been stressed in the literature on resilience in childhood. Both from the psychosocial and intellectual perspective, teachers have been shown to play an important role in troubled students' lives (Benard, 1991; Noddings, 1988). When teachers are responsive to the varying affective and intellectual needs of their students, they maximize each student's opportunities for learning success, and foster positive attitudes towards school and self (Corno and Snow, 1986; Waxman, Huang, & Pardon, 1997). There is no reason to believe that this sensitivity to student needs is only important in urban settings. This may explain why Wang, Haertel, and Walberg (1994, p. 61-2) have incorporated the methods used by urban teachers into a list of teaching practices that all educators are encouraged to use to promote *educational resilience*. These include:

- manipulating classroom organizational structures so that they include the use of short-term, non-stigmatizing groups
- providing a variety of materials that support active problem solving by the students
- providing support in the form of aides and peer tutors, and a variety of media
- varying the level, form, and number of questions asked so that students have opportunities to consider higher order questions (i.e., questions that require them to go beyond the material presented)
- varying the nature and amount of reinforcement given for correct answers, as well as the level of information provided when a student gives an incorrect answer
- enhancing students' use of inquiry processes by implementing teaching strategies that promote higher-order thinking

- a

q

- fa

re

le

higher

develo

structu

are dis

How d

these c

middle

same cl

designe

reforms

basic si

I

students

creation

different

often tau

- actively involving students in the presentation of new information by asking them questions and prompting them for examples
- facilitating students' use of self-regulating techniques, such as self-monitoring or self reinforcement, by providing a variety of problem-solving opportunities during the learning process

The emphasis on heterogeneous grouping, varied instructional approaches, higher-order thinking, active learning, and problems solving echoes the emphasis of developmentally appropriate education, middle level education, and many third-wave structural and instructional reforms. In the following sections, connections between these are discussed more explicitly.

How does the literature on risk and resilience describe the relationship between these concepts and education reform (both in general and with specific reference to middle school)?

The literature on risk and educational resilience appears to advocate many of the same changes to educational structure and practice that are emphasized in reforms designed to detrack schools and promote intellectual autonomy among students. These reforms will be discussed in more detail in the next chapter. For now I will describe the basic similarities.

Detracking is a reform that attempts to eliminate the practice of streamlining students in to particular curricular tracks on the basis of ability. This practice leads to the creation of long-term, homogeneous ability groups wherein students are afforded differential access to courses and school resources. Students in the lowest tracks are often taught by less experienced teachers, have limited access to technology, and are

perceive

in the lo

educatio

concern

efficacy

autonom

interacti

V

achiever

autonom

Many al

of belon

and self

What e:

educati

disserta

7

many of

various

develop

intellect

• hom

• wor

perceived by other students as intellectually deficient—a perception which many student in the lower tracks adopt regarding themselves. The emphasis that the literature on educational resilience places on short-term, non-stigmatizing groups is connected to concerns about the negative effects of tracking on students' opportunity to learn, sense of efficacy, and feelings of connectedness/relatedness. Reforms that promote intellectual autonomy emphasize critical thinking and analysis, problem solving, self-regulation, peer interaction during learning, and the use of high quality curricula and materials.

While the primary goal of these types of reforms is to increase student achievement, the literature on many initiatives related to detracking and intellectual autonomy also communicates a desire to promote more positive affect and motivation. Many also emphasize the importance of an internal locus of control, persistence, a sense of belonging and opportunities for active participation, and opportunities for autonomy and self-determination.

What explicit references, if any, does the literature contain that connect risk and educational resilience to other topics included in the dissertation (or external to the dissertation)?

The literature on risk and *educational resilience* seems to advocate adherence to many of the tenets of the middle school philosophy, which calls for the elimination of various teaching practices that are typical of middle level schools. Like advocates of developmentally responsive educational practices, the authors recognize the harm to intellectual and psychosocial development that results from practices such as:

- homogeneous ability grouping
- working in isolation

- low
- infl
- trea
- foc
- exe

are resp

follows

develop

resilien

likeliho

difficul

Endno

¹ Also s

² Also s

²¹ See F
on the r

²² See E
Midgle

²³ See F

²⁴ See E
(1993).

- low level instruction
- inflexible approaches to instruction and towards learners
- treating students as passive recipients of knowledge
- focusing only on correct answers and
- exercising excessive control over students' thought processes and behaviors.

Researchers such as Eccles, Lord, and Midgley (1991) believe that these practices are responsible for the “downward spiral of motivation and achievement” that often follows entrance into the middle grades. In other words, the literature on developmentally appropriate education, middle level education, risk, and educational resilience all suggest that these practices may serve as risk factors that increase the likelihood that middle level students will experience academic, social, or emotional difficulties.

Endnotes

ⁱ Also see Barber and McClellan (1987), and Conrath (1988).

ⁱⁱ Also see Ryan, Gheen, and Midgley (1998) for more on help-avoidance.

ⁱⁱⁱ See Roeser, Midgley, and Urdan (1996) and Wentzel (1997,1998) for empirical studies on the role of these characteristics in student behavior and academic success.

^{iv} See Eccles, Buchanan, Flanagan, Fuligni, and Yee (1991), and Eccles, Lord, and Midgley (1991).

^v See Feldlaufer, Midgley, and Eccles (1988).

^{vi} See Eccles, Midgley, and Adler (1984), and Eccles, Wigfield, Midgley, Reuman, et al. (1993).

While

appare

1997 a

the inte

Murph

others

classro

exclusi

closely

educati

Chapte

were w

As exp

and the

by teach

standar

CHAPTER 6: FINDINGS RELATED TO THIRD-WAVE STRUCTURAL AND INSTRUCTIONAL REFORM

Middle schools are a wasteland of our primary and secondary landscape...Caught between the warmth of a good elementary school and the academic seriousness of a good high school, middle school students often get the least of both and the best of neither.

Tucker & Coddington, *Standards for Our Schools*, (1998, p.153)

Middle level schools have a long history of failing to achieve their central goals.

While the cause of this failure is a constant source of controversy, efforts to address the apparent problems of middle grades education abound. In the period between 1989 and 1997 a number of reforms implemented in the middle grades have attempted to address the intellectual and psychosocial issues that have been raised by critics (House, 1996; Murphy, 1990). While some efforts focused on improving the structure of the schools, others focused primarily on improving the curriculum and instruction in middle level classrooms. Although none of the reform efforts discussed in this chapter apply exclusively to middle level schools, the rationale and recommendations of these reforms closely resemble many of those found in the literature on developmentally appropriate education (see Chapter 3), middle level education (see Chapter 4), and at-riskness (see Chapter 5). In this chapter, I describe various structural and instructional reforms that were widely implemented in middle schools during the Third-wave of education reform. As explained in a Chapter 1, the term “Third-wave” refers to the period between 1989 and the present, during which large-scale school and subject matter reform was propelled by teacher empowerment initiatives and the production of curriculum and teaching standards for the core academic subjects.

were

for st

projec

"dece

discus

Engli

are th

1991)

Socia

Intern

called

labele

oppos

exhaus

and re

delvin

while

in this

motiva

the foll

Of specific interest in this chapter are structural and instructional reforms that were intended to increase teachers' decision-making power, promote equity and choice for students, and support instructional pursuits such as inquiry-based learning and project-based learning. The three structural reforms discussed in this chapter are "decentralization," "block-scheduling," and "detracking." The instructional reforms discussed in this chapter relate to the standards initiatives in mathematics, English/language arts, science, and history/social studies. Specific standards of interest are those produced by the National Council of Teachers of Mathematics (NCTM, 1989, 1991), the National Academy of Sciences (NAS, 1993), the National Council for the Social Studies (NCSS, 1994), and the National Council of Teachers of English and International Reading Association (NCTE/IRA, 1996). While these reforms are often called *subject-area reforms* because they concern content as much as instruction, I have labeled them "instructional reforms" due to my focus on the instructional features, as opposed to subject-area content.

In this chapter I provide a brief description of each of these reforms, but not an exhaustive one. This is due, primarily, to my interest in the similarities between the goals and recommended practices of these initiatives. An exhaustive description would involve delving into issues that are unique to each initiative and subject area. Such descriptions, while helpful for other purposes, would divert attention away from the issues of interest in this dissertation. For this reason, my primary focus is on the goals and general motivation behind each of the efforts, and on the literature that is relevant to answering the following guiding questions:

- How

the

ref

- How

the

- How

eff

- How

and

ref

- W

ins

dis

coding

procee

releva

paragr

detrac

Third

the mo

for stu

- How does the literature on third-wave structural and instructional reforms describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?
- How does the literature on third-wave structural and instructional reforms describe the consequences of failing to meet these needs?
- How does the literature on third-wave structural and instructional reforms describe effective approaches to meeting students' intellectual and psychosocial needs?
- How does the literature describe the relationship between these particular structural and instructional reforms and education reform (both in general and with specific reference to middle school)?
- What explicit references, if any, does the literature on third-wave structural and instructional reforms contain that connect the topic/concept to others included in the dissertation (or external to the dissertation)?

As with Chapters 3-5, this chapter will present the findings that resulted from the coding, classification, and categorization processes described in Chapter 2. But before proceeding with that presentation, it is important to first provide some background on the relevant structural and instructional reform initiatives. Toward this end, the following paragraphs provide a general description the decentralization, block scheduling, and detracking efforts, as well as an introduction to the subject-matter reforms.

Third-Wave Structural Reforms

Structural reforms are often implemented to improve school climate and increase the motivation of middle school teachers and students, thereby yielding positive results for students' educational aspirations, attainment, and achievement. *Decentralization* is an

effort

ways t

studen

these a

accura

poor st

popula

more c

and m

is a cat

decent

are am

wave (

the wa

respon

implem

making

respon

Rineha

manag

Teache

effort to redraw the boundaries of authority with regard to educational decision-making in ways that allot greater power those (especially teachers) who interact more closely with students (Bandlow, 2001). The rationale behind decentralization is that by empowering these administrators and teachers, students' learning needs can be assessed more accurately and met more frequently (Murphy, 1990; Smith & Purkey, 1985).

According to Bandlow (2001), the driving force behind decentralization is usually poor student achievement that is attributed to unique characteristics of the student population. The idea behind decentralization is that by empowering those who interact more closely with students, students' needs can be assessed more directly and accurately and met more frequently and consistently. But it is important to note that decentralization is a category of reform, not a particular reform. Many specific reforms fit underneath the decentralization umbrella. Site-based management, teacher empowerment, and teaming are among these, and were the most popular decentralization initiatives during the Third-wave (Hoy & Miskel, 1996). In the following paragraphs, I describe these initiatives and the ways in which they attempted to redraw boundaries of authority and promote responsiveness to students' needs.

According to Hoy and Miskel (1996), *site-based management* is the most popular implementation of decentralization across grades K-12. This reform shifts decision making power away from school districts and towards individual schools so that they can respond to the needs of their particular population (Bandlow, 2001). According to Rinehart and Short (1991), *teacher empowerment* is a reform that is similar to site-based management, but it operates within schools as opposed to between districts and schools. *Teacher empowerment* shifts decision-making power away from principals and towards

teacher

someti

in the

which

input a

respon

school

exhibi

can va

betwee

in whi

range o

teacher

own cl

decision

In othe

own cl:

describ

collabo

teams—

Petrie, J

teachers and parents (Schermerhorn, Hunt, & Osborn, 1994). For example, teachers (and sometimes parents) participate more actively (and in some cases as primary authorities) in the decisions about resource allocation, the selection of texts and materials, the ways in which students are grouped for instruction, and the school schedule. Such increases in input and decision-making power to are expected to allow for more flexibility in responding to the needs of students in a particular grade or classroom of a particular school.

While all *teacher empowerment* initiatives are motivated by similar goals and exhibit several common features, the exact nature of the implementation of these reforms can vary significantly. According to Sweetland and Hoy (2000) primary differences between different implementations of teacher empowerment initiatives relate to the ways in which teachers interact with each other during the decision-making process and the range of decisions they participate in making. In some implementations “empowered” teachers are granted greater autonomy and decision-making power with regard to their own classes. In these cases, teachers work independently of one another and make decisions regarding the instructional strategies and materials they use in their classrooms. In other cases, teachers collaborate with each other to make decisions that affect their own classes as well as those of other teachers in the school. In the following paragraphs I describe three versions of teacher empowerment initiatives that are based on teacher collaboration models.

When collaboration between teachers is desired, a popular plan is to create teams—a practice that is often referred to as *teaming* (Lee & Smith, 1993). According to Petrie, Lindauer, Dotson, and Tountaskis (2001) and Green (2001), teams can be

organiz

grade 1

student

level, c

innova

grade 1

on stud

retain s

also or

Smith.

same t

increas

experie

identif

connec

about s

statem

compo

Van T

recom

Counc

organized in a number of ways. Sometimes teachers of *different subjects*, at the *same grade level*, collaborate with each other to create interdisciplinary programs for all students in a particular grade. Sometimes teachers of the *same subject*, at the *same grade level*, collaborate to standardize some aspects of the curriculum and learn instructional innovations from one another (Petrie et al., 2001). Sometimes teachers from *successive grade levels* collaborate in order to build a cohesive and coherent curriculum that builds on students' experiences from previous years (Petrie et al., 2001; Spear, 1992).

Often at the middle school level, in an effort to foster closer interactions and retain some of the intimacy that supports learning in the elementary grades, students are also organized into teams along with their teachers (Asplough & Harting, 1998; Lee & Smith, 1993; Spear, 1992). In this form of teaming, a group of students have all of the same teachers and take all of their classes together. This experience is believed to increase familiarity between teachers and students, generate a higher degree of common experience between students from which teachers can build, increase teachers' ability to identify and respond to students' needs and interests, and increase students feelings of connectedness/relatedness to their peers, teachers, and school. In response to concerns about students' feelings of anonymity and isolation in large schools, original position statements on middle level education identified this particular teaming practice as a key component of responsive middle level schools (Koos, 1927; Gruhn & Douglass, 1947; Van Til, Vars, & Lounsbury, 1961). Student teaming is also advocated in more recent recommendations for middle school structure and functioning produced by the Carnegie Council on Adolescent Development (1989), the National Association for Secondary

Scho

1989

litera

a ref

instru

advoc

schoo

the hi

was n

achie

middl

(Grub

block

linke

Englis

with s

Block

increa

respec

that re

Canad

School Principals (NASSP, 1985), and the National Middle School Association (NMSA, 1989, 1995).

Block Scheduling is another popular structural reform that was advocated in early literature on middle level education (Grantes, Noyce, Petterson, & Robertson, 1961). It is a reform that involves reorganizing the school day so that students spend more instructional time in the core academic subjects. Although block scheduling has been advocated in middle level education literature since the 1960s when the first middle schools emerged, this reform was not typically implemented in middle level schools or at the high school level until the early 1990s. The increase in popularity during this periods was most likely the result of studies linking increased instruction time to higher academic achievement (Yair, 2000). Although block scheduling has been strongly advocated for middle level schools, this reform is most often implemented at the high school level (Gruber & Onwuegbuzie, 2001). However, according to DiBiase and Queen (1999), block scheduling is gaining popularity in middle schools.

The subject(s) for which schools choose to use block scheduling are usually linked to assessments of student achievement. School subjects such as math, science and English/language arts are subject to intensive, high-stakes assessment. Dissatisfaction with students' scores frequently triggers exhortations to increase academic achievement. Block scheduling is often seen as a means of increasing instructional time, thereby increasing achievement (Calweti, 1994). Many also view the practice as facilitative with respect to many curricula that call for increased exploration and in-depth investigations that require longer class periods (Benton-Kupper, 1999; Edwards, 1993; Rettig & Canady, 1996).

English

warmly

maintain

The tra

specific

time. 7

studies

low-sta

(Bryan

support

reform

change

meeting

success

(Brund

include

combin

Westbro

S

and stud

can inclu

Block scheduling has become increasingly popular in mathematics, English/language arts and science. However, it would be a mistake to say that it has been warmly embraced—especially among new teachers who have difficulty planning for and maintaining order in classes that can be up to 90 minutes long (Zepeda & Mayers, 2001). The transition is not an easy one for experienced teachers either (Fritz, 1996). Without specific training, many teachers have difficulty making productive use of the additional time. This is one of the reasons why block scheduling is most common in history/social studies and in non-core subjects, where it is initially implemented on “trial” and with low-stakes (i.e., the fewest consequences) in case it worsens the achievement situation (Bryant & Bryant, 2000).

Although the middle school philosophy encourages scheduling reforms that support the use of interdisciplinary and exploratory curricula, block scheduling is a reform that can be implemented with or without changes to the curriculum. When changes are not made, this reform can allow the class to cover more content during each meeting, but many advocates of block scheduling argue that for this reform to be successful at increasing achievement, changes must be made to the curriculum (Brundrett, 1999; Deuel, 1999; O’Neil, 1995). When changes are made, they often include the addition of discussions, group-work, projects, “hands on” activities, or a combination of these (Benton-Kupper, 1999; Skrobarcek, Chang, Thompson, Atteberry, Westbrook, & Manus, 1997).

Some also view longer class periods as an opportunity to change both instruction and student-grouping traditions (Brundrett, 1999). With longer class periods, teachers can include more activities that respond to differences in learning style and pace, and can

try out

schedul

learners

leads to

needs o

develop

elimina

practice

groupin

philoso

curricu

(Canad

while m

deal of

students

homoge

ability g

or group

certain c

may pla

try out more approaches for reaching struggling students. In these ways, block-scheduling is seen as an opportunity to reduce reliance on practices aimed at auditory learners and students who learn at an average pace. Aiming instruction at these students leads to practices that are less responsive to the needs tactile and visual learners, and the needs of students who learn at a faster- or slower-than-average pace.

According to the middle school philosophy and the recommendations of developmentally appropriate education, schools that serve early adolescents should eliminate both rigid scheduling and the use of tracking and homogeneous ability grouping practices. Although block scheduling does not require any specific form of student grouping, middle school educators who wish to remain true to the middle school philosophy often implement block scheduling along with other organizational and curricular reforms that increase the developmental appropriateness of the schools (Canady & Rettig, 1995a, 1995b). However, many schools implement block scheduling while maintaining *tracking* and *homogeneous ability grouping* practices.

Tracking and *homogeneous ability grouping* are practices that received a great deal of negative attention during the Third-wave. Tracking is the practice of streamlining students into different courses based on ability. While tracking is a school-level practice, homogeneous ability grouping is a classroom- or group-level practice. Homogeneous ability grouping as the practice of placing students of “similar ability” in the same class or group (Gamoran, 1992). Unlike tracking where students are eligible to enroll in certain courses based on their track assignment, homogenous ability grouping practices may place a student in the highest ability group in one subject or class, and the lowest

group

eliminate

literature

(Carnegie

middle

same 1

cooper

& Slav

group

in high

(H.O.7

They a

many e

1993;

that th

Dawki

commu

many s

in resp

provide

group in another subject or class. *Detracking* is the name often given to efforts to eliminate these practices.

Tracking and homogeneous ability grouping are strongly discouraged in the literature on middle level education and developmentally appropriate education, (Carnegie Council, 1989; NMSA, 1982, 1989, 1992, 1995; Scales, 1991). Instead, middle level educators are encouraged to place students with a range of abilities in the same learning group on a more frequent basis, and utilize flexible instructional practices, cooperative learning activities, and peer tutoring to bridge ability differences (Braddock & Slavin, 1992; Tomlinson, 1995; Wheelock, 1994).

Educational equity is the main goal behind detracking and heterogeneous ability grouping initiatives. Advocates of detracking, such as Oakes (1985), argue that students in higher tracks are afforded more opportunities to develop higher order thinking skills (H.O.T.S.) such as reasoning, predicting, hypothesis testing, analyzing, and summarizing. They also argue that students designated as average- or low-ability have limited access to many courses that are available to students in the highest track (Braddock & Dawkins, 1993; Oakes, 1991; Wheelock, 1992, 1994). In essence, advocates of detracking believe that this form of streamlining limits many students' educational opportunities (Brewer & Dawkins, 1993; Brewer, Rees, & Argys, 1995). They also argue that these practices communicate messages about students' potential that are unwarranted and harmful to many students' self-concept and motivation. These issues will be discussed in more detail in response to the first and second guiding questions. Before proceeding with that, I will provide an overview of the instructional reforms that I focus on in this chapter.

Third-

content

other m

reforms

to do in

higher-

decision

how to

Perseve

open-m

frequen

abilities

student

An exam

intellec

reasonin

combin

to succe

differen

tended t

characte

Third-Wave Instructional Reforms

Instructional reforms are often implemented because they are expected to improve content learning, thereby improving students' performance on standardized tests and other measures of academic achievement. In the late 1980s and early 1990s, instructional reforms focused heavily on setting standards for what students should know and be able to do in a subject area, but also came to increasingly emphasize the importance of more higher-order thinking and reasoning skills. The ability to think creatively, make decisions, solve problems, visualize, reason, analyze, interpret, communicate, and know how to learn are the skills most often mentioned in definitions of higher order thinking. Perseverance, flexibility, metacognition, transfer of knowledge, problem orientation, open-mindedness, use of quality standards, and independence are among the most frequently emphasized characteristics (Lee 1989). In this dissertation, these skills and abilities are represented by the term *intellectual autonomy*.

According to Yackel and Cobb (1996), developing intellectual autonomy in students was the major goal of the mathematics reform movement during the Third-wave. An examination of reforms in other subjects reveals that the emphasis on this type of intellectual development was not unique to mathematics reform. Critical thinking, critical reasoning, critical literacy, and scientific literacy are all terms used to represent the combined abilities of logical reasoning and creative thought that individuals need in order to successfully govern themselves in academic, moral, and social domains. Despite differences in the terminology used to describe the goal, instructional reform across fields tended to emphasize the development of a similar set of content-independent characteristics and intellectual traits.

in a di

there v

toward

mathem

expect

particip

accord

know v

fluently

why th

names

the cha

accept t

emphas

reform

students

to devel

own sen

reforms

themselv

In terms of educational practices, the emphasis on intellectual autonomy resulted in a different set of expectations for student (and teacher) behavior. In each subject area there was a shift away from encouraging students to simply memorize facts, and a shift towards encouraging higher level reasoning, conceptual understanding, and meaning. In mathematics, English/Language Arts, History/Social Studies, and Science students were expected to learn more than the formula for area, the rules of phonics, the dates of and participants in historical events, and the classification of biological organisms. In accordance with the emphasis reasoning and meaning, students were expected to also know where the formula came from and understand why it works; not only to read fluently, but to comprehend text; not only to dates and participants, but to understand why the participants were involved and why the event occurred; and not only know the names and features of animals, but to understand theories about how they came to have the characteristics which determine their classification.

This new emphasis also involved a shift away from forcing students to adopt or accept the solution strategies and interpretations of others, and a progression towards emphasizing concepts, situations, and student reasoning. In all of these subject-matter reform initiatives we see a shift away from educational contexts and practices that tell students what to do and think, and towards contexts and practices that encourage students to develop their *own sensible strategies* for answering important questions and draw their *own sensible conclusions* after interpreting facts for themselves. At the center of these reforms is the goal to help students develop their ability to govern and think for themselves, taking relevant factors into account, when deciding between truth and untruth

in an i

(1984a

develop

perform

recomm

critical

importa

meaning

approac

literatur

question

set here.

How do

(both in

A

were clo

influen

perform

student r

dissertat

motivate

in an intellectual realm. This is the definition of intellectual autonomy offered by Kamii (1984a, 1984b).

Although the standards-based instructional reforms in each subject area were developed independently of one another, the overarching goals for student learning and performance were quite similar across disciplines. Each instructional reform initiative recommends educational approaches and activities that promote dispositions and skills of critical thinking and inquiry. Each also emphasizes the use of authentic tasks, the importance of students interest and choice, and equal opportunity to engage in meaningful learning. These will be discussed in more detail in the section on effective approaches. In preparation for that discussion, the following paragraphs describe the literature on each of the structural and instructional reforms in relation to the first guiding question. In subsequent responses to the guiding questions, I will continue the pattern set here, of addressing structural reforms first, then instructional reforms.

How does the literature describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?

According to Yair (2000), many Third-wave structural and instructional reforms were closely aligned with contemporary theories of motivation that emphasized the influence of contextual features of the environment on student engagement, learning, and performance. While the literature on structural and instructional reform does not describe student needs in as explicit detail as the literature on the other four topics in this dissertation, the reform literature does present a perspective on effective functioning that motivates each initiative with reference to teachers, learners, and institutions.

descri

literat

are ex

achiev

empov

connec

three b

Wellbe

these a

(1992)

belongi

Leithw

psychol

goals o

pursuit.

desired

needs"

the sect

similar

Structural Reforms

Most of the literature on decentralization, block scheduling, and detracking describes specific efforts to implement the reforms. However, there is a small body of literature that describes not only the goals of these reforms, but also the reasons why they are expected to produce better teaching and learning environments and higher academic achievement. According to Osterman (1992), structural reforms such as teacher empowerment, teaming, block scheduling and detracking increase interpersonal connection, active participation, equal opportunity, and choice; and in so doing fulfill three basic psychological needs that underlie effective personal functioning. Connell and Wellborn (1991), Deci, Vallerand, Pelletier, and Ryan (1991), and Ryan (1995) describe these as the need for relatedness, competence, and autonomy. According to Osterman (1992) additional literature describes these as the need for support, acceptance, belonging, membership, and community. Leithwood, Jantzi, and Haskell (1997) and Leithwood and Jantzi (1999) have found that when environments provide for these psychological needs, teachers and students are more likely to identify with the values and goals of the school, commit to achieving them, and participate more actively in their pursuit. All of these reactions and behaviors lead to greater success in achieving the desired goals. These needs are similar to those described as in Chapter 3 “enduring needs” for all students and “age-specific needs” of early adolescents, and as I discuss in the section on consequences, the outcomes of fulfilling or failing to fulfill them are similar to those described in previous chapters.

Dece

that c

conne

This i

were i

sugge

intelle

in whi

treat st

to that

affects

perceiv

their te

behavi

Block

class p

other in

Accorc

contrib

identifi

strategi

Decentralization

According to Ryan (1991 p. 119), “The experience of relatedness and mutuality that derives from authentic contact with others appears to play a crucial role in connecting individuals to social tasks and promoting an internalization of valued goals.” This is the reason why teacher empowerment—especially forms that involve teaming—were expected to promote better performance. Research by Kruse and Louis (1997), suggests that teaming creates a climate of emotional and moral support, personal dignity, intellectual assistance and personal encouragement for teachers that influences the ways in which they interact with students. In climates such as these, teachers are more likely to treat students with respect, seek out information about students’ needs, respond creatively to that information, and provide more constructive feedback to students. This in turn affects the ways in which students perceive and respond to their teachers. Students who perceive their teachers as knowledgeable, powerful, and caring are more likely to respect their teachers and try harder to live up to their teachers expectations for learning and behavior.

Block Scheduling

Block scheduling, while offering students additional time to learn during each class period, also offers the opportunity for teachers and students to interact with each other in more meaningful ways (Rettig & Canady, 1995; Canady & Rettig, 1996). According to Huff (1995), Queen and Isenhour (1998) and Wild (1998), block scheduling contributes to increased relatedness and competence by providing more opportunities to identify students' strengths and weaknesses, and implement effective instructional strategies. According to the literature, this arrangement also offers greater opportunities

use

instr

exter

psych

adjus

have

oppor

stude

out as

(Ainle

Detra

detrac

the lit

practic

labelin

interes

shoulc

nature

highly

not be

argue t

use a greater variety of teaching methods (Canady & Rettig, 1996), to individualize instruction (Eineder & Bishop, 1997), and engage in authentic learning activities and extended investigations (Boarman & Kirkpatrick, 1995).

Kramer (1997) notes that block scheduling contributes to another basic psychological need—autonomy—by allowing teachers more freedom to make adjustments to content coverage. Deuel (1999) and Passe (1996) note that when teachers have greater autonomy they tend to pass it on to students by allowing them greater opportunities to pursue special interests. When exploring a topic of personal interest students are more likely to pay closer attention, persist for longer periods of time, seek out assistance, learn more, communicate their knowledge, and enjoy the learning process (Ainley, 1994, 1998; Renninger, 1987, 1990; 1998; Schiefele, 1991, 1996).

Detracking

In addition to eliminating institutionalized obstacles to high quality instruction, detracking is also believed to respond students' basic psychological needs. According to the literature, students' needs for support, acceptance, and autonomy are undermined by practices that communicate limited competence and potential, promote peer rejection by labeling them as less desirable, and prevent them from taking courses they may be interested in. Detracking is motivated by a belief that students' educational experiences should communicate respect for diversity and variation, and recognize the transitional nature of adolescent development. This reform is based on the view that during the highly uneven process of adolescent development, a student's current functioning should not be viewed as an indicator of his or her ultimate potential. Advocates of detracking argue that instead of assigning students to courses of study based on their achieved

deve

deve

the m

a stre

Instr

which

clima

each

learni

standa

indire

descri

descri

make a

These

Nation

Studies

early ac

emotion

• The

age,

development, all students should be given opportunities to advance their cognitive development. Those who are lagging behind their peers are seen as especially in need of the richer learning experiences that are often reserved for high performing students under a streamlined system.

Instructional Reforms

In the years since the production of *Turning Points* (Carnegie Task Force, 1989), which is often cited as the impetus for structural reforms to improve middle school climate, there has also been increased attention on standards for content and instruction in each of the core academic subjects. These standards identify conditions and criteria for learning environments and evaluations regarding student competence. While each set of standards and related literature that I discuss in this chapter express many student needs indirectly and in terms of the specific subject area, there are many similarities in the descriptions. Among the standards documents, only those produced by the NCSS (1994) describe students needs thoroughly and directly, but the NCTM (1989) standards also make a few specific statements about the characteristics and needs of early adolescents. These statements are the focus of the paragraphs that follow.

National Council for the Social Studies (NCSS)

Unlike most of the other instructional reform initiatives, the Standards for Social Studies (NCSS, 1994) explicitly links NCSS recommendations to their understanding of early adolescents' developmental needs. With regard to early adolescents' socio-emotional development, the NCSS asserts:

- The quest for independence and self-identity creates unique emotional needs for this age, including the need for a sense of competence and intimacy with others.

a

- A

c

a

e

- T

m

ex

Gr

oth

- The

dire

appe

- Ado

that

- The

adult

and a

oppre

TH

developm

Erikson's

Adolescents waver between the desire for independence and the need for regulation and reassurance from adults.

- A constant struggle exists between wishing to be seen as unique and wanting to conform to group norms. Adolescents often surrender individuality to the desire for acceptance by peers that leads to an inordinate concern with appearance and social efficacy.
- The focus of social life changes from family to friends. Previously accepted values may be questioned. Conformity to peer group norms may run counter to the social expectations of adults. Affirmation and security are sought through the peer group. Group loyalty and acceptance may supersede good judgment and care and concern for others, leading to cruel and indifferent treatment of outsiders.
- The student's assessment of personal self-worth is extremely fragile. Self-esteem is directly influenced by how well adolescents feel they perform in areas of importance: appearance, scholastic competence, athletic competence, and behavior.
- Adolescents believe that they uniquely experience thoughts and feelings. They feel that no one else understands them or the intensity of their experiences.
- The adolescent conscience becomes increasingly alert to the actions and values of adults and registers disappointment over perceived imperfections. A sense of ethics and altruism is developing with corresponding concern for those wronged or oppressed, for fairness, and for the pursuit of high ideals.

These observations are quite similar to those expressed in the literature on developmentally appropriate education and middle level education. In accordance with Erikson's theory of psychosocial development (Erikson, 1968), these points communicate

a reco

need

ways

social

- Co

gr

- A

yo

- Th

att

Ta

anc

develop

the tran

socio-e

practice

approac

of needs

Nationa

A

Curricul

a recognition the quest for identity, the need for people and ideas to have faith in, and the need for affirmation by peers that is confirmed by teachers and inspired by worthwhile ways of life. In addition, these points communicate recognition of the tendency toward social comparison and personal fable as described in Chapter 3.

With regard to early adolescents' intellectual characteristics, the NCSS asserts:

- Cognitive development is related to biological maturation and will therefore show great variation even among a small group of early adolescents.
- A great deal of curiosity emerges about the world, its peoples, and life in general. The young adolescent exhibits a vivid imagination and a wide range of interests.
- The early adolescent begins the transition from concrete to abstract thinking. The attention span increases and students can begin to think about their own thinking. Talents can develop rapidly during this period, as can the aptitude for critical thinking and decision making.

It is clear from this list that the NCSS views early adolescents' cognitive development in light of Piaget's theory, and recognizes the capacities that emerge during the transition to formal operations. This perspective, combined with their perspective on socio-emotional/psychosocial development, influences their recommendations for practice. These recommendations will be discussed in the section on effective approaches. But before proceeding with that discussion, I will first present the discussion of needs expressed in the NCTM documents.

National Council of Teachers of Mathematics (NCTM)

According to the National Council of Teachers of Mathematics (NCTM), the *Curriculum and Evaluation Standards for School Mathematics* (1989, p. 5) were intended

to assi

indivi

power

well a

routin

collec

reason

indivi

(NCT

who h

- po

co

- ar

- ex

so

auton

assoc

devel

mathe

explai

6), "st

power

to assist teachers' efforts to help *all* students become mathematically powerful individuals. Based on the description in the Standards document, the term mathematical power denotes an individual's abilities to explore, conjecture, and reason logically, as well as the ability to use a variety of mathematical methods effectively to solve non-routine problems. "This notion is based on the recognition of mathematics as more than a collection of concepts and skills to be mastered; it includes methods of investigating and reasoning, means of communication, and notions of context. In addition, for each individual, mathematical power involves the development of personal self-confidence (NCTM, 1989, p. 5). In related literature produced by Even and Lappan (1994), students who have mathematical power are described as those who:

- possess conceptual understanding that allows them to know when to use particular computational skills,
- are confident in their ability to solve problems in situations that look unfamiliar,
- explain with conviction, and change their minds only when they are convinced by someone else's explanation that the other person is correct.

This description of mathematical power is similar to the description of intellectual autonomy offered by Kamii (1984a, 1994b). To promote the skills and behaviors associated with mathematical power, the Standards encourage teachers to help students develop confidence in their abilities, and skill at solving problems, communicating mathematically, and reasoning mathematically. These intellectual skills are further explained with regard to students' needs. According to the Standards (NCTM, 1989, p. 6), "students need to view themselves as capable of using their growing mathematical power to make sense of new problems situations in the world around them" and they

need m

thinkin

right a

proble

exerci

coope

mathe

mathe

langu

refine

early

transi

devel

68). c

peer r

consc

do I f

their r

thoug

values

they w

need numerous and varied experiences that foster trust in their own mathematical thinking. Students also need opportunities to explore both open-ended problems with no right answers, as well as formulated problems. They need opportunities to work on problems that may take hours, days, or even weeks to solve. In addition to simple exercises that can be completed independently, they also need opportunities to work cooperatively in small groups and with the entire class. To learn to communicate mathematically, students need opportunities to learn the signs, symbols, and terms of mathematics in problem situations where they can read, write, and discuss ideas in the language of mathematics. These activities are believed to help students learn to clarify, refine, and consolidate their thinking (NCTM, 1989, p. 6). According to the literature on early adolescent development and critical thinking/reasoning, these skills facilitate the transition to full formal operational thought (Muuss, 1996), and contribute to the development of intellectual autonomy (Yackel & Cobb, 1996).

With specific regard to early adolescents, the NCTM Standards (NCTM, 1989, p. 68), describe them as “children in transition” who are restless, energetic, responsive to peer influence, and unsure about themselves. This description goes on to assert that self-consciousness is their hallmark, and curiosity (about such questions as Who am I? How do I fit in? What do I enjoy doing? Who do I want to be?) is both their motivation and their nemesis. From this turmoil emerges an individual with attitudes and patterns of thought taking shape.

According to NCTM middle school students are in the process of forming lifelong values and skills. “The decisions students make about what they will study and how they will learn can dramatically affect their future...Because many of the attitudes that

affect

efforts

pursue

need t

NCS.

appro

Parti

orien

How

the r

their

deve

moti

nega

begi

discu

Struc

foster

others

1999).

affect these decisions are developed during the middle grades, it is crucial that conscious efforts be made to encourage all students, especially young women and minorities, to pursue mathematics (NCTM, 1989, p. 68). If students are to pursue mathematics, they need to experience it as a personally meaningful and worthwhile endeavor.

The descriptions of students' intellectual and psychosocial needs offered in the NCSS and NCTM Standards echo those found in the literature on developmentally appropriate education, middle level education, at-riskness, and educational resilience. Particular overlaps of note relate to early adolescents' cognitive characteristics, social-orientation and sensitivity, and pursuit of meaning, relevance, and independence.

How does the literature describe the consequences of failing to meet these needs?

According to the literature on structural and instructional reform, failing to meet the needs of early adolescents is associated with a range of negative consequences for their intellectual development and achievement, as well as for their psychosocial development and behavior. Of specific concern are: 1) the negative impact on motivation, 2) the negative influence on disposition and habits of mind, and 3) the negative impact on content learning and achievement. As with the previous section, I begin by discussing these in relation to structural reform literature and follow with a discussion of instructional reform literature.

Structural Reforms

According to the literature on structural reforms, students whose environments foster feelings of belongingness or acceptance and promote positive involvement with others, are more likely to evidence autonomy and self-regulation (Leithwood & Jantzi, 1999). More specifically, they:

- de
- ac
- id
- ex
- a
- l

teach

low

activ

effic

the li

inabi

of th

abili

devel

are (C

the in

more

incapa

outside

heteron

- demonstrate intrinsic motivation,
- accept the authority of others while at the same time establishing a stronger sense of identity,
- experience a sense of autonomy, and
- accept responsibility for regulating their own behavior in the classroom (Ainley, 1993, 1998; Renninger, 1998; Schiefele, 1996)

According to the research on teacher empowerment and detracking, students' and teachers' who feel disrespected, disconnected, and excessively restricted tend to display low motivation to respond negatively to expectations—evidenced by higher rates of active and passive opposition. They are also more likely to experience feelings of low efficacy, and participate less actively in the teaching and learning process. According to the literature on detracking, students who feel rejected often exhibit an unwillingness or inability to conform to norms, and appear less able to act independently. These are two of the most frequently observed negative consequences of tracking and homogeneous ability grouping.

The literature on detracking also asserts that students in lower tracks tend to develop low self-efficacy due to their belief that they are not as capable as other students are (Oakes, 1991; Wheelock, 1992, 1994). According to Brophy (1998), in response to the institution's assertions that they are intellectually limited, lower track students are more likely to develop a form of "learned helplessness" where they feel they are incapable of thinking critically and solving problems without constant direction from an outside authority. Constance Kamii (1994) describes this outcome as *intellectual heteronomy*—the opposite of *intellectual autonomy*. The feelings of helplessness that are

assoc

math

stigm

to fee

disen

They

conse

sugge

they

schoc

powe

and L

Instru

conse

experi

utility

develo

These

the sec

associated with intellectual heteronomy are a major source of anxiety towards mathematics, and possibly other school subjects (Stodolsky, 1985).

Other researchers, such as Canady and Rettig (1995a, 1995b), note that stigmatizing experiences such as tracking and homogeneous ability grouping often lead to feelings of rejection for students in the lower groups, and many students respond by disengaging during learning or withdrawing from school completely (e.g., dropping out). They also note that teachers who work with these students also suffer from the consequences. Studies conducted by Johnson (1990) and Rosenholtz (1989a, 1989b) suggest that many teachers find interactions with tracked students to be less fulfilling, they experience more behavior problems from students, and receive a smaller share of the school's resources. These features of their work environments have been cited as powerful predictors of low morale and high teacher turnover (also see Lieberman, 1988 and Little, 1982).

Instructional Reforms

While the literature on instructional reforms is much less explicit about negative consequences, there are many references to the need for certain types of opportunities and experiences. Chief among the implied consequences are low assessment of the value and utility of the content and discipline, impaired learning, low persistence, and failure to develop competence, critical thinking skills, and reasonable standards for work quality. These relate directly to the recommendations for effective practice that are described in the section below.

How

appro

are si

educ

are th

auton

regar

diffe

appro

more

litera

appro

expre

Struc

curric

increa

studen

studen

throug

detrac

How does the literature describe effective approaches to meeting these needs?

The literature on structural and instructional reforms describe effective approaches to meeting early adolescents' intellectual and psychosocial needs in ways that are similar to the literature on developmentally appropriate education, middle level education, at-riskness, and educational resilience. Key similarities in these approaches are their emphasis on increasing the quality of the curriculum, and its relevance to autonomy-related goals, equity-related goals, and student interests. As was the case regarding consequences, the literature on structural reform speaks to these issues with a different level of explicitness than instructional reforms, but in the case of effective approaches, this relationship is reversed. While the literature on structural reforms is more explicit about consequences of unmet intellectual and psychosocial needs, the literature on instructional reforms is more explicit about the features of effective approaches. The paragraphs below present the discussion of effective approaches expressed in the literature on each type of reform.

Structural Reforms

According to the literature on structural reforms, emphasizing high quality curricula, equity, and autonomy are necessary—but insufficient—conditions for increasing student achievement. Before these emphases can have the desired effect on student performance, schools must create conditions that support positive beliefs about student efficacy and empower teachers to respond to students' interests and needs (e.g., through changes to content, grouping, and scheduling). Structural reforms such as detracking and teacher empowerment are considered to be effective approaches to

estab

block

posit

comm

by st

Loui

belie

diffi

perfe

effec

they

Jant

struc

need

parti

acce

Emp

prese

neces

teach

Jantzi

establishing these conditions—especially when they involve the implementation of block-scheduling.

Detracking initiatives are considered to be effective approaches to supporting positive beliefs about efficacy because they implicitly (and in some cases, explicitly) communicate to teachers that they are capable of responding to the challenges presented by student variation, and are expected to respond to the needs of all students (Kruse & Louis, 1997). These initiatives are also expected to support positive efficacy-related beliefs among students because they communicate that students, regardless of past difficulties or failures, are also capable of rising to high expectations for learning and performance (Oakes, 1991; Wheelock, 1992, 1994). Additional expectations for the effectiveness of detracking relate the ability of the practice to support students' belief that they have the power to control and/or change the trajectory of their future (Leithwood & Jantzi, 1999).

While positive efficacy-related beliefs are important components effective structural reform, these beliefs must also be accompanied by access to the resources needed in order to realize those beliefs. Structural reforms that increase teachers' participation in decisions about resource allocation and teaching materials increase their access to the resources they need in order to teach high quality content to all students. Empowering teachers in this way helps to support their efforts to live up to the demands presented by student variation (Leithwood, Jantzi, & Haskell, 1997). This support is necessary in order to prevent feelings of frustration and futility than can undermine teachers' beliefs about their own efficacy, as well as that of their students (Leithwood & Jantzi, 1999).

when

way

pres

Ref

and

stud

In th

expe

by ig

& Ki

range

expl

chara

in res

atten

as wh

more

instru

overv

work

One resource that teachers (and students) often feel deprived of is *time*. Even when practices such as tracking and homogeneous ability grouping were implemented in ways that reduced student variability, teachers and students often felt tremendous pressure to race through the content they were expected to cover (Brundrett, 1999). Reforms that increase the demands for content learning (e.g., standards-based reforms), and introduce greater student variability (e.g., detracking), further strain teachers' and students' resources and limit their autonomy (Deuel, 1999; Kramer, 1997; Passe, 1996). In these situations, time can become a critical factor in their ability to respond to higher expectations.

When teachers and students perceive a shortage of time, they often compromise by ignoring certain demands or pursuing certain goals in a superficial manner (Boarman & Kirkpatrick, 1995; Canagy & Rettig, 1996). For example, teachers may restrict the range of topic that they cover, or teach all topics "in summary" and few (or none) through exploration and investigation. They may also teach by telling, and toward the characteristics and needs of the average student (i.e., by excessive lecturing), rather than in response to the characteristics and needs of all of their students. In addition, they may attempt to address students' desire for autonomy by allowing them to make choices such as where to sit, rather than more important decisions such as which topics to explore in more depth.

In essence, a lack of adequate time can promote improper implementation of instructional reforms, interfere with the achievement of important reform goals, and overwhelm teachers and students in ways that undermine their sense of efficacy. After working so hard in pursuit of the goals they were able to properly address, student

ach

inc

fee

tea

Litt

pre

resp

(19

teac

add

teac

they

con

resp

like

auto

the f

prom

gene

effec

achievement often fails to live up to expectations and teachers and students face increased pressure to cover all of the content in-depth. This pressure can promote feelings of frustration and futility that lead to disengagement and withdrawal among teachers as well as among students (Canady & Rettig, 1995a, 1995b; Lieberman, 1988; Little, 1982). Structural reforms such as block-scheduling are believed to reduce time pressure, promote proper implementation of standards-based reforms, facilitate responsiveness, and sustain efficacy-related beliefs (Huff, 1995; Queen & Isenhour (1998, Eidener & Bishop, 1996).ⁱ

According to the literature on structural reforms, decentralization (especially teacher empowerment), detracking, and block-scheduling can effectively prevent and address alienation, disaffection, disengagement, and unnecessary resistance among teachers and students. When each of these reforms is implemented properly, and when they are implemented as an interrelated set of structural reforms, they can create conditions that support positive beliefs about student efficacy and empower teachers to respond to students' interests and needs. Fulfilling these conditions increases the likelihood that high quality curricula, equity-based practices, and greater provisions for autonomy will lead to higher student achievement.

In the next section I present the literature on instructional reforms that describe the features of high quality curricula, and effective (and productive) strategies for promoting equity and student autonomy. I begin this presentation by discussing the general literature on the mathematics standards, and specific recommendations for effectively teaching mathematics in the middle grades.

Instr

Engli

instru

be ex

this c

subje

litera

goals

practi

prese

prima

The M

class

the P

shift

evide

and p

In es

colle

away

math

Instructional Reforms

As discussed earlier in the chapter, the standards for mathematics, English/language arts, science, and history/social studies concern content as much as instruction. The standards for each of these subjects identify topics and ideas that should be explored in the curriculum. While the information I present below does not discuss this content, it does present the goals educators are expected to pursue when exploring subject-specific topics and ideas. The content below also discusses the ways in which the literature on these reform initiatives describes effective strategies for pursuing these goals. Depending on the specific initiative, some of these strategies relate to classroom practice as well as to conditions in the larger school environment. I begin my presentation of the literature with a discussion of the NCTM standards, which focus, primarily, on classroom practice.

The National Council of Teachers of Mathematics (NCTM)

According to NCTM, five major shifts in the environment of mathematics classrooms are needed to move towards mathematics teaching that empowers students. In the Professional Standards for Teaching Mathematics (NCTM, 1991), they advocate the shift toward classrooms as mathematical communities, toward logic and mathematical evidence as verification, toward mathematical reasoning; toward conjecturing, inventing, and problem solving; and toward connecting mathematics, its ideas, and its applications. In essence, they are advocating a shift away from away from classrooms as simply a collection of individuals; away from the teacher as the sole authority for right answers; away from merely memorizing procedures for finding solutions; and away from treating mathematics as a body of isolated concepts and procedures.

more

The

math

in the

strong

ensur

dispo

school

their

view

releval

dispos

learn

ask qu

listeni

establ

by hel

own th

indepe

author

NCTM encourages math educators to redefine their roles so that they function more as facilitators or coaches, and increase interaction between peers during learning. The Standards also encourage educators to eliminate rigid ability grouping during mathematics learning, promote higher order thinking skills, increase student participation in the decision-making process, and use assessment to aid teaching and learning.

In content related specifically to middle school students, the NCTM reasserts the strongly held belief that all students have the right to a mathematics education that ensures mathematical literacy and the development of the concepts, skills, and dispositions necessary for a meaningful and productive life. They note that middle school students are at a particularly crucial stage, as they are in the process of forming their identities and making decisions that will influence their futures. If students are to view mathematics as important to their futures, the curriculum must be interesting and relevant, must emphasize the usefulness of mathematics, and must foster a positive disposition towards mathematics” (NCTM, 1989, p. 68).

The NCTM Standards express the belief that “Students will perform better and learn more in a *caring environment* in which they feel free to explore mathematical ideas, ask questions, discuss their ideas, and make mistakes “(NCTM, 1989, p. 69). By listening to students’ ideas and encouraging them to listen to one another, one can establish an atmosphere of mutual respect. Teachers can foster this willingness to share by helping students explore a variety of ideas in reaching solutions and verifying their own thinking. This approach instills in students an understanding of the value of independent learning and judgment and discourages them from relying on an outside authority to tell them whether they are right or wrong (NCTM, 1989, p. 69).

math

their

comm

togeth

instru

capab

recom

intere

mathe

explai

apply

recom

they c

and d

better

even n

gather

mathe

intelle

they c

To create such an atmosphere, the NCTM Standards suggest that middle school mathematics teachers create learning environments that fosters students' confidence in their own abilities and skills in problem solving, reasoning, making connections, and communicating with and about mathematics. They also suggest that teachers work together in *teams* to develop meaningful mathematics programs, and modify mathematics instruction as needed to motivate and nurture students.

NCTM also encourages teachers to take advantage of the expanding mathematical capabilities of students by including more complex problems that integrate topics. They recommend implementing practices that involve regularly ask students to formulate interesting problems based on a wide variety of situations, both within and outside mathematics. Teachers are also encouraged to give students frequent opportunities to explain their problem-solving strategies and solutions, and to seek general methods that apply to many problem settings. To promote effective self-governance, NCTM recommends that teachers encourage students to monitor and assess themselves so that they can use their time and energy wisely, learn to plan more carefully and effectively, and develop the habits of mind that make them not only better problem solvers but also better learners. In addition, the Standards assert that good reasoning should be rewarded even more than students' ability to find correct answers since making conjectures, gathering evidence, and making supportive arguments are fundamental to doing mathematics (1989, p. 6). As discussed above, these abilities are also fundamental to intellectual autonomy, and—as they deal with exploring possibilities before realities—they challenge students abilities to engage in propositional thinking and correlational

reas

oper

oppo

- a

- g

- di

- pr

- ex

shoule

them t

apply

situati

activit

both in

about

studen

charac

exchar

work c

Projec

reasoning thereby supporting the transition from concrete operations to formal operational thinking.

With specific regard to instruction, teachers are encouraged to provide variety and opportunities for

- appropriate project work
- group and individual assignments
- discussion between the teacher and the students, and among students
- practice on mathematical methods, and
- exposition by the teacher (NCTM, 1989, p. 10).

The NCTM Standards go on to state that assert that instructional approaches should engage students in the process of learning rather than transmit information for them to receive. They argue that students must become active learners, challenged to apply their prior knowledge and experience in new and increasingly more difficult situations. Because students in the middle grades are especially responsive to hands-on activities in tactile, auditory, and visual instructional modes, learning should engage them both intellectually and physically (NCTM, 1989, p. 87).

Working in small groups is believed to provide students with opportunities to talk about ideas and listen to their peers, and enable teachers to interact more closely with students. Working in small groups also takes positive advantage of the social characteristics of the middle school student, and provides opportunities for students to exchange ideas and hence develop their ability to communicate and reason. Small group work can involve collaborative or cooperative work, as well as independent work. Projects and small-group work can empower students to become more independent in

their

summ

work

subje

attent

illustr

NCTM

Table

Increa

Pursui

extenc

Invest

from p

Repre:

numer

symbol

Discus

to mat

Reason

proport

deduct

Conne

and to

Conne

Apply

involv

techno

learnin

decrea

their own learning. Whole-class discussions require students to synthesize, critique, and summarize strategies, ideas, or conjectures that are the products of individual and group work. These skills can be expanded to, and integrated with, any or all of the other subjects (NCTM, 1989, p. 67).

Within an atmosphere such as this, teachers are encouraged to pay increased attention to particular activities, and decreased attention to others. The table below illustrates the areas that NCTM emphasizes in the Standards document (taken from NCTM, 1989, pp. 70-71).

Table 1. General Areas for Increased and Decreased Emphasis

<i>Increased Emphasis</i>	<i>Decreased Emphasis</i>
Pursuing open ended problems and extended investigations	Practicing routine, one-step problems
Investigating and formulating questions from problem situations	Practicing problems categorized by types (e.g., coin problems, age problems)
Representing situations verbally, numerically, graphically, geometrically, or symbolically	Doing fill-in-the-blank worksheets
Discussing, writing, reading, and listening to mathematical ideas	Answering questions that require only yes, no, or a number as responses.
Reasoning in spatial contexts, with proportions, from graphs, inductively, and deductively	Relying on outside authority (teacher or an answer key)
Connecting mathematics to other subjects and to the world outside the classroom	Learning isolated topics
Connecting topics within mathematics	Developing skills out of context
Applying mathematics	

Additional areas for increased emphasis during instruction include actively involving students in the learning activities, using concrete materials, using appropriate technology for computation and exploration, being a facilitator of learning, and assessing learning as an integral part of instruction (NCTM, 1989, p. 73). Additional areas for decreased emphasis include teaching computations out of context, drilling on paper-and-

pencil

knowl

publisl

flexibi

Scienc

produc

(NCSS

publica

Nationa

Associat

docume

standar

discuss

2061: S

Standar

Langua

NCTE/

The Na

are prer

become

pencil algorithms, stressing memorization over reasoning, being a dispenser of knowledge, and testing for the sole purpose of assigning grades (NCTM, 1989, p. 93).

The standards for science, social studies, and English/Language arts were all published after the NCTM Standards and express similar commitments to equity, inquiry, flexibility, and appropriate uses of assessment and technology. The National Academy of Sciences (NAS) and the American Association for the Advancement of Science (AAAS) produced their standards documents in 1993. The National Council for the Social Studies (NCSS) produced their document in 1994. These were followed, in 1996, by the publication of the English/language arts standards document jointly produced by the National Council of Teachers of English (NCTE) and the International Reading Association (IRA).

In the presentation below, the standards for science are discussed first as these documents temporally precede those in the other subject areas. Among the science standards documents, the *National Standards for Science Education* (NAS, 1993) is discussed first, because this document focuses more explicitly on instruction than *Project 2061: Science for All Americans* (AAAS, 1993). Likewise, since the *Social Studies Standards* (NCSS, 1994) were published before the *National Standards for the English Language Arts* (NCTE/IRA, 1996), the NCSS Standards are discussed before the NCTE/IRA Standards.

The National Academy of Sciences (NAS)

According to the NAS, the *National Science Education Standards* (NAS, 1993) are premised on a conviction that all students deserve and must have the opportunity to become scientifically literate, and rest on the premise that science is an active process.

The N

is don

must l

call fo

inferri

becaus

constr

comm

logica

develo

and thi

NCTM

learnin

NAS e

interac

curricu

particip

instruc

issues

argue t

Towar

environ

The NAS stresses that “learning science is something that students do, not something that is done to them, and that hands-on activities, while essential, are not enough. Students must have ‘minds-on’ experiences as well.” As a result of these views, the NAS standards call for more than “science as process,” in which students learn such skills as observing, inferring, and experimenting. They believe that inquiry is central to science learning because while engaging in inquiry, students describe objects and events, ask questions, construct explanations, test those explanations against current scientific knowledge, and communicate their ideas to others. They identify their assumptions, use critical and logical thinking, and consider alternative explanations. “In this way, students actively develop their understanding of science by combining scientific knowledge with reasoning and thinking skills.” This description of an effective approach mirrors that advocated by NCTM, especially with regard to the role of conjecture, evidence, and discussion.

The NAS believes that students must accept and share responsibility for their own learning but they also stress the importance of the teacher’s role. Like the NCTM, the NAS encourages teachers to facilitate exploration, investigation, and meaningful interactions during learning. The NAS also emphasizes the importance of adapting curricula to student interests, knowledge, and abilities while encouraging active participation by all students and fostering student autonomy. In the content related to instruction, the NAS emphasizes classroom level issues, as well as structural/school-level issues that create conditions that support high expectations and equity. Specifically, they argue that teachers should work in collegial contexts that support good science teaching. Toward these ends, they offer six teaching standards designed to improve the learning environment and educational approach. These are presented below.

prog

- D

- S

ki

- S

un

- W

In doing

- Fo

- Or

- Ch

- Rec

full

- Enc

to n

of their

- Use

abili

- Anal

- Guide

TEACHING STANDARD A: Teachers of science plan an *inquiry-based science program* for their students. In doing this, teachers:

- Develop a framework of yearlong and short-term goals for students.
- Select science content and adapt and design curricula to meet the interests, knowledge, understanding, abilities, and experiences of students.
- Select teaching and assessment strategies that support the development of student understanding and nurture a community of science learners.
- Work together as colleagues within and across disciplines and grade levels. (p. 30)

TEACHING STANDARD B: Teachers of science guide and facilitate *learning*.

In doing this, teachers:

- Focus and support inquiries while interacting with students.
- Orchestrate discourse among students about scientific ideas.
- Challenge students to accept and share responsibility for their own learning.
- Recognize and respond to student diversity and encourage all students to participate fully in science learning.
- Encourage and model the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and skepticism that characterize science. (p. 32)

TEACHING STANDARD C: Teachers of science engage in ongoing *assessment* of their teaching and of student learning. In doing this, teachers:

- Use multiple methods and systematically gather data about student understanding and ability.
- Analyze assessment data to guide teaching.
- Guide students in self-assessment.

-
-
- U
- s
- n

envir

learn

- S
- in

- C

- E

- M

ac

- Id

- En

science

social

- Dis

stu

- Use student data, observations of teaching, and interactions with colleagues to reflect on and improve teaching practice.
- Use student data, observations of teaching, and interactions with colleagues to report student achievement and opportunities to learn to students, teachers, parents, policy makers, and the general public. (p. 37-38)

TEACHING STANDARD D: Teachers of science design and *manage learning environments* that provide students with the time, space, and resources needed for learning science. In doing this, teachers:

- Structure the time available so that students are able to engage in extended investigations.
- Create a setting for student work that is flexible and supportive of science inquiry.
- Ensure a safe working environment.
- Make the available science tools, materials, media, and technological resources accessible to students.
- Identify and use resources outside of the school.
- Engage students in designing the learning environment.

TEACHING STANDARD E: Teachers of science develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the attitudes and social values conducive to science learning. In doing this, teachers:

- Display and demand respect for the diverse ideas, skills, and experiences of all students.

•

•

•

•

ongo

•

•

sc

•

st

studen

and in

placed

resour

involv

practic

studen

meanin

- Enable students to have a significant voice in decisions about the content and context of their work and require students to take responsibility for the learning of all members of the community.
- Nurture collaboration among students.
- Structure and facilitate ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.
- Model and emphasize the skills, attitudes, and values of scientific inquiry. (p. 45-46)

TEACHING STANDARD F: Teachers of science actively participate in the ongoing planning and development of the school science program. In doing this, teachers:

- Plan and develop the school science program.
- Participate in decisions concerning the allocation of time and other resources to the science program.
- Participate fully in planning and implementing professional growth and development strategies for themselves and their colleagues. (p. 51)

These standards reflect the importance that the NAS places on responding to students' needs for connection/belonging, critical thinking and analytical skills, support and informative feedback, and self-direction/autonomy. They also reflect the importance placed on teachers' sense of belonging/relatedness, decision-making power/access to resources, and autonomy in the classroom. Effective approaches to meeting these needs involve the use of high quality inquiry-based curricula and the implementation of practices that promote mutual respect between teachers and students and between students, as well as practices that promote equity, school-community relationships, and meaningful assessment that provides useful results.

The

activ

relati

needs

conte

profic

intere

studen

in the

and w

additi

“apply

thereb

descrip

studen

when c

1984b)

The Na

interest

interdis

contro

The American Association for the Advancement of Science (AAAS)

In *Project 2061: Science for All Americans* (AAAS, 1993), the AAAS stresses activities similar to those in the NAS teaching standards, however, these are discussed in relation to “big ideas” such as inquiry and competence rather than in terms of students needs and specific teaching practices. This document focuses primarily on science content to be learned, and on benchmarks for measuring progress toward proficiency/scientific literacy. The document does, however, offer some particularly interesting perspectives regarding “habits of mind” that the learning process should help students develop. These habits include critically reading or listening to assertions made in the mass media, by teachers, and by peers; deciding what evidence to pay attention to and what to dismiss; and distinguishing careful arguments from shoddy ones. In addition, the AAAS believes that a well educated science student should be able to “apply those same critical skills to their own observations, arguments, and conclusions, thereby becoming less bound by their own prejudices and rationalizations.” This description is similar to the definition of intellectual autonomy, which emphasizes students’ ability to govern and think for themselves, taking relevant factors in account, when deciding between truth and untruth in an intellectual domain (Kamii, 1984a, 1984b).

The National Council for the Social Studies (NCSS)

In the *Standards for Social Studies* (NCSS, 1994), the NCSS expresses a similar interest in promoting critical thinking, and explicitly advocates experiential learning, interdisciplinary instruction, cooperative learning, heterogeneous grouping, addressing controversial issues, and performance-based assessments. In response to their

reco

of s

to a

- a

- k

a

- a

- k

et

gr

- th

th

- a s

within

similar

involve

effectiv

literacy

for criti

relation

similar t

organiza

recognition of early adolescents' developmental issues, the NCSS advocates the adoption of several goals (i.e., outcomes for students) and the use of several instructional strategies to achieve those goals. These outcomes include:

- a sense of personal history and social history,
- knowledge of temporal and spatial relationships, an understanding of and appreciation for the delicate relationship between humans and the natural world
- an understanding of the world as a dynamic system,
- knowledge of and respect for cultural diversity, commitment to democratic values and ethical standards, and the ability to function effectively as a member of a variety of groups,
- the ability to organize and access information, think critically and analyze their own thoughts and actions, and
- a sense of efficacy in analyzing and participating in contemporary affairs

Like the goals described in the other standards documents, these are situated within the focus subject-area. However, the emphases of the NCSS Standards bear similarities to the goals of promoting scientific literacy and mathematical power (which involves the development of mathematical literacy). The goals in the list above could be effectively described as the components of cultural literacy. As with the other forms of literacy, the achievement of cultural literacy is dependent upon the development of skills for critical analysis, a sense of history and future, and an understanding of norms and relationships. To promote these outcomes, the NCSS recommends the use of strategies similar to those advocated in the standards documents produced by the other subject area organizations. More specifically, these strategies involve the use of cooperative group

work

heter

explo

stude

devel

explo

studie

respec

activit

other c

include

tutorin

organiz

and use

Finally,

NCSS e

teachers

punishm

critical t

1

orientati

work, interaction with people who are different from themselves (i.e., diversity and heterogeneity), group discussion, active student participation and involvement, and exploration and the pursuit of personal interests.

With specific regard to early adolescents, the NCSS encourages teachers to help students develop a stronger sense of personal and social history by supporting the identity development process. Specific strategies involve allowing them to engage in self-exploration and using interest inventories, journals, role-playing, simulations, case studies, biographies, and independent research projects. To promote knowledge of and respect for cultural diversity the NCSS encourages teachers to use prejudice reduction activities, develop community-in-the-world projects, invite guest speakers representing other cultures, and encourage students to participate international service projects.

Strategies for promoting democratic values and effective functioning in groups include the use of school or community service, group projects and presentations, peer tutoring, and opportunities for class governance. To strengthen students' abilities to organize and access information, teachers are encouraged to help students' development and use technology such as databases, computer simulations, and media productions. Finally, to promote efficacy in analyzing and participating in contemporary affairs, the NCSS encourages the use of surveys and polls, demographic data, and encourages teachers to promote discussion about controversial social issues such as poverty or capital punishment. Within each of these activities, teachers are encouraged to emphasize critical thinking and analysis of data and opinions (including students own opinions).

The NCSS believes these experiences respond to students heightened social orientation, need for connection and relatedness, and increasing desire for autonomy.

They

the a

resea

relat

know

The I

Assoc

Lang

encou

exper

strong

and st

techno

inform

that pr

- pro

- a w

app

- an u

acro

effe

They also believe that these experiences promote attitudes conducive to lifelong learning, the ability to communicate effectively, competence in conducting activities necessary for research and problem solving, and the ability to recognize and capitalize upon the relationships between school subjects, as well as integrate experiences with academic knowledge.

The National Council of Teachers of English (NCTE) and The International Reading Association (IRA)

Like the other instructional reform initiatives, the *Standards for the English Language* (NCTE/IRA, 1996) encourage the use of instructional strategies that encourage students to interact with one another and explore many dimensions of human experience. They expressly state the belief that curricula should be adapted to students, strongly advocate involving students in the selection of reading material and activities, and strongly oppose tracking and all other practices that promote inequity.

The NCTE/IRA Standards also encourage teachers to use of a variety of technological and information resources to help students gather and synthesize information and communicate knowledge. In particular the Standards advocate practices that promote the development of:

- proficiency with various styles of writing
- a wide range of strategies for comprehending, interpreting, evaluating, and appreciating texts from various genres, and
- an understanding of and respect for diversity in language use, patterns, and dialects across cultures, ethnic groups, geographic regions, and social roles so that they can effectively participate in a variety of literacy communities.

school

stand

early

educ

choic

- ac

re

- so

(G

- int

inc

dec

198

How d

structu

with sp

instruct

Howeve

and prac

of the m

(Carnegi

These standards apply to all grade levels and do not focus explicitly on middle school students. However, these standards mirror the recommendations in the other standards, as well as those in the literature on developmentally appropriate education for early adolescents and middle level education. These recommendations encourage educators to respond to students needs for belonging, meaningful participation, and choice by providing:

- academic content that is authentic/realistic, intellectually challenging, and personally relevant/interesting (Simmons & Blyth, 1987),
- social contexts that communicate acceptance, and promote affiliation and belonging (George & Alexander, 1993; Havighurst, 1972; Simmons & Blyth, 1987), and
- interactions with adults that provide guidance and support, communicate respect for individual differences and potential for improvement, and offer opportunities for decision-making and autonomy (Manning, 1993, Takanishi, 1993; Worell & Danner, 1989).

How does the literature describe the relationship between these particular structural and instructional reforms and education reform (both in general and with specific reference to middle school)?

As mentioned in the opening of this chapter, none of the structural and instructional reforms described here are exclusively applicable to the middle grades. However, each has resonated with or had an impact on the recommended organization and practices of middle level schools. Third-wave education reform coincided with many of the middle school reform efforts triggered by the publication of *Turning Points* (Carnegie Council on Adolescent Development, 1989). Many of the recommendations in

Tur

leve

func

Dou

the r

empl

of *Tu*

schoo

level

imple

reform

Natio

many

and th

middl

teache

decen

effica

flexib

increa

long-h

Turning Points pointed to the need to realign the structure and general practices of middle level schools with the original philosophy of middle level education and the major functions described in the early literature (e.g., Briggs, 1920, Koos, 1927; Gruhn & Douglass, 1947).

In this literature and much of the middle level education literature that followed, the recommended structure and practices of these schools bears many similarities to the emphases in the structural reforms that were prevalent during the Third-wave. As a result of *Turning Points*, there were several major efforts to restructure, reinvent, or transform schools that serve early adolescents. Because *Turning Points* focused more on school-level variables than on classroom-level variables, this document triggered more efforts to implement structural reforms in middle level schools than to implement instructional reforms such as those described in this chapter.

The influence of *Turning Points*, combined with the influence of the report *A Nation at Risk* (National Commission on Excellence in Education, 1983), resulted in many parallel—though relatively independent—efforts to improve both school climate, and the quality of curricula/instruction. At the same time that *Turning Points* encouraged middle level educators to revive the effort to empower teachers and organize students and teachers into teams, mainstream education literature was also beginning to focus on decentralization as a means to promote higher teacher retention, responsiveness, and efficacy. As middle level education was attempting to return to—or finally achieve—flexible scheduling and student grouping practices, mainstream education was increasingly embracing block scheduling and detracking initiatives. In many ways, the long-held goals of middle level education and the new emphases of Third-wave reform

seemed to converge and coalesce into a multifaceted perspective and approach to improving the context of schooling.

With regard to instructional reform, the relationship between subject matter standards and the interdisciplinary aspirations of the middle school reform effort was not as complementary. Many advocates of the middle school philosophy expressed concern about the impact of the standards movement on the implementation and maintenance of interdisciplinary curricula (Beane, 2001; Dickinson, 2001; NMSA, 1995). While organizations such as NCTM explicitly acknowledged the compatibility between the mathematics standards and interdisciplinary approaches (NCTM, 1989, p. 67), other organizations were less clear. For example, the NCSS argued for the use of biographies and mock trials as a means of exploring history and society, but were not explicit about the role that these could play in an interdisciplinary approach.

In the context of an interdisciplinary curriculum it would be just as appropriate to use biographies to explore the life and times of Copernicus, Shakespeare, or Picasso as it would be to explore the life and times of Christopher Columbus, George Washington, or Martin Luther King Jr. Decisions to restrict the content to traditional topics is not one that is dictated by the content of the NCSS standards. The possibilities for integration are less evident in all of the science standards documents, and go unmentioned in the sections that describe content and activities for middle grades students. With regard to English/language arts, the possibilities are numerous, but in the NCTE/IRA standards the possibilities are completely unspecified as these standards are very broad and make few if any direct recommendations about content and activities for students in the middle grades.

While many educators may have appreciated and capitalized on the flexibility afforded by broad goals and general recommendations for practice, some teachers perceived them as lacking in guidance and could not generate a coherent educational program using the standards as guides. As Robert Orrill (1994, p 7) noted, both practitioners and the public experienced great confusion when they tried to comprehend the array of subject area standards documents and relate their contents to one another. He went on to state, "...the sheer quantity of the standards threaten[ed] to 'collide' and 'compete' with one another in actual school settings rather than make a coherent whole." In an effort to make the task more manageable, many practitioners selected among the recommended instructional goals and activities in a manner akin to buffet-style dining.

During the scramble to understand and implement many of the recommendations in the standards documents, goals for curriculum and instruction advocated in middle level education literature were virtually ignored (Beane, 2001, p. xix). While there were efforts to create interdisciplinary programs and exploratory curricula at the elementary, middle, and high school levels, their numbers were so few (or their impact so small) that they did not produce literature that register during my SSCI search. Even among the initiatives that are discussed in this chapter, many—although prevalent and extensively written about—were controversial, short-lived in many locations, and in most cases never fully implemented. This, too, parallels the effort to reform middle level education, but many of the lessons learned during the effort to implement these Third-wave structural and instructional reforms might enhance current and future efforts to transform middle level schools.

What explicit references, if any, does the literature contain that connect these structural and instructional reforms to other topics included in the dissertation (or external to the dissertation)?

In each “findings” chapter I have attempted to link the content to preceding chapters as well as to content presented later. I did this throughout the sections devoted to the guiding questions, and especially so in the section devoted to connections. I hoped that by doing so I could help the reader understand the relevance of the information presented in each chapter to the larger effort/argument of the conceptual component. As a result, by this point in the dissertation, all of the major connections between the five topics have discussed. For this reason, the content below may seem redundant. In an effort to avoid this, I have presented a very brief description of the connections between Third-wave structural and instructional reform and the other topics in the dissertation.

Structural and Instructional Reforms

While increased student achievement is the primary goal behind structural and instructional reforms, the focus of the efforts depends on which student characteristics and needs the reformers attend to. Concerns about students’ connection to teachers and to school are often cited as important reasons behind the adoption of structural reforms. In recognition of students’ need for belonging, active participation and guidance, structural reforms often attempted to scale down large institutions and foster closer interaction between students and teachers. Instructional reforms have attempted to provide for these needs by encouraging small group activities and projects that mirror those of the professional community in each subject.

In recognition of students' need to be viewed by others (and themselves) as competent, structural reforms have attempted to eliminate practices that stunt intellectual growth and undermine efficacy-related beliefs and a positive sense of future. Similarly, instructional reforms have attempted to eliminate practices that assess students in a punitive manner and compare them to other students rather than to an explicit standard of proficiency.

It is interesting to note the parallels between these emphases in these relatively recent reform efforts and the emphasis on belonging, student teaming, and heterogeneous grouping expressed in middle level education literature dating as far back as the 1920s. These emphases also parallel those in the literature on at-riskness and educational resilience. All five bodies of literature also highlight the importance of positive attitudes and dispositions, autonomy and self-determination, intellectual challenge, and responsiveness to students' characteristics and needs.

Likewise, within each of the five topic areas efforts to implement the suggested reforms to program and practice have met with greater or lesser degrees of opposition from educators, policy-makers, and the general public. Much of this opposition has related to the appropriateness of attending to psychosocial issues, and the appropriateness of allowing students to make important decisions about what and how they learn. Additional debates and controversies arose as a result of differing perspectives on—and definitions of— equity and excellence.

In many cases, these debates engendered bitter resentment towards particular goals (e.g., contextualized learning, and developmental appropriateness), initiatives (e.g., NCTM standards-based curricula, and multiculturalism in history/social studies), and

organizations (e.g., NCTM, and NMSA). During the Third-wave and in the years since, advocates of the structural and instructional reforms discussed in this chapter faced many of the same obstacles that have interfered with efforts to fully implement and maintain “true” middle schools. While none of the reform efforts discussed in this chapter have overcome these obstacles to such an extent that a direct path for successful reform emerges, each effort has contributed valuable information about the reform process that can be used to smooth the way for constructive dialogue and sustained progress towards middle school transformation. These contributions and their implications are discussed in the chapter that follows. They are the factors that have motivated this dissertation, and influenced the major activities.

Endnotes

ⁱ These expected benefits of block scheduling are also noted by Canady and Rettig (1996), Boarman and Kirkpatrick (1995), and supported by the findings of Ainley (1993, 1998), Renninger (1987, 1990), and Schiefele (1991, 1996).

CHAPTER 7: ARCHIVAL SUMMARY

As described in Chapter 2 (Archival Methods) the purpose of the archival component of the dissertation was to test the hypothesis that important conceptual connections exist between Developmentally Appropriate Education (DAE), Middle Level Education (MLE), At-Riskness, Educational Resilience, and Third-Wave Structural and Instructional Reform. More specifically, the content analysis of selected literature on these topics was undertaken in an effort to answer two major comparison questions, which will be addressed in this chapter. As a reminder to the reader, these questions are:

1. Does the literature across the five areas reflect a shared understanding of the nature and sources of educational risk? What are the implications of this for the claim that all early adolescents in middle schools with an unbalanced approach are at risk for unnecessary academic and social difficulties?
2. Does the literature across the five areas reflect a shared understanding of how to effectively address academic and social risk? What are the implications of this for the claim that resilience education addresses these risks?

Before I could attempt to answer these questions, I had to first determine the content of the literature in each topic area. To do this I examined the results of the literature searches in light of the first three guiding questions that structured the Chapters 3 through 6 (i.e., the “findings” chapters). As a reminder, these question (in their generic form) were:

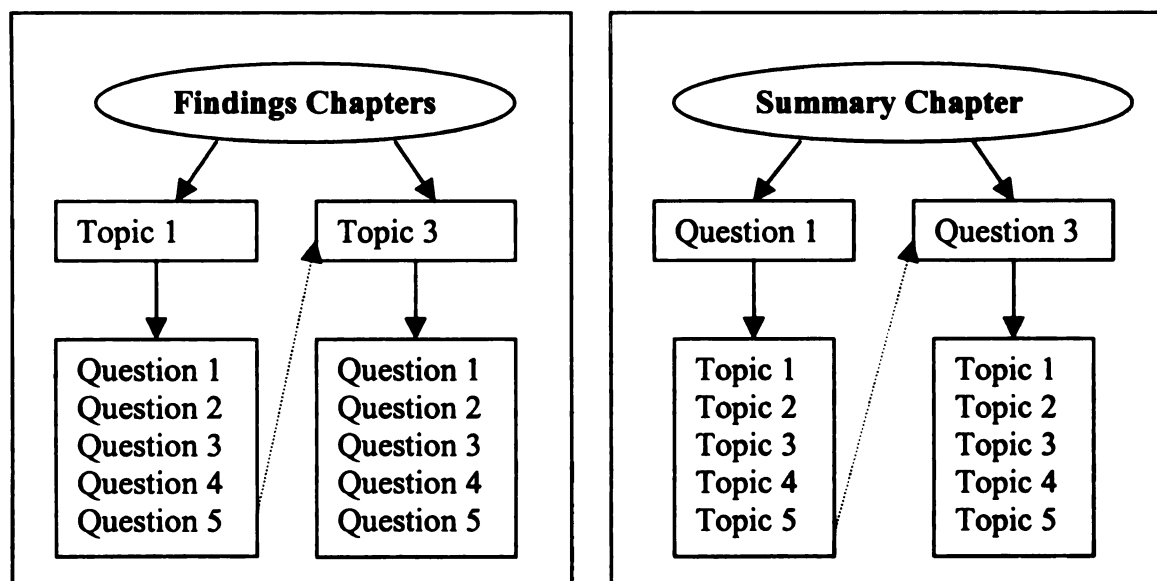
1. How does the literature describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?
2. How does the literature describe the consequences of failing to meet these needs?

3. How does the literature describe effective approaches to meeting these needs?

The remaining guiding questions (number 4 and number 5) relate to reform and to connections across topics. Because this chapter, specifically about connections, Question 5 (connections) will not be included in this chapter. However, Question 4 (reform) will be discussed, but this discussion will focus on lessons learned from reform efforts in the five topic areas and the implications of these lessons for middle school transformation efforts.

In chapters three through six, the guiding questions were addressed as a set within each topic area. However, in this chapter, I build from the answers by looking across topic areas at the information relevant to answering each question and integrating the answers to the first three guiding questions (See illustrations below).

Figure A. Structure of the Summary Chapter vs. Findings Chapters



I do this in the hope that the effort will highlight important points of consensus that could be exploited to promote more constructive dialogue about the vision, goals, and processes of middle level education, and more sustained progress towards middle

school transformation. By examining the literature across topic areas, I hope to construct a more inclusive description of students’ characteristics and needs, consequences of unmet need, and effective approaches to meeting students’ needs. It is important to note, however, that these descriptions emphasize the perspectives and understandings that are *shared* in the most popular literature on the five focus topics in the dissertation.

Although this chapter is not technically a “findings” chapter, the bulk of the chapter follows a format similar to that used in chapters three through six. In each description I focus on the topic(s) that most directly anchor the connections across topics. For example, in the discussion of Question 1—which focused on students’ intellectual and psychosocial needs—the literature on DAE will serve as the anchor, or core topic, around which the discussion of connections will center. In relation to Question 2—which focused on consequences of unmet need—the literature on At-Riskness will serve as the anchor. The table below illustrates the anchor(s) for each question.

Table 2. Anchoring Topics for Summary of Connections

Question #	Focus	Anchoring Topic(s)
1	Student Needs	DAE
2	Consequences of Unmet Need	At-Riskness
3	Effective Approaches to Meeting Student Needs	DAE, MLE, Resilience, Instructional Reform
4	Reform	Third-wave Reform, DAE, At-Riskness

The presentation of connections for each question begins with a brief summary of the main conceptual content in that topic area. These summaries are the basic context for discussing the connections. After exploring the connections, I focus on issues related to reform, and the comparison questions. I then bring the archival component to a close and

describe the ways in which this component influenced the structure and activities of the empirical component.

The Guiding Questions

Question 1: How does the literature across the five topics describe the intellectual and psychosocial needs of students (both in general and with specific reference to early adolescents)?

Among the five topics of focus in the dissertation, developmentally appropriate education (DAE) is the topic that is most centrally concerned with students' intellectual and psychosocial needs. The literature on this topic is most explicit about the nature of these needs, which needs endure across the life-span, and how needs vary during different developmental periods. For this reason DAE was the appropriate anchoring topic for the discussion of Question 1.

As discussed in Chapter 3, DAE emphasizes student-centered approaches to education that are based on varied and combined understandings of students' characteristics and needs (National Association for the Education of Young Children, 1996; National Association of Secondary School Principals, 1985, 1989; National Middle School Association, 1995). Drawing on the theories of Piaget, Vygotsky, Erikson, Dewey, Bronfenbrenner, Bruner, Maslow (Bredekamp, 1987; Bredekamp & Rosegrant, 1992; Caine & Caine, 1990), and various theories related to ethical development, motivation, affect, and resilience (see Novick, 1996), literature on DAE presents two general descriptions of students intellectual and psychosocial needs.

The first description of student needs in the literature on DAE highlights several pervasive, context-independent needs that are believed to endure throughout the lifespan.

Drawing specifically on the theories of Dewey, Bronfenbrenner, Bruner, Maslow and Vygotsky, this description emphasizes the enduring nature of particular needs. These “enduring needs” include the need for belonging, security, and personal relevance/meaning. Takanishi (1993) describes these as the need to experience secure relationships, to be a valued member of a group, to become a competent individual who can cope with the exigencies of everyday life, and to believe in a promising future in work, family, and citizenship.

The second description highlights needs that are particularly strong during certain periods in development. Drawing specifically on the theories of Piaget and Erikson, this description emphasizes the unique characteristics and needs of a particular developmental stage. For early adolescents, these “age-specific” needs include the needs for 1) concrete experiences from which to build abstract understandings, and 2) opportunities to explore relationships between objects and sets (including individuals and groups), sets and systems (including groups and societies), and objects/individuals and systems. Manning (1993), Worell and Danner (1989), and Dickinson (2001) describe these as the need for academic experiences that promote conceptual understanding, integrated knowledge (as opposed to disconnected collections of factual knowledge) and problem-solving/decision-making skills. According to Hill (1980), Steinberg (1989), and Milgram (1992), experiences such as these also promote the development of skills involved in the construction of a coherent and stable identity.

In the DAE literature students’ intellectual and psychosocial needs are also described more explicitly in various lists and group-focused documents. These are echoed in the literature on other topics in the dissertation. Among these are the needs for

psychological security, belonging and relatedness, self-understanding and self-determination, intellectual challenge, and guidance and support.

For example, in the literature on middle level education, Mitchell (1974) describes the need for psychological security as the need for status and positive self-regard, while Dorman (1984) describes it as the competence and achievement¹. The literature on risk and resilience describe this as the need for competence and a sense of purpose and future (Benard, 1991, 1995; Werner & Smith, 1992). In the literature on third-wave structural and instructional reform the need for psychological security is most closely connected to the discussion of detracking. According to detracking literature, students need learning environments that are free from explicit and implicit messages that they are intellectually limited, inferior to their peers, socially undesirable, and unlikely to succeed in the adult world.

The literature on middle level education describes the need for belonging and relatedness in terms of acceptance (Mitchell, 1974), and positive social interaction with peers and adults (Dorman, 1984; Manning, 1993, Takanishi, 1993). This literature also asserts that due to their tendency towards adolescent egocentrism, early adolescents need experiences that encourage them to think about themselves in connection to others and the larger society, rather than as isolated entities within a given social context. While the literature on risk and resilience describe the need for belonging and relatedness as the need to bond (Benard, 1991; Skinner and Wellborn, 1997; Wang, Haertel, & Walberg, 1994), the literature on structural reform describes it as the need for relatedness, community, and interpersonal connection (Osterman, 2000; Ryan, 1991).

¹ These needs are also identified in the NASSP (1985) document.

The literature on middle level education describes the need for self-understanding and self-determination as early adolescents' need for opportunities to explore aptitudes, interests, and special talents, as well as the need for opportunities to behave responsibly and demonstrate their growing capacity for self-control and self-management (NASSP, 1985). The literature on risk and resilience describes this as the need to develop an internal locus of control and the need for opportunities to develop independence and exercise autonomy (Mitchener and Schmidt, 1998; Noddings, 1992). In the literature on structural and instruction reform, the need for self-understanding and self-determination is discussed as the need to explore the world, its people, and life in general (NCSS, 1994), as well as the need to pursue topics of personal interest (Ainley, 1993, NCSS, 1994; Renninger, 1987, 1990; 1998; Schiefele, 1991, 1996).

According to the literature on middle level education, early adolescents need high quality intellectual climates that foster the development of adaptive skills that they can use throughout their lives (NASSP, 1985). More specifically, they need learning opportunities that challenge them intellectually, promote the development of literacy, metacognitive skills, critical thinking skills, and formal operational tools of thought (Dickinson, 2001; Manning, 1993; NASSP, 1985; NMSA, 1995). According to the literature on risk and resilience, in addition to other provisions, students need to be held to high but realistic standards for learning and competence if they are to achieve their potential (Benard, 1991; Skinner & Wellborn, 1997; Wang, Haertel, & Walberg, 1994). The literature on structural and instructional reform also endorses this goal. While the literature on block scheduling merely alludes to the need for intellectual challenge, the literature on instructional reforms related to the subject-matter standards assert this need

more explicitly and provide specific information regarding what qualifies as intellectually challenging content and learning activities. These specifics will not be discussed in this chapter, but in general, the recommendation can be characterized as an emphasis on inquiry, reasoning, and intellectual autonomy.

To achieve the goals for improved learning and performance, the literature on middle level education and instructional reform strongly echo the need for guidance and support that is expressed in the literature on developmentally appropriate education. According to both bodies of literature, students need assistance understanding what is expected of them, developing strategies for meeting those expectations, and determining which expectations have been met and where more effort and improvement are needed. While the literature on middle level education discusses the need for guidance and support in terms of general advisement programs and strategies for promoting successful adjustment to school (Carnegie Council on Adolescent Development, 1989; NASSP, 1985; NMSA; 1982, 1992, 1995), the literature on instructional reform discusses this need in terms of informative assessment and feedback (NCTM, 1989).

According to the literature on DAE, middle level education, risk and resilience, and reform, fulfilling students' the need for psychological security, belonging and relatedness, self-understanding and self-determination, intellectual challenge, and guidance and support is expected to lead to a number of positive results. Among these are greater attachment and commitment to school, a more positive self-concept, higher motivation and ambition, higher achievement and better preparation for advanced studies, and more informed decisions about courses of study and higher persistence in the chosen

course of study. It is for these reasons that educators are encouraged to respond to these needs.

On the other hand, the literature on the five topics also discusses the potential, and too often realized, consequences of failing to meet students' intellectual and psychosocial needs. In the next section, which is devoted to a cross-topic examination of Question 2, I discuss the ways in which the literature reviewed in this dissertation describes the consequences of failing to meet early adolescents' intellectual and psychosocial needs.

Question 2: How does the literature across the five topics describe the consequences of failing to meet these needs?

Among the five topics of focus in the dissertation, risk and educational resilience are the topics that offer the most explicit discussion of the consequences of unmet needs. Hence risk and resilience are the anchoring topics for the discussion of Question 2. While the literature on risk discusses the consequences of unmet need quite directly, the literature on educational resilience discusses the consequences in a less direct manner. However, this literature does describe the features of programs that have been shown to successfully reduce the rate at which particular negative outcomes occur. When discussing the literature on educational resilience, these are the consequences that will receive the most attention.

As discussed in Chapter 5, students are described as “at-risk” when they appear likely to leave school without developing the academic—and social—skills and dispositions that are valued in adult society (Covington, 1992; Jens & Gordon, 1991; Goleman, 1995). Much of the recent literature on risk describes it as a transactional process characterized by an imbalance between the emotional, social, and academic

needs of students, and the resources that are available to them (Brown, D'Emedio-Caston, & Benard, 2001; Skinner & Wellborn, 1997; Werner & Smith, 1992). From this perspective, risk is viewed as a product of challenging circumstances coupled with inadequate personal and institutional responses (Benard, 1991; Henderson & Milstein, 1996; Krovetz, 1999; Liddle, 1994; Werner, 1990). In essence, risk can be described in terms of match/mismatch between needs and provisions, or in terms of the level, or lack, of responsiveness to students' needs.

According to the literature on risk and educational resilience, there is a powerful psychosocial/socio-emotional component to at-riskness, and many studies have identified student perceptions (Waxman, Huang, Knight, & Owens, 1992; Werner, 1990) and affect (Covington, 1992; Goleman, 1995; Ryan, Hicks, & Midgley, 1997) as major determinants of risk status. A number of recent studies have identified alienation and disaffection as better predictors of a particular individual's educational outcome than the group-level characteristics (such as race and socio-economic status) that are often used to identify students who are potentially at risk (Catterall, 1998; Hixson, 1993; Murdock, 1999; Newman & Newman, 2001; Yair, 2000). Many of the negative educational and social outcomes associated with being at risk are strongly related to students' feelings of futility, inferiority, isolation, and alienation (Hunter, 1998; Mitchener & Schmidt, 1998; Turner, Thorpe & Meyer, 1998). In the recent literature on risk and educational resilience, these feelings are presented as common consequences of unmet need for psychological security, belonging and relatedness, self-understanding and self-determination, intellectual challenge, and guidance and support.

In the literature on DAE, middle level education, and reform the consequences of unmet need are described in similar terms. Across the five bodies of literature, the consequences of unmet need are typically described as negative self-views, anxiety, low motivation/apathy, low achievement/underachievement/failure, misbehavior/truancy/delinquency, and withdrawal/dropping out. More specifically, these consequences have been described as:

- challenge avoidance (Covington, 1992; Clifford, 1988; Goleman, 1995)
- avoidance of help-seeking (Ryan & Pintrich, 1997; Ryan, Hicks, & Midgley, 1997)
- a lack of effortful self-regulatory behaviors (Ames & Archer, 1988)
- low perceptions of the utility of additional education (Anderman & Midgley, 1997; Beane, 1990; Eccles, Lord, & Midgley, 1991), and
- intellectual heteronomy (Kamii, 1984, 1991)

According to the literature on developmentally appropriate middle level education, these outcomes are often associated with the use of practices that do not respond to early adolescents' issues of imaginary audience (Eccles & Midgley, 1989), need for belonging (Kumar & Midgley, 2001), need for caring relationships with adults (Feldlaufer, Midgley & Eccles, 1988), need for intellectual stimulation and challenge (Eccles & Midgley, 1989), and increasing desires for autonomy and decision-making in the classroom (Eccles, Buchanan, Flanagan, Fuligni, Midgley, & Yee, 1991). Specific practices that have been identified as sources of contributors to risk include:

- excessive teacher control of classroom activities and limited opportunities for meaningful participation by students (Eccles & Midgley, 1989; Midgley & Feldlaufer, 1987),

- an emphasis on comparative performance (Eccles & Midgley, 1989),
- a lack of intellectual challenge and a decline in emphasis on critical thinking (Eccles & Midgley, 1989; Gheen, Hrudu, Middleton, & Midgley, 2000), and
- homogenous ability grouping (Fuligni, Eccles, & Barber, 1995).

The writings of Clark and Clark, and those of Lounsbury emphasize the need to respond to early adolescents' growing capacity for abstract thought, increasing desire for interaction with peers, heightened tendency toward social comparison, need for support and guidance from caring adults, and concerns about their changing bodies (Clark & Clark, 1993; Lounsbury, 1992; Lounsbury & Clark, 1990).

According to these authors, developmentally inappropriate education reflects insensitivity to these developmental characteristics by engaging in practices that:

- under-emphasize higher-order thinking and personally relevant content,
- force students to work in isolation,
- assess students by comparing their performance other students,
- place teachers in the role of judges and/or adversaries, and
- emphasize homogenous ability-grouping.

Across the five topics, there is a high degree of consistency in descriptions of early adolescents' characteristics and needs (Question 1), as well as in descriptions of the consequences of unmet need (Question 2). While the specific research is framed by different concepts related to learning—such as motivation, achievement, self-concept, or behavior—these works have at least one thing in common. At the root of the explanation of the problem and the recommendations for solving it is a description of the developmental characteristics and needs of early adolescents and an emphasis on creating

environments that respond appropriately to those characteristics and needs. In the next section, these recommendations are described in more detail.

Question 3: How does the literature across the five topics describe effective approaches to meeting these needs?

Among the topics of focus in the dissertation, DAE, middle level education, resilience education, and instructional reform are most explicit about how to best respond to early adolescents' intellectual and psychosocial characteristics and needs. According to the literature on DAE and middle level education, effective approaches to responding to early adolescents' intellectual and psychosocial needs involve attending to students needs for psychological security, belonging and relatedness, self-understanding and self-determination, intellectual challenge, and guidance and support. Specifically, educators are encouraged to:

- Eliminate assessments as tools of judgment and reconceive them as tools for diagnosis and opportunities for learning.
- Allow time for students to interact with peers in small groups to discuss the content of lessons.
- Create a caring community of learners by eliminating homogeneous ability groups—which create status hierarchies—and replace them with heterogeneous ability groups where differences in understanding are explored and resolved through communication.
- Emphasize self-assessment so students become aware of and proficient in identifying their own strengths and weaknesses.

- Create an intellectually engaging environment by emphasizing higher-order thinking skills such as reasoning, predicting, and planning so that students are better prepared to deal with novel problems in school and life situations.
- Emphasize exploration so students are aware that there are always options to choose among.
- Emphasize integrated and/or interdisciplinary studies so students learn to see the “big picture” as well as how the pieces fit together.
- Develop, refine, and use a wide repertoire of teaching strategies to help students with different learning styles develop conceptual understanding of the material.
- Emphasize extended explorations/investigations of problems so that students develop patience and persistence, learn strategies for dealing with frustration, and learn to apply lessons learned in school to the solution of problems faced outside of school (NAEYC, 1996, Part 4, p. 1-7).

According to the literature on developmentally appropriate education, these practices also respond to the enduring needs that are common to students at all ages. In relation to early adolescents, specifically, the literature on middle level education describes effective approaches to meeting students intellectual and psychosocial needs as those that 1) encourage active student involvement and engagement in the instructional process, 2) acknowledge diverse areas of competence, and 3) emphasize self-exploration and physical activity (Carnegie Council on Adolescent Development, 1989; Lipsitz, 1984; NMSA, 1982; Tye, 1985).

With regard to school structure, effective approaches to middle level education are described as those that employ interdisciplinary teams, schools-within-schools, and

teacher advisory groups that are used to increase interpersonal connections, connections between content areas, and student involvement and engagement (Carnegie Council, 1989; NMSA, 1982; Tye, 1985). According to Lipsitz (1984, p. 199), through the use of these structures, middle schools can effectively involve students in participatory activities, personalize the quality of adult-student relationships, and reduce student anonymity and isolation.

In recognition of students' psychosocial needs, and in accordance with the recommendations of DAE, middle level educators are encouraged to reduce the use of homogenous ability grouping and other practices that communicate predictive assumptions about student ability (Lounsbury & Clark, 1990; Manning, 1993; Simmons & Blyth, 1987). Homogenous grouping and flexible grouping practices are considered more effective for students during this developmental stage, where development is highly variable both within and between students (Braddock, 1990; Oakes & Lipton, 1993; Worell & Danner, 1989).

In addition, effective approaches to middle level education are described as those that have a socialization curriculum as well as an intellectual one. According to Johnston (1994, p. 55) at a minimum, this curriculum should focus on several major domains. Among these domains are membership, learning to work, social heterogeneity and urbanization, and collaboration and collective action. Through the socialization curriculum, schools are expected to promote the four elements of social bonding as described by Hirschi (1969). As explained in Chapter 4, these include attachment, commitment, involvement, and belief.

This general framework for developmentally appropriate practice encourages the use of approaches that acknowledge the intellectual and psychosocial variability in students without stigmatizing certain students or constructing institutionalized barriers that limit students' development and learning. The framework does not, however, advocate the use of a single instructional or grouping method, nor does it prescribe specific content or materials. Decisions of this nature are left to the discretion of educators in possession of more detailed knowledge about the particular group of students and their specific characteristics and needs.

These recommendations are consistent with those in the literature on risk and educational resilience which encourages educators to:

- provide a core curriculum for all students, and manipulate classroom organizational structures so that they include the use of short-term, non-stigmatizing groups
- organize students and teachers into small units to reduce anonymity and provide a close relationship between each student and a mentor
- provide a variety of materials that support active problem solving by students
- providing a variety of support materials such as aides, peer tutors, and a variety of media
- vary the level, form, and number of questions asked so that students have opportunities to consider higher order questions (i.e., questions that require them to go beyond the material presented)
- vary the nature and amount of reinforcement given for correct answers, as well as the level of information provided when a student gives an incorrect answer

- enhance students' use of inquiry processes by implementing inductive teaching strategies
- actively involve students in the presentation of new information by asking them questions and prompting them for examples
- facilitate students' use of self-regulating techniques, such as self-monitoring or self reinforcement, by providing a variety of problem-solving opportunities during the learning process
- implement programs that encourage students to take responsibility for helping each other learn and that help to make the school a friendly and orderly place
- enrich the learning possibilities and support of students by fostering connections between the school and parents, community institutions and outside agencies.
- engage in assessment practices that guide curriculum and instruction (Wang, Haertel, & Walberg, 1994, p. 45, 61-62).

These criteria were selected because The Carnegie Foundation for the Advancement of Teaching (1988) found them to be effective even in troubled urban schools. This suggests that despite exposure to multiple risk factors, these characteristics of schools were highly correlated with high academic achievement and high student engagement in all grades. They also promoted self-esteem, autonomy, positive social interactions, and mastery of tasks, all of which have been shown to enhance life satisfaction and general well-being among teenagers, even among those from the most troubled communities (Maton, 1990).

The emphasis on heterogeneous grouping, varied instructional approaches, higher-order thinking, active learning, and problems solving echoes the emphasis of

developmentally appropriate education, middle level education, and many third-wave structural and instructional reforms.

In the literature on instructional reform, groups such as the National Council of Teachers of Mathematics (NCTM), the National Council of Teachers of English (NCTE), the International Reading Association (IRA), and other subject-related educational organizations have recommended the following:

- Allow time for students to interact with peers in small groups so adolescents can 1) test their ideas in front of a small audience before opening themselves up to public scrutiny, 2) learn that they have something valuable to contribute, and 3) develop a prosocial disposition towards their peers.
- Eliminate the adversarial relationship between teachers and students by increasing the frequency of student-centered or student-led activities where teachers act as coaches rather than judges, and resources rather than knowledge authorities.
- Allow time for students to work alone so adolescents can explore topics of personal interest, practice skills, reflect, and develop a sense of independence/autonomy.
- Read literature that evokes thought and discussion about issues faced by adolescents, especially issues related to identity development, major social issues, and utopian ideals.

These instructional recommendations relate directly to the general principles for development and learning as well as to the specific developmental needs of early adolescents. They are suggested as an appropriate response to early adolescents' concerns with imaginary audience, their heightened tendency toward social comparison,

their efforts to understand and define the self, and their efforts to make sense of adult society and decide upon a role.

Focusing specifically on classroom activities, the literature on instructional reform offers several suggestions for effective practice that echo those in the literature DAE and middle level education, and resilience. In each of the Standards documents, the authors emphasize the creation of learning communities where peers interact, teachers serve as facilitators and coaches, critical thinking skills are emphasized, and intellectual autonomy and self-regulation are fostered.

To achieve these goals, teachers are encouraged to include extended projects that investigate authentic or “real-world” issues that students participate in selecting. During these investigations, teachers are encouraged to eliminate rigid ability grouping practices, nurture collaboration, use concrete materials and appropriate technology, and teach content in an integrated fashion. These activities are believed to enhance content learning and decision-making skills used in academic and social problem solving.

It is clear from an examination of the literature across topics that there are several commonly agreed upon strategies for responding to early adolescents’ needs for psychological security, belonging and relatedness, self-understanding and self-determination, intellectual challenge, and guidance and support. However, as discussed in Chapter 6, these similarities are often not recognized and efforts to implement the strategies are often fraught with controversy. In the next section, which focuses on reform, strategies for overcoming these obstacles are discussed in more detail.

Question 4: Implications for Middle School Transformation

When one attempts to develop a coherent educational/instructional framework, three important questions frequently guide the process. These are:

- Who are the students?
- What do they need to learn? and
- Why do they need to learn this?

The ways in which these questions are answered influence the nature of the approach (i.e., the goals and strategy), as well as the content of the curriculum (i.e., the topics and focus skills). To achieve coherence, each of these features of the framework should be related. Experience has shown us that it is not particularly productive to provide experiences that students do not have the ability, prior knowledge, or skill set to benefit from. Experience has also shown us that when we aim to produce particular outcomes (such as deep understanding, improved functioning, and/or lifelong learning), it is not productive to select content at random, emphasize skills that only are useful in a limited set of situations, or engage in processes that decrease students' motivation to learn.

While it is important that the features of the framework be related, the relevant questions are often answered separately, in different bodies of literature, and in different levels of detail in those bodies literature. While specialization is an important contributor to depth of understanding, differential foci in several important topic areas have often promoted fragmentation, competition, and conflict. These problematic outcomes often interfere with our ability to achieve important educational goals, both in general and within subject-matter areas. But the major conflicts that characterize the reform process

in American education are not as inherent as they may seem. We have seen many examples of reform processes that work on the small scale (e.g., at particular sites, or in particular subject areas). In this dissertation, I have argued that there are also ways to overcome obstacles to coherence and consensus on a larger scale (e.g., at the middle school or national level).

While we will most likely never eliminate all of the conflicts and differences of opinion that interfere with reform progress, one way to promote more productive reform processes is to promote the establishment of essential prerequisites to successful reform. A common vision of education, explicit goals for content and skill learning, and a degree of flexibility that allows for variation and innovation have been identified as essential features of successful efforts to overcome reform obstacles (Breux, Danridge, & Pearson, 2002). But the most difficult step—achieving a common vision—is frequently under-emphasized or is so “situated” within an area of focus that it is difficult for others to understand or embrace the vision and resulting mission that drives the reform effort.

Few researchers and educators read broadly across the educational fields outside of their subject area(s) or topic(s) of direct focus. This is understandable given the great quantity of literature within each field alone, but the tendency to oversimplify that which we don't understand has led many to view particular reform efforts as myopic or suffering from tunnel-vision. When left unaddressed, this tendency limits our ability to connect the specific emphases of a particular effort to the larger goals of that effort and education in general. In this dissertation I argue that some, if not many of the goals for student learning are undoubtedly shared across fields. For this reason, there is a need to occasionally step back and view the broader landscape that is the context within which all

of the specific areas are situated. Facilitating this process is a major goal for those who specialize in educational reform. As a reform specialist, I have adopted this as the ultimate goal of my dissertation.

In this paragraphs below, the process of education reform is discussed in relation to Third-wave structural and instructional reforms and the reform efforts associated with the middle level education movements of the 1960s and 1980s. Each of these efforts have taught important lessons about the nature of, and obstacles to, successful and sustained educational change.

As discussed in Chapter 3 and Chapter 6, many diverse priorities and perspectives influence the emphases of reforms and the success of implementation efforts. Despite numerous instances of successful implementation of particular programs at particular sites, on the larger scale, many major reform efforts “compete” and “collide” (Orrill, 1994, p. 7) rather than complement one another and promote transformation. In the literature on Third-wave structural and instructional reform and the literature on the middle level education movements, we have seen evidence of debates and controversies that are so extreme in some cases that they are described as “wars.” Analyses of the underlying factors in these controversies have underscored the need for common vision, explicit goals for learning, and a degree of flexibility that allows for variation and innovation without a loss of coherence or conceptual focus.

In the reform efforts associated with the five topics in this dissertation, there are some indications that outreach is a key component of promoting constructive dialogue and a higher level of consensus are major contributors to reform success. National organizations that are devoted to particular topics or issues can play an important role in

developing outreach efforts that facilitating awareness, understanding, and connection between focus areas. The literature on DAE provides some examples of how this can be achieved.

As discussed in Chapter 3, advocates of developmentally appropriate education have engaged in extensive outreach activities and participated in many collaborative efforts to address a range of educational issues. They have worked in partnership with organizations that focus on specific subject areas as well as those that focus on pervasive problems in education. For example, the Child, Family, and Community Program (CFC) has worked collaboratively with schools in the northwest in an effort to change pedagogical practice in ways that reflect “what we know about how children learn and develop” (Novick, 1996).

Advocates of DAE have participated in curriculum development efforts, efforts to improve school climate, efforts to diversify instructional practice, and efforts to address a range of issues associated with school failure. For example, the National Association for the Education of Young Children, the National Association of Elementary School Principals, and the National Association of Secondary School Principals have produced official statements endorsing student-centered learning, interdisciplinary curricula, learning centers, learning communities, and authentic assessment. These organizations have also produced research summaries and training materials for administrators and teachers to assist their efforts to increase the developmental appropriateness of their programs, improve learning and achievement outcomes, and promote student well-being. They have also provided consulting services and professional development workshops designed to assist educators in their efforts to address particular challenges to

implementing programs that are more developmentally appropriate. In addition, they have worked with individual schools to help them identify state and community resources that could help provide school-linked services for students with learning disabilities, students with limited English proficiency, and students living in poverty (Novick, 1996).

These outreach efforts appear to have had a significant impact on education reform. Standards documents in the core and non-core school subjects have come to include recommendations that relate not only to the subject-area content, but also to the characteristics and needs of students in general and in relation to that content. As illustrated in the section on reform, recommendations for instruction and assessment contained in standards documents related to mathematics (NCTM, 1989, 1991), English/language arts (NCTE/IRA, 1996), science (NAS, 1993), and social studies (NCSS, 1994) reflect many of recommendations contained in literature on developmentally appropriate education. The recommendations from the DAE literature also appear in the standards documents related to non-core subjects such as music (MENC, 1994), the visual arts (NAEA, 1994), and physical education (NASPE, 1995). In addition, programs designed to address the needs of at-risk students have also come to include recommendations that relate to promoting development as well as learning and achievement.

Like organizations promoting DAE, those that focus on at-riskness have also engaged in major outreach efforts. For example, the outreach activities of CRESPAR (Center for Research on the Education of Students Place At Risk) also target educators at a variety of grade levels, teaching a variety of subjects. Possibly as a result, the issue of at-riskness and the needs of at-risk students are highly visible and have become the focus

of national concern. While neither of these outreach efforts can be described as perfect successes, they illustrate the ways in which “bridging” efforts can help to promote common vision.

Although similar efforts were undertaken in the wake of reform backlash during the Third wave, these efforts were possibly impeded by perceptions of “situatedness” within a subject area. A major premise of this dissertation is that middle school transformation may have been similarly impeded by perceptions of “situatedness” and isolation from the larger goals of American education. As a result, I have argued for a stronger emphasis on connections between the specific purpose and goals of middle school reform and the purposes and goals of reforms related to the other topic areas. By exploring these connections, some points of consensus can be identified that may help in promoting constructive dialogue and creating a framework for middle school transformation.

Notable similarities exist between the ways in which the selected literature on developmentally appropriate education, middle level education, at-riskness, educational resilience, and Third-wave structural and instructional reform describe students’ needs, the consequences of unmet need, and effective approaches to meeting students needs. After comparing the five bodies of literature, I have concluded that the literature across topic areas reflects a shared understanding of the nature and sources of educational risk, and a shared understanding of how to effectively address these risks. Based on the emphasis that recent literature on at-riskness places on addressing both intellectual and psychosocial needs, I have concluded that early adolescents attending middle schools that

address intellectual and psychosocial needs in an unbalanced manner are at risk for unnecessary academic and social difficulties.

Based on the connections between at-riskness and educational resilience, and between educational resilience and Third-wave structural and instructional reform, I believe that resilience education might represent an effective approach for addressing the risks arising from imbalance by providing a guiding framework for balancing the approach to middle level education. Using the concept of educational resilience as a guide, many programs have attempted to maximize the protective factors present in learning environments, and foster the development of traits common to highly adaptable (i.e., naturally resilient) individuals (Benard, 1991; Skinner & Wellborn, 1997; Wang, Haertel, & Walberg, 1994). Results from several implementations of resilience education programs suggest that this approach is effective in reducing the negative outcomes associated with risk factors such as minority status and low socio-economic status (Benard, 1991; Hawkins, Catalano, & Miller, 1992; Werner & Smith, 1992; Wolin & Wolin, 1993; Cooper & Henderson, 1995). I believe that this is due to the effectiveness of resilience education approaches in addressing the feelings of “otherness” (i.e., alienation) and powerlessness (i.e., low-efficacy) that often go along with minority status and poverty and are often reinforced by low quality education and negative experiences at school.

Of particular relevance to this dissertation are results that suggest that education reform guided by educational resilience could yield a “pound of prevention” rather than the typical “ounce of cure” that results from most risk-reduction programs (Fiske, 1992; Henderson & Milstein, 1996; Richardson, Neiger, Jensen, & Kumpfer, 1990). For this

reason exploring perspectives on educational resilience is the major goal of the empirical component. I believe that educational resilience is best candidate for promoting outreach and constructive dialogue, common vision/consensus, and focusing political will and resources in ways that support middle school transformation. As will be described in the next chapter (Empirical Methods), this belief will be tested against the perspectives of experts in the five topic areas. The subsequent chapters of the dissertation present the results of this investigation, discuss the implications of the findings, and present suggestions for future research.

CHAPTER 8: EMPIRICAL METHODS

As discussed in Chapter 1, this dissertation has both an archival and an empirical component. In the archival component I conducted a content analysis of selected literature from five topic areas in an effort to explore the existence of conceptual connections between the five focus topics and identify topics that might promote productive dialogue about middle level education and reform. Based on that analysis I arrived at several conclusions. The paragraph below summarizes these conclusions.

When examined from the perspective of student needs, potential consequences of unmet need, and effective approaches to meeting student needs, the literature on developmentally appropriate education, middle level education, at-riskness, educational resilience, and third-wave reform:

- suggests that early adolescents attending middle schools that do not attend to both their intellectual and psychosocial needs are at risk,
- indicates instances of shared understanding (i.e., conceptual connections) that could be useful in promoting constructive dialogue about middle school reform,
- suggests that educational resilience is a concept that attends to both intellectual and psychosocial needs, and may be a good candidate for promoting constructive dialogue and middle school transformation.

In the empirical component, I explored these conclusions with experts in the five topic areas of focus in this dissertation. Using interviews and surveys, I attempted to gather information related to each experts level of familiarity with (and impression/understanding of) the five topics/concepts, and probe each expert's conception of possible connections between the five topics. I also attempted to gather

information on each expert's general views on education, reform, obstacles to reform, and potential means for overcoming reform obstacles, and explore each expert's opinion on the potential value of *educational resilience* for promoting constructive dialogue and reform progress. This chapter describes the methods I used to obtain the empirical data, including the process for identifying and selecting participants, the design of the interview and survey instruments and the data collection procedures, and the procedures for analyzing the interview and survey data.

The Participants

As mentioned above, the empirical data was derived from individual interviews and surveys with leaders in the topic areas. These leaders were identified based on the significance of their work to researchers in their respective fields. Significance was determined using one of the three methods: 1) the Social Science Citation Index (SSCI) search, 2) endorsement by a relevant professional organization, or 3) nomination by my dissertation committee. These methods of identifying potential candidates are described in more detail in the paragraphs below.

The SSCI Search

The primary means for identifying participants involved using the SSCI to determine which written works (and hence, authors) were cited most frequently in a given topic area. This process was identical to the process used to identify the literature used in the archival component. The search was only conducted once, but the search results were used to guide both article selection in the archival component and to identify potential participants in the empirical component. In this way I hoped to examine both the content

of the literature, and the views of some of the researchers who produced some of the content that I analyzed in the archival component.

To identify potential candidates using the SSCI, I used the *Topic Search* utility of the *General Social Science Citation Index (SSCI)* database. The *Topic Search* utility allows the user to set parameters such as language, span of years, etc., and search by keyword, author, title, etc. This utility also allows the user to sort the results according to citation frequency, and citation recency. For my search, I set the parameters to locate journal articles written in English in the years between 1985 and 2002 (inclusive), and to display the results in descending order of citation frequency. Once these parameters were set, I entered the search terms (presented in the table below) into the search window, and retrieved the most frequently cited articles in each category from the database. Within each topic category, searches were conducted using the category name as well as the variants and related terms.

Table 3. SSCI Search Categories, Variants, and Related Terms

Category Name	Variants and Related Terms
Developmentally Appropriate Education	Developmentally appropriate education for adolescents Developmentally responsive education for adolescents Developmentally appropriate practices for adolescents Adolescent characteristics (cognitive, psychosocial, & socio-emotional) Adolescent needs (cognitive, psychosocial, socio-emotional, & educational) Adolescent health Adolescent behavior
Middle Level Education	Middle level education movement Middle school concept Middle school philosophy Middle school movement
Third-wave Structural & Instructional Reform	Middle level reform Middle school reform Restructuring Movement Standards movement Intellectual Autonomy

	Critical thinking Critical literacy Critical reasoning Scientific literacy Executive cognition Self-directed learning
Educational Risk	At-Riskness Academically at-risk Educationally at-risk Psychosocial risk Socio-emotional risk School failure Underachievement School violence
Educational Resilience	Resilience Academic Resilience Educational Resiliency Academic Resiliency Resilience Education

Once the searches were completed, the most cited authors were identified and their names were cross-referenced with the topics to determine the scope of their expertise.

Alternative Search Processes

Secondary methods of identifying potential candidates for interviews involved examining the web sites of professional organizations devoted to the five topics of interest and noting which researchers were identified as highly influential and which written works were endorsed as essential literature. Additionally, researchers were considered as potential candidates if they were nominated and unanimously endorsed by members of my dissertation committee as influential researchers in one or more of the fields of interest. As the committee was composed of esteemed researchers and educators whose work incorporates a variety of the focus topics within their subject areas, their

input was especially helpful in identifying researchers in the fields of adolescent development, at-risk students, and school reform.

Potential Candidates

Through the SSCI search process, endorsements, and nominations, a long list of potential candidates was created. The optimal candidate would have been well-versed in adolescent needs, reform (especially intellectual autonomy), and educational resilience. While I was unable to locate a candidate with this range of expertise, four of the eventual five participants had expertise in at least two of the areas of interest. The names of potential interview candidates are presented below in Table 4.

Table 4. Potential Participants

Topic Area	SSCI Search & Endorsements	Committee Nomination
Developmentally Appropriate Education	Elkind, David Loda, Frank Lounsbury, John Scales, Peter	Kagan, Lynn
Middle Level Education	Eccles, Jacquelynne Lounsbury, John Midgley, Carol	Mac Iver, Douglass Tyack, David Wentzel, Kathryn
At-Risk Students	Peng, Samuel Walberg, Herbert Wang, Margaret Wehlage, Gary	Delpit, Lisa Hakuta, Kenji Ladson-Billings, Gloria Pallas, Aaron
Educational Resilience	Benard, Bonnie Crovetz, Martin Henderson, Nan Millstein, Mike Walberg, Herbert Wang, Margaret	Gordon, Edmund
Reform & Intellectual Autonomy	Barnes, Cynthia Dudley-Marlin, Curt Kamii, Constance Norris, Stephen Pressman, Barbara Searle, Dennis	Kamii, Constance

With assistance from my committee, I ranked potential candidates in each topic area and contacted the highest ranked individuals by mail to invite their participation in the study. To minimize expenses due to postage, the invitation process proceeded in phases. In phase one, I mailed an information packet to the highest ranked candidate in each of the five topic areas. This packet contained two letters—one from the committee which introduced me and my research, and one from me which explained my interest in the particular candidate and the participation process.

If the three-week period of allotted response time elapsed without an affirmative or negative reply from a potential participant, the individual was contacted by phone or electronic mail to determine whether or not the invitation had been received, and if it had, to confirm intentional non-response (i.e., unwillingness to participate). Candidates who were unwilling or unable to participate were removed from the list and replaced with an individual from the same category with the next highest rank. This person was then invited to participate. Overall, nine of the potential participants received letters inviting them to participate in the study before the participation of an expert from each topic area was secured.

Actual Participants

Five experts agreed to participate in the study. Each of the five topic areas was represented, and as mentioned above, four of the participants were experts in more than one category. Due to confidentiality rules imposed by the University Committee on Research Involving Human Subjects (UCRIHS), the actual participants are not listed by name anywhere in this document, but a description which allows the reader to determine their area(s) of expertise is provided in Table 5.

Table 5. Experts and their Area(s) of Expertise

Expert #1	Middle Level Education, Reform
Expert #2	At-Risk Students, Educational Resilience
Expert #3	Middle Level Education, Reform, Developmentally Appropriate Education
Expert #4	Intellectual Autonomy
Expert #5	At-Risk Students, Reform

Once an expert agreed to participate, I reviewed all of his or her published work that was accessible and of moderate length. I made a special effort to find and review works published since 1989. In some cases I also read journal articles and short books that were published in prior years. Decisions about whether or not to read older works were based on their relationship to the more recent works. Older works that were highly influential or cited as background for recent articles published by the author were included if they were accessible. In addition, some of the experts provided me with copies of articles and book chapters that were or difficult to locate or not yet published (i.e., in press). As will be described below, the contents of these works created the context for the interview.

Procedures and Instruments

The Interview

Those who agreed were first interviewed, then surveyed. The interviews were semi-structured, and each participant was asked approximately 20 questions during the hour-long, tape-recorded telephone interview. Because the interviews were semi-structured, participants had the flexibility to elaborate and explain, and I had the flexibility to explore—rather than simply record—their responses. They also contained several standard elements and were conducted in a manner that allowed for comparison as well as insight into each participant's unique perspective.

The interview always began with the topic of the participant's expertise and moved through the remaining topics either according to my impression of their relatedness, or as the participant's responses introduced a new topic/concept. Most of the interview questions related directly to the expert's topic(s) of expertise and the contents of their published works. For example, the interview protocols presented in Appendix A illustrate that the questions asked of Expert #1 were situated in the context of middle level education and reform since these were the areas of expertise for this participant.

The remaining interview questions related to the expert's knowledge of the other concepts, impressions and opinions about the general utility of the concepts, and perceptions on the utility of the concept in educational practice and reform. As also illustrated by the interview protocols, questions about the other topics and issues were explored using the participant's areas of expertise as a reference point.

Although each expert was asked to respond to questions relating to all five topics, the order and directness of the questions varied considerably. Overall, however, the participants were directly or indirectly asked to:

- define each concept in their own words
- describe the characteristics or behaviors that a student would be expected to display if he or she embodied each concept
- list specific educational/instructional activities and practices that promote the development these behaviors in students, and
- discuss the implications of each concept for educational reform

As experts were invited to participate on the basis of my familiarity with their work, they were not asked questions with obvious answers. For example, they were not

directly asked to define the concept(s) of their own expertise. Instead, with regard to their own area of expertise, experts were asked to clarify certain aspects, or elaborate on the content, of their written work and to discuss the underlying rationale for their perspective. I proceeded in this manner out of fear that inviting an expert on, say Developmentally Appropriate Education, and then asking the expert to define the concept after claiming to have read his or her work might have negatively affected rapport.

As the process for securing the participation of these experts was long and arduous, some experts were interviewed while others were being recruited. As a result, interviews that occurred later in the data collection process contained questions related to issues raised in earlier interviews. Because there was no opportunity to pose questions arising from later interviews to participants who were interviewed earlier in the process, it was necessary to use the survey process as a follow-up measure. The possibility that this need would arise, was one of the motivations behind conducting the surveys after the interviews.

After completing each interview I generated a summary which highlighted issues that elicited strong (positive or negative) responses, identified unanticipated issues that should be explored in later interviews, and noted specific features and characteristics that were explicitly identified as central or important to the definition of the focus concepts. This preliminary analysis of the interview data generated the content contained in the 21 statements that made up the survey (see Appendix B for survey form).

The Survey

The survey was distributed to all participants at the same time, following the completion of all of the interviews. In the survey, participants were asked to categorize

their level of agreement with 16 of the statements by choosing a rating on a five-point Likert scale (1=strongly disagree, 5=strongly agree). For 3 statements they were asked to select one option from a list of three comparative phrases (e.g., largely successful, marginally successful, largely unsuccessful). The remaining 2 statements presented a list of options from which participants could choose. As with the comparative phrases, they were asked to reply to these items by placing a mark next to the option or options that reflected their view.

As mentioned above, one purpose of the survey was to present follow-up statements to participants. Some of these statements were designed to elicit reactions from participants who were interviewed prior to the introduction of a potentially important issue. However, most of the statements were designed to test my interpretations of the interview responses. These statements were developed in an effort to generate a small set of comparable responses to focus issues, and to directly elicit responses to issues where consensus appeared to exist and where mutually exclusive views were expressed. In the actual survey, the statement types were interspersed—arranged according to topic (see the survey form for the actual order of presentation), but in the paragraphs below the statements are presented according to 1) their format and then 2) the focus topic. In the paragraphs below, I present the survey statements that comprised each of these categories, and explain the motivation underlying the format (Likert-type or list type) in which I presented the items.

Likert-type Items

The survey presented 16 Likert-type items related to concept definitions, middle level education, and reform. I used a Likert-scale for these items for one of two reasons:

(1) most of the participants were very familiar with the content at issue and expressed relatively strong opinions about them, or (2) the responses to the interview questions were varied, and I needed to focus the participants' attention on specific perspectives expressed in the interviews. The content below presents the content category, the rationale for including these statements in the survey, and the statements that appeared in the actual survey.

Concept Definitions

The statements below represent the definitions of three concepts that were central in the two major comparisons conducted in the dissertation. These concepts were developmentally appropriate education, at-riskness, and educational resilience. Among the five focus topics, these elicited the most controversial responses during the interviews. These statements included in the survey present the extreme positive and extreme negative impressions expressed in the interviews with regard to these concepts. These impressions were as follows:

1. When I hear the phrase, "developmentally appropriate education", I think primarily of the boundaries that the practice constructs around students' capabilities.
2. When I hear the phrase, "developmentally appropriate education", I think primarily of the effort to meet student needs that the practice represents.
3. When I hear the phrase "at-risk students", I think of students who are statistically more likely to receive poor grades and/or test scores, and/or to become teenage parents, and/or to become involved in criminal activities, and/or to drop out before graduating from high school.

4. When I hear the phrase “at-risk students”, I think of students who—regardless of measured achievement—display signs of alienation/disaffection, and/or emotional immaturity, and/or social difficulty.
5. When I hear the phrase “educational resilience”, I think primarily of the positive characteristics of students who meet or exceed normal expectations despite adverse life and/or learning conditions.
6. When I hear the phrase “educational resilience”, I think primarily of the negative characteristics of the environments that students are expected to cope with.

Middle Level Education

As most of the participants were not experts in middle level education and reform, this was a topic where it was necessary to ask a large number of individually tailored interview questions. The statements below represent an attempt to present a more standardize prompt and obtain more direct responses from the participants. I used a Likert-scale for these statements because I was interested in experts’ evaluation of middle school environments with specific reference to intellectual and psychosocial issues. In the interviews the participants provided detailed descriptions of healthy learning environments, so I did not think that much would be gained from using the list option, but I wanted to know if their evaluations differed when intellectual and psychosocial issues were considered explicitly and separately.

The statements about middle level education that I presented to the participants in the survey were as follows:

7. The current environment of the majority of middle schools is healthy for early adolescents’ intellectual development.

8. The current environment of the majority of middle schools is healthy for early adolescents' psychological/social development.
9. If educational resilience is thought of in terms of positive student characteristics, I believe that it can support the creation healthy school environments.
10. When asked to consider the application of "educational resilience" to schooling, I am not sure how the two are related.
11. Educational resilience can and should be fostered in students.

Reform

The statements listed below relate to reform obstacles and contributors to reform progress. During the interviews, many participants described reform obstacles and contributors in terms of assessment. Although assessment was not a topic that was initially included as a focus, the following statements appear in the survey because many of the participants introduced the topic. While the statements with "list" options are generally more informative in wide-ranging issues such as reform, these particular statements are presented in Likert format because some of the participants expressed very strong views regarding these specific assessment formats and their impact on educational practice and reform. These statements represented my attempt to explore this unanticipated, but potentially important topic, and delineate the issues involved in the strong opinions expressed.

The Likert-type items about reform were:

12. Norm-referenced standardized tests have contributed to the creation of higher educational standards.

13. Norm-referenced standardized tests have contributed to the improvement of educational practices.
14. Norm-referenced standardized tests have contributed to increases in academic achievement.
15. Norm-referenced standardized tests, themselves, are not the problem. It is the way that the results are used that is problematic.
16. Increased use of criterion-referenced tests and other alternative assessments would have a more positive impact on educational practice and student achievement than norm-referenced tests have had.

Comparative-Phrase Items

As mentioned above, three of the survey items included comparative lists from which participants could choose one option. These items designed a follow-up to interview questions about reform. Specifically, they were designed to elicit responses regarding participants' perspective on the state of education and the success of past reform efforts designed to address social and academic aspects of at-riskness.

The statements given in comparative-phrase format were:

1. When I consider the collection of educational issues that are of most importance to me, I evaluate the current state of American education as:
☐ Much better than it was in previous years
☐ Similar to previous years
☐ Much worse than it was in previous years
2. In my opinion, efforts to improve the educational outcomes for at-risk students have been:

- ☐ Largely successful
- ☐ Marginally successful
- ☐ Largely unsuccessful

3. In my opinion, efforts to improve the social outcomes for at-risk students have been:

- ☐ Largely successful
- ☐ Marginally successful
- ☐ Largely unsuccessful

List Items

Two survey items were presented in list format. The “list” option was presented instead of the Likert-scale in three situations: 1) where participants expressed uncertainty during the interview, 2) when there was a large range of answers, and 3) when experts omitted pertinent characteristics from their descriptions of a concept or the behaviors that reflect it. In the case of omissions, it was necessary to determine whether an expert’s omission indicated an actual lack of support for the characteristic. This option was used with two concepts—educational resilience and intellectual autonomy—to account for two participant’s complete unfamiliarity with one or the other concept, and because each involves a long list of features which increased the likelihood of omissions.

The statements given in list-option format were:

1. If a group of adolescent students was described to me as “intellectually autonomous”,

I would expect them to: (select all that apply)

- ☐ be able to set learning goals and evaluate their progress towards those goals
- ☐ be able to motivate themselves to persist through “drill and practice” tasks
- ☐ set acceptably high standards for themselves

- ☐ behave responsibly in academic situations
- ☐ behave responsibly in social situations
- ☐ know when to seek help and how to elicit help
- ☐ critically evaluate claims made in their textbooks and in the media
- ☐ hold steadfast to their beliefs
- ☐ have difficulty taking the perspective of others
- ☐ believe that they are always right
- ☐ challenge adult authority in inappropriate situations

2. If a group of students was described to me as “educationally resilient”, I would expect them to: (select all that apply)

☐ achieve their maximum intellectual potential regardless of the educational circumstances

- ☐ make the best of their educational situation
- ☐ be persistent
- ☐ set high goals for themselves
- ☐ believe that effort is the key to success
- ☐ believe that ability is the key to success
- ☐ question expectations for their success in school and life
- ☐ feel personally responsible for success
- ☐ know how and when to seek help
- ☐ behave responsibly in academic situations
- ☐ behave responsibly in social situations
- ☐ be focused

- ___ respect themselves
- ___ respect others
- ___ view themselves realistically
- ___ view others realistically
- ___ view situations realistically
- ___ seem mature beyond their years
- ___ be stunted in non-academic domains
- ___ like school
- ___ hold high career aspirations

Participants' responses to the 21 survey items were analyzed according to topic, as well as in comparison to interview responses produced by the same participant.

Before analyzing the survey responses I conducted a more the in-depth analysis of the interview data. The processes used to analyze the data from both sources is described in the section below.

Data Analysis

In keeping with the goal of examining the possible contribution of each topic to promoting constructive dialogue between experts who emphasize different aspects of students' needs, the data was analyzed in a manner that would best address issues that exist "within-topics" rather than "between-experts." With a maximum of two participants from each field, it was not possible to draw conclusions between topics without erroneously assuming that each expert reflected the views of most researchers in his or her field. Although the data was examined for differences between experts, this

was done primarily as a means to identify important potential differences that should be explored in future projects.

With my small sample, it was possible, however, to get some indication of possible overlaps in the underlying ideas of each concept—some of which the experts, themselves, may not be aware of. This knowledge could prove very useful in future efforts to promote dialogue and consensus among researchers—even if there is no “named” concept in current use under which they can all unite.

Analysis of Interview Data

As stated above, I transcribed and summarized each participant’s responses after completing his or her interview. As explained above, this process was used to aid the survey design. Additional analysis of the interview data involved importing the complete interview transcripts into the NUD*IST program. Because the interviews were semi-structured, participants were allowed to elaborate. Sometimes, these extended answers related not only to the question at hand, but also to questions that appeared earlier or later in the protocol. As a result, answers related to each concept may have been distributed throughout the interview rather than in a simple cluster of questions. I chose to analyze the interview data using NUD*IST software because the program reduces the complexity inherent in analyzing and comparing texts that vary in structure, and it simplifies the task of identifying themes in qualitative data.

The NUD*IST program allows the user to search within and across documents for relevant data, and categorize the responses (i.e., “code” the data). I coded the content of the transcripts in relationship to the five focus topics. All responses related to each topic were placed in the appropriate topic category. In some cases, responses were placed in

more than one category. This was especially true for responses related to composite constructs (such as educational resilience, middle level education, and reform) as such constructs both contain, and depend upon, other constructs.

For example, it is difficult to discuss educational resilience without referencing educational risk. Overcoming adverse educational circumstances is the essential feature of educational resilience, hence these circumstances are, in effect, risk conditions. As a result, discussions related to educational resilience must involve—either explicitly or implicitly—some definition of at-risk students.

Middle level education and developmentally appropriate education were similarly linked. Developmental appropriateness is a core feature in the middle school concept. Although this fact is not typically reflected in middle school practices, that does not negate the link. As a result, opinions about the validity of developmental appropriate education have the potential to weigh heavily on opinions about middle level education and reform. Individuals who reject the validity of developmentally appropriate education are more likely to also reject student-centered approaches to middle level education as well as many of the specific practices that are essential features of “true” middle schools. For this reason, the experts’ responses that related to developmentally appropriate education were also coded under *middle level education* as this coding practice allowed me to examine this relationship.

Although responses that related to developmentally appropriate education were also coded under *middle level education*, the inverse relationship was not assumed, and the reverse application of coding was not automatically applied. As discussed in the conceptual component of dissertation, the rationale for this choice is that definitions of

developmental appropriateness vary, and as a result, opinions about what constitutes developmentally appropriate practice vary. So, it cannot be assumed that an individual's opinion about a certain middle level practice indicates his or her opinion about developmentally appropriate education in general—even if that practice is often implemented because it is deemed developmental appropriate. Unless experts explicitly linked developmentally appropriate education and middle level education, their responses to questions related to middle level education were not coded under *developmentally appropriate education*.

After coding the interview responses, the data was analyzed to determine the degree of consensus about the meaning of particular concepts, their relationship to the other concepts, and their expected utility in educational practice and reform. This analysis yielded interpretations of the experts' views, which were translated into statements that the participants were asked to consider during the survey.

Analysis of Survey Data

Because the number of participants was small and response rate for the survey was lower than the participation rate in the interviews, the survey data was not analyzed statistically. Only three of the five participants interviewed also completed the survey. Of the two participants who did not complete the survey, one (Expert #1) passed away in the interim between the interview and the administration of the survey. The other (Expert #4) declined to complete the survey on the grounds that she was uncomfortable taking a position (including a neutral position) on many of the statements related to topics outside of her area of expertise (however, she did not wish to withdraw her interview data from the analysis). These unfortunate circumstances reduced the number of survey responses

available for analysis, and complicated the comparison of interview and survey responses related to intellectual autonomy. While counts are provided for each item, the analysis did not focus on these quantitative aspects of the data.

As mentioned above, the survey was conducted as an addendum to the interview and aid to my understanding of the interview data, the survey responses obtained from each participant were compared to that individual's interview responses, and to the survey responses of the remaining participants. The purpose of this activity was to test the accuracy of the interpretations derived from the analysis of interview responses and to reduce the degree of subjectivity in my judgments about consensus and disagreement.

One analysis of the survey data involved aggregating responses by topic and comparing the Likert ratings, and options selected from the lists, to the content of the interview responses that were about the same issue. For example, in both the interview and survey, participants were directly asked to respond to the claim that focusing on *educational resilience* can promote the creation of healthier school environments. By comparing participants' responses to the item in the interview and in the survey, I was able to determine the degree of consistency between the responses, examine the strength of particular view, and indirectly measure the participant's willingness to generalize his or her views. I believe that both of these features of an individual's view potentially influence the success of efforts to build consensus, so when discrepancies occurred, I made an effort to understand why.

To explore potential reasons for discrepancy, I undertook an additional analysis. I examined the data across participants and aggregated all instances of discrepancy between interview and survey responses. I then analyzed those by topic and looked for

similarities and differences in the interview responses that might explain the discrepancy. Because specific topics and items generated unique distributions of discrepancy across participants, these are explained in detail in the results chapter (Chapter 9). But for now, it is important to note that in general, the participants were less comfortable making strong statements generalizing their views on survey issues and topics that were outside of their area(s) of expertise than they were about generalizing their view on topics within their area(s) expertise.

Despite the complications that arose during the course of the study, I was able to obtain a lot of interesting and useful interview and survey data. I used this data to determine which features of intellectual autonomy and educational resilience experts considered essential or central to the concepts, and to gauge the level of agreement between experts in different fields regarding the meaning of the concepts and their possible role in future education reforms. In Chapter 9 (Empirical Results), I present the results of the interview and survey analyses.

CHAPTER 9: EMPIRICAL RESULTS AND CONCLUSIONS

As discussed in Chapter 8 (Empirical Methods), the purpose of the empirical component was to test the conclusions derived from the archival analysis. I tested these conclusions by enlisting the assistance of five prominent researchers (each with expertise in one or more of the five focus topic areas).¹ These experts were invited to participate in an interview and a subsequent survey. Using the interviews and surveys I attempted to explore each expert's perspective on the relations among the five topics and opinion of the potential value of *educational resilience* for promoting constructive dialogue and educational reform progress. I attempted to gather additional information related to each expert's views on education, reform, obstacles to reform, and potential means for overcoming reform obstacles. The interview data was analyzed using NUD*IST (a software program that supports qualitative analysis of text-based data), and the survey data was analyzed for trends as well as for consistency/discrepancy with the interview data. This chapter presents the results of these analyses.

In keeping with the order of administration, the interview results are presented before the survey results. I begin with a summary of the findings from the interviews for each topic area. This is followed by a discussion of the themes that emerged from the interview data related to the participants' views on education, reform, obstacles to reform, and potential means for overcoming reform obstacles. A presentation of the results from the survey analyses follows. Conclusions arising from the interview and

¹ Expert #1 (Middle Level Education & Reform), Expert #2 (At-Risk Students & Educational Resilience), Expert #3 (Middle Level Education & Developmentally Appropriate Education), Expert #4 (Intellectual Autonomy), Expert #5 (At-Risk Students & Reform).

survey results are given in this chapter rather than presented in a separate chapter. This is due, primarily, to the interrelated nature of the interview and survey data.

Interview Results

This section of the chapter presents the results from the analysis of the interview data. The first sub-section of interview results contains summaries of findings related to each topic. In the five summaries I describe the experts' level of familiarity with the topic, identify and discuss the views held in common by the experts, and identify and discuss perspectives that were contrary to the common view. The second sub-section of interview results provides a thematically arranged discussion of the interview data. Here I present and discuss four themes that emerged in the data that were not completely or directly part of the content of the five topic areas. The four themes are (1) the characteristics of early adolescents, (2) the purposes of scope of schooling, (3) obstacles to achieving educational ideals, and (4) means of overcoming reform obstacles. The paragraphs below present the summary for each of the five topics.

Developmentally Appropriate Education

All five of the experts interviewed had read or heard enough about this concept to hold, and be willing to express, an opinion about it. Four of the five experts (Expert #1, 3, 4, and 5) supported the basic idea of developmentally appropriate education although they did not support all of the practices that have been described as developmentally appropriate. The remaining expert (Expert #2) was opposed to developmentally appropriate education on the grounds that there is no demonstrable link between theories of development and student achievement. He explained his position as follows:

I'm not a fan of what's been called "developmentalism", or developmental periods, or sensitive periods... It's a very prevalent idea in schools of

education...I think it's a terribly destructive idea because it encourages the idea that children can't learn until some golden moment or golden stage. The idea of developmentalism goes back to Freud and Piaget and many others...It's the general idea that children can't be taught at certain age levels, and I don't think there's much hard evidence for it, particularly when you look at children's learning in school, because some children have learned to read—for example—before they even come to school, and other children can't even learn to read by the time they're in 3rd grade. So I think we need to think that children *can* learn and they need the circumstances that would produce it, rather than saying we have to be timid or reluctant to give children the opportunities they need...I think that what the basis of much of this has to be is the knowledge or achievement that we need, rather than any invention of development. Because, among other things, if you look more critically at developmentalism—There are many, many theories of developmentalism, and people don't agree upon what they are or what ages of development are. And I think that they have a terrible time trying to relate those to educational achievement tests and what children actually learn in school. And I'm not talking about generic ideas about morality. I'm talking more about the specific subject matter. So I guess I'm more of an educator than a psychologist (Expert #2).

Experts who supported the concept of developmentally appropriate education believed that educational practice should be informed by a number of theories, on a range of issues, that impact learning. As a result, they tended to oppose practices what were based on only one theory of development, especially when that practice conflicted with the implications of other theories. Five theories mentioned by name during the interviews were Piaget's Theory of Cognitive Development (Experts #4 and #5), Erikson's Theory of Psychosocial Development (Experts #3 and #5), Stage-Environment Fit Theory (Expert #1), Expectancy Value Theory (Expert #1), and Achievement Goal Theory (Expert #1). Expert #1 explained her choices in the following way:

...I don't know that I point to any particular theory of cognitive development...I feel as though my understanding of it has come from many different views and theories and ideas...I will say this about achievement goal theory: it speaks to many of these issues that we are all concerned about, which includes providing a stimulating, challenging cognitively appropriate environment for all students, [and] perhaps moving away from some of the practices such as ability grouping and

honor rolls and competition among students that can be particularly damaging as young adolescents are beginning to understand [and] have more differentiated concepts of ability.² That fits well with goal theory and mastery goals versus performance goals...What goal theory does not speak to, as specifically—but which I think perhaps it will move [towards]—is the relationship dimension...We know from old work we've done that students do perceive more positive student-student and student-teacher relationships in classrooms that they perceive as mastery-oriented (Expert #1).

The other three experts (#2, #4, and #5) who supported the concept of developmentally appropriate education also opposed tracking and homogeneous ability grouping. For example, Expert #4 said:

They [students] might not see what's going on coming right out of elementary school, but tracking and ability grouping tends to become more obvious as students progress through junior high school....Also, they are more sensitive to their peers—they compare themselves to one another much more than elementary school students, and they notice how much they're being compared to one another. They also have more powerful thinking skills than younger children, and they can project into the future a bit more...[T]hey can start to understand that their placements say something about what's expected of them in the future—what they're expected to achieve... [T]hey know what it means to be in algebra in 7th grade or in general math, and this [knowledge] impacts many students' views of their intelligence, and this [view] follows them to high school.

Although tracking and homogeneous ability grouping can be justified using theories of cognitive development, the incompatibility of these practices with the suggestions of psychosocial theories, socio-psychological theories, and theories of motivation influenced their negative evaluation of these practices. As Expert #2 was not directly asked about tracking or homogeneous ability grouping, and did not spontaneously offer an opinion about these practices, it is uncertain whether he agreed or disagreed with the practices.

² In an earlier statement Expert #1 described differentiated concepts of ability as a shift away from effort-based conceptions and towards conceptions that emphasize innate ability.

Middle Level Education

Only two of the five experts (#1 and #3) fully understood the intended structure and function of middle level schools. Both were experts in middle level education. These experts recognized that middle level schools were created in an effort to respond to the developmental characteristics and needs of early adolescents. Specific characteristics and needs cited by both experts included early adolescents' growing capacity for abstract thought, heightened tendency towards social comparison, and self-consciousness. While Expert #1 believed that middle schools should make an effort to eliminate practices (such as tracking and honor rolls) that can negatively impact average and struggling students' self-views, she also viewed responsiveness to students' intellectual characteristics as an important component of middle level education. The following quote illustrates this perspective:

This [early adolescence] is a particularly fertile time for cognitive development, moral reasoning, and abstract thinking. This doesn't mean, necessarily, that all young adolescents have reached that stage, but developmentally responsive middle school programs take into account that they are primed—they're kind of ready—to take off with some of these things...Being aware of that, students should be asked to do more than just "solve these 7 problems"... Capitalizing on this new cognitive growth seems to me to be an important part of what the middle school should be about (Expert #1).

The other three experts (#2, #4, #5) viewed middle schools much as they viewed elementary schools and high schools and were unaware that the phrases "middle school" and "junior high school" were ever intended to describe anything other than grade organization. When describing middle level schools, Expert #2, #4, and #5 emphasized the content to be learned in the included grades. While they also expressed the hope that these schools would provide caring learning environments, they were completely

unaware that the provision of a nurturing learning environment was the impetus behind the development of and practices advocated in middle level education

At the outset of the study I anticipated this lack of specific awareness of the middle school philosophy. This is one reason why I asked questions focused on elucidating the expert's perspective on the goals and purpose of education. Based on the three experts' responses to these questions, this lack of awareness did not appear to significantly influence their perspectives on middle level education. Although these experts were unaware that middle level schools were intended to be developmentally responsive, two of the experts (#4 and #5) expressed the view that middle level schools—and education in general—should be responsive to many developmental characteristics of students. This, however, was not the case for the third expert (#2).

While Expert #2 expressed many of the same opinions as the other four experts with regard to school climate, he was unwilling to think about school climate in terms of students developmental characteristics and needs, and was vehemently opposed the validity of developmentally responsive schools. His perspective was rooted in the belief that development and education are not related and should not be the basis for practice. Like Expert #4 and #5, his perspective was not influenced by knowledge of the middle level education philosophy, and would probably remain unchanged by an awareness of that philosophy.

Intellectual Autonomy

While only two of the experts (Expert #4 and #5) were familiar with the specific phrase “intellectual autonomy,” the views expressed by Expert #1, #2, and #3 were similar to those of Expert #4 (whose expertise was in intellectual autonomy) and Expert

#5 (who related the concept to “planful competence”). When Expert #1, #2, and #3 were asked: “If you were told that a group of students is intellectually autonomous, what characteristics would you expect them to have, and what behaviors would you expect them to display?”, like Expert #5, all three experts linked the concept to others that emphasize metacognition. For example, Experts #1 and #2 said that the phrase initially triggered thoughts related to sound reasoning and critical thinking, but they also believed that the concept suggested more. In their view intellectual autonomy seemed to contain an additional component that involves two aspects. These were (1) thinking for oneself, and (2) standing up for what one believes. Both of these experts linked the first aspect to educational practices that are cognitively appropriate (or in the wording of Expert #2, “moved students towards mature reasoning” and “executive cognition”). They linked the second aspect to educational practices that are psychosocially appropriate (or in the wording of Expert #2, “promote healthy values and consistency of character”).

At-Risk Students

All five of the experts interviewed had heard of at-risk students or the notion of at-riskness and four of the five felt that they had enough information to form an opinion about the concept. Among these four, one expert (#2) agreed—almost completely—with the traditional conception of at-risk students. The remaining three experts (#1, #3, and #5) felt that the traditional conception was valid insofar as its focus characteristics correlate with school failure and dropping out. However, these three experts also viewed the traditional conception of at-riskness as incomplete because it did not attend to the psychosocial or socio-psychological factors that predict an individual student’s risk status and outcomes.

Unlike the four experts described above, Expert #4 felt that the term “at-risk” had been operationalized in so many ways in so many different studies that she dismissed the concept, was unwilling to consider or any possible re-definition, and was uncomfortable with all questions related to the topic. This expert was willing, however, to discuss the topic of “harm to students” and identified instructional practices and features of the learning environment that promote intellectual heteronomy as major sources of that harm.

Educational Resilience

While all five of the experts were familiar with the general concept of resilience, three of the experts (#1, #3, and #4) were not familiar with educational resilience. When asked to describe what it might mean, Expert #4 was unwilling to speculate, but Expert #1 and #3 both provided definitions of educational resilience that, although incomplete, were consistent with the literature on the concept. These definitions built from the general definition of resilience and emphasized students’ ability to “beat the odds” (Expert #3) or “rise to teachers’ expectations for academic performance despite a pattern of past failures” (Expert #1). When asked for a possible explanation of the cited outcome, Experts #1 and #3 both described meaningful interactions and caring support as potential mediators. These views are similar to those expressed by Expert #2 (an expert on educational resilience) and Expert #5 (an expert on at-riskness).

While Expert #4 was not asked any additional questions about educational resilience (because of her resistance), the other four experts were asked if they saw any connection between educational resilience and the other four topics in the dissertation. In response to this question, each of the four experts related educational resilience to

traditional and modern perspectives on at-riskness. For example, Expert #3 (middle level education) said:

Unfortunately we're losing a generation of kids now who are alienated and I wonder if they'll ever be able to bounce back because society has not done well by them. But fortunately, resilience is a natural human trait...If we approach students with the attitude that if at first you don't succeed, try, try again, we can foster greater resilience. If something doesn't work and we respond by saying "Let's see what's wrong?" and "How can we go at it different?"—I think that's fundamental to education, and we've got to use it positively. If a kid's not learning that means there's something wrong with the schools, not wrong with the kid.

While this response presents risk as based on a deficit-model (a traditional perspective) and as unidirectional (i.e., imposed from the outside), rather than as based on a transactional (a modern perspective), the response also exhibits features of a modern perspective on at-riskness. While Expert #3 acknowledges that children from historically disadvantaged groups (i.e., children who society has not done well by) generally fare worse (i.e., are candidates for "bouncing back"), he describes the effects of this traditional risk factor (i.e., group membership) as alienation (a modern perspective) and poor academic performance (both traditional and modern). The response also presents educational resilience as a tool for promoting motivation/persistence, and as a responsive approach to identifying and addressing students' needs. This view of educational resilience is consistent with that in the literature, which emphasizes the psychosocial and socio-emotional (e.g., motivational) features of at-riskness and resilience.

When asked to consider the remaining topics, Expert #3 and #5 also related educational resilience to intellectual autonomy, and Expert #2 related it to character and intelligent decision-making. Only Expert #3 (whose expertise was in middle level education and developmentally appropriate education) explicitly related educational

resilience to middle level education. However, the four experts who were willing to discuss the concept each believed that the school-related protective factors associated with educational resilience should be standard practice for all schools and that the characteristics and traits associated with educational resilience should be fostered in all students. The experts disagreed, however, about whether using educational resilience as a guide to reform would be productive. Two experts (#1 and #4) worried that its use would encourage educators to shift the responsibility (for coping) onto the students. The other three experts (#2, #3, and #5) believed that its use could encourage educators to alter learning environments in ways that facilitate the development of competence and commitment to school.

Themes in the Interview Data

As mentioned above, the interview data was also analyzed for additional emergent themes. In the survey portion of the empirical component I examined some of the issues raised in relation to the themes (as well as issues that arose in relation to the five focus topics). The four themes that emerged from the data related to (1) the characteristics of early adolescents, (2) the purposes of scope of schooling, (3) obstacles to achieving educational ideals, and (4) means of overcoming reform obstacles. Each theme is based on the responses of at least three participants.

Theme #1: Characteristics of Early Adolescents

The experts' perspectives on early adolescents were derived from a number of theories, and were consistent with the literature on early adolescent development, developmentally appropriate education, and middle level education. They explicitly cited Piaget's Theory of Cognitive Development, Erikson's Theory of Psychosocial

Development, and various theories of socio-psychological development, motivation, and learning as theories that they rely on to determine early adolescents characteristics and needs. They defined early adolescents as children between the ages of 10 and 15 who are progressing towards formal operations and the establishment of a stable personal and social identity that is influenced by their patterns of experience at school. Specific characteristics mentioned in the interviews included:

- Having more powerful thinking skills than younger children (Experts #1, 3, 4, & 5)
- Applying these skills in analyses of the self as well as in academic situations (Experts #1, 3, & 5)
- An increased tendency towards social comparison (Experts #1, 2, 3, & 5), and
- An increased desire for respect and autonomy (Experts #1 & 3).

The following quotes illustrate the experts' perspectives on early adolescents:

Young adolescents [are] pretty absorbed with the self and pretty self-conscious, and not wanting to stand out. They want more choice and more opportunities for decision-making, and at the same time, [they] are needing to bond with adults outside the home. We also know that this is a particularly fertile time for cognitive development, moral reasoning, and abstract thinking. This doesn't mean, necessarily, that all young adolescents have reached that stage, but ...they are primed—they're kind of ready—to take off with some of these things.... (Expert #1).

I think that if you read Tanner, Erikson, or Comer, or most anybody else, you know... This is not something that is just one person's idea, but it's generally recognized that when young people reach the age of formal operations, they are able to be analytical about themselves. They can hypothesize. They can learn about learning. They can think about thinking. They can learn in different ways, and they apply that new ability to think to themselves and their own values and their own beliefs. And it's while they're in middle school that they really decide who they are in terms of their personality and their values and standards (Expert #3).

...They also have more powerful thinking skills than younger children, and they can project into the future a bit more... [T]hey are more sensitive to their peers—they compare themselves to one another much more than

elementary school students, and they notice how much they're being compared to one another (Expert #5).

In general, the experts believed that early adolescents' characteristics interact with their schooling experiences in ways that influence their academic, social, and personal identities, which in turn influence their achievement, educational attainment, and career goals. For example, Experts #3 and #5 said:

Students are persons first, and students second, and if we ignore who they are as persons—their attitudes, their values, their beliefs about themselves, and all of these other things—then we are really handicapping our efforts to have them achieve academically (Expert #3)

Adolescents are very socially-oriented. They have definite ideas about who is smarter, who is the better athlete, who is more attractive, and who is more popular, and they can start to understand that their placements say something about what's expected of them in the future—what they're expected to achieve. They constantly compare themselves to one another, and they know what it means to be in algebra in 7th grade or in general math, and this impacts many students' views of their intelligence, and this follows them to high school (Expert #5).

Theme #2: Purposes and Scope of Schooling

When asked to describe learning environments would promote better outcomes for early adolescents than current environments promote, the experts tended to express purpose of education in terms of goals that educators should pursue and outcomes for students, rather than in terms of specific practices. These goals and outcomes were both academic and psychosocial in nature. They included:

- Content Knowledge (Experts #1, 2)
- Higher-Order/Critical Thinking Skills (Experts #1, 3 & 4)
- Social and Personal Skills (Experts #2, 3, 4 & 5)
- Personal and Social Responsibility (Experts #1, 3 & 4), and
- A Love of Learning (Experts #1, 3).

The following quotes relate to these goals and student outcomes:

We have to prepare our young people to be media literate—to be able to interpret and analyze and be judgmental so that they're not taken in by ads, or gratuitous displays of sexuality and so on...So that they are able to make personal decisions, and not be taken with drugs or violence or sex or alcohol or whatever (Expert #3).

The purpose of schooling—education—is to learn/master/understand/think deeply/grapple with difficult questions/come up with new ideas, new ways of thinking...It should mirror life—have the complexity of life and cover the topics of life. Probably if I just had to pick a word or two I would say “deep understanding.” One would hope, first of all, that students—in and of themselves—would be more mastery-oriented. That they would ask, “What is this all about? How does the world work?” and that when they go through life they would seek challenge, they would not be afraid to take a risk, and they would understand that if they try hard they can do wonderful things. A quality education produces that kind of student. It promotes life-long learning and students who say, “I love to learn” (Expert #1).

[They should have] persistence, [a] willingness to work hard and [the ability to] persevere though difficulty...[but] I have no hesitation to say that a child who has had a high quality education should get high scores on an achievement test...You'd like for them to do well in life as well, but, I mean, I think of academic achievement as measured by achievement tests (Expert #2).

The emphasis on interpretation, analysis and judgment in the first quote relates to higher-order/critical thinking skills, social and personal skills, and responsible decisions about personal behavior. In the second quote, the emphasis on thinking deeply, grappling with difficult questions, and generating new ideas and ways of thinking relate to higher-order/critical thinking skills. While the emphasis on mastery and understanding relates to content knowledge, and the emphasis on challenge seeking, risk-taking, and effort-based perceptions of ability relate to social and personal skills and a love of learning. The emphasis on persistence and effort in the third quote relate to social and personal skills, while the emphasis on high test scores relates to content knowledge. These views are

consistent with those expressed in the literature on Third-wave reform (especially intellectual autonomy) and the literature on educational resilience (especially with regard to persistence and being motivated by a challenge).

With regard to scope, Expert #3 had the most to say. Like Expert #1, who also focused on middle level education, and Expert #4 who focused on at risk students, Expert #3 believed that education should be a transformational process. He defined transformative education as a process that not only equips young people with the information that they need to contribute to the economy, but also promotes the development of attitudes and values that they need to reach their full potential and function effectively in a democratic society. The following quote illustrates this.

I think a part of the problem with the public, and indeed with the profession, is we have come to define teaching and education too narrowly... and we have failed to recognize that an education involves much, much more than those things that are measured on a paper and pencil test... Responsibility, character, effectiveness in communicating orally and in writing, the ability to solve problems, to be analytical, to have attitudes towards others that are respectful—all of the things that determine one's behavior are a part of an education... The school has to play a role. This is society's institution for educating young people... If school doesn't do it, we're in bad shape, especially since the family and the church no longer have the degree of responsibility that they once had to educate a child. And when I say educate a child, I'm talking about the broader aspects of education, not just the narrowness of schooling (Expert 3).

The experts' views on the scope and purposes of schooling appear to influence their perspectives on middle level education and reform. Experts who viewed the purposes as both cognitive and psychosocial were more likely to support developmentally appropriate education, as well as reforms that promote the development intellectual autonomy and many features of educational resilience. Experts who viewed the purpose as primarily cognitive tended to oppose developmentally appropriate education and

advocate more traditional instruction and assessment practices. For example, Expert #2 said:

I'm geared towards [tests]. I'm very much interested in educational achievement as based on tests. A lot of people in schools of education don't like tests, but parents like tests, the public likes tests, most presidential candidates like tests, most legislators like tests. They think that children ought to learn to *read* in school. They ought to learn mathematics, civics, history, [and] geography. Psychologists, and people at schools of education, have these new phrases all the time, and they want to get away from educational achievement, but I'm right there—all the time—whatever the new phrases are in psychology (Expert #2).

In my view, what we need to do is focus on where the child is with respect to, let's say, reading. We don't need any sort of complex reading theory. We know what we need to give them and we need tests. If they're having trouble with the "c-h" consonant blend, then they need to have instruction on that. If you have a system that adapts to the individual child so that if I need the "c-h" consonant blend and you need the "s-t" blend and we're in the same class, either a computer, or maybe if we have autonomy—We ought to have a class that's flexible enough to be accommodating or adaptive, where we can study, individually, what we need to study. But there's a lot of stuff, too, that you and I both need. So there's some things that we need that are similar. If I'm a year older or a year younger than you, that isn't the critical thing. It's the knowledge (Expert #2).

Theme #3: Obstacles to Achieving Educational Ideals

After expressing their views on the scope and purposes of education, each expert was asked to identify what they believed to be the major obstacles to the achievement of the educational ideals they espouse. With the exception of Expert #2, all of the experts identified high-stakes, norm-referenced standardized assessments as a major obstacle to high quality education. In addition Expert 1 argued that "providing a more interesting and stimulating, exciting curriculum for *all* kids is pretty tough in today's high-stakes testing atmosphere." She went on to state:

I think we need high standards, but they need to be based on mastery principles. We need to be asking, "Is this young person really learning, understanding, thinking deeply, and willing to take risks?" Rather than

“Does she know the capitals of all the states?” I think those are the kinds of standards that we need, and schools do need to pay attention to them. [But] I think the whole thing breaks down when we try to test for it. Good teachers know when students are learning and when they are thinking deeply and whether they are thinking creatively and making a contribution, but when we try to test for it, it becomes very difficult. And then when the testing movement becomes the be-all-and-end-all in schools—I don’t know how much time you’ve spent in schools lately, but when we go and talk to teachers now, they are overwhelmed by it. They have told some other folks here at [the university] that they can’t even think about participating in research, because all of their thinking and working time with their students is dominated by this need to do well on the [state test]. So it’s not that I don’t believe in testing and standards. I do. But I think we have to be very careful that it doesn’t take us to the point where children are really not learning anymore (Expert #1).

This expert’s concerns about the role that assessment currently plays in education are expressed in terms that highlight her support for developmentally appropriate education, intellectual autonomy and social justice, all of which are linked to her conception of education as a transformational process. The following statement made by Expert #3 also demonstrates a linkage between his view on the purposes of education and his support of developmentally appropriate education and intellectual autonomy.

People think that teaching is simply communicating information to get a high score on a test. Students themselves have failed to recognize what really it’s all about. The excessive emphasis on content, per se, and information, per se, is actually handicapping the effectiveness of achieving that information. To learn best and to learn in ways that last, they need to have involved, their total person—to have some sense of ownership, some sense of purpose, to see what they’re about beyond simply being able to provide the right answers and then forget them...The paper and pencil tests, that merely measure the temporary acquisition of information, do not in any way give an indication of whether students are achieving those more important parts of an education (Expert #3).

He goes on to explain what is, in his view, the root cause of over-reliance on assessment. Like Expert #1 whose expertise was also in middle level education, he

describes the obstacles presented by current approaches to assessment as society's well-intentioned, but confused, effort to promote and reward excellence. He states:

People have this notion of the great academics—the high and mighty—but in fact they're really talking about skills. Skills are not the same thing as content, per se. Skills last. Content fades. And yet the emphasis is on content, and we are under-emphasizing the skills. When you get right down to it, that's what lasts—attitudes and skills, not specific bits of information. Skills like learning how to deal with information, the ability to read context clues, to analyze, to interpret graphs, to interpret political cartoons, to draw inferences from statements, to find out where information is available and how to organize it and articulate it. Skills including social and personal skills. Interpersonal skills; intrapersonal skills; problem solving skills; reading, writing, speaking skills. A sense of personal responsibility. The skill of dealing with your emotions without resorting to violence. These are all things that really determine how effective one is in life. These are the things that last. These are the things that are really important, and yet the emphasis now is on the acquisition of information. Information which we know will soon fade (Expert #1).

Like those of Experts #1 and #3, the opinion of Expert #4, whose area of expertise was intellectual autonomy, was also related to her view on the purpose of education. Unlike Experts #1 and #3, she expressed concern about the use of test results, and her explanation of the root cause of over-reliance on testing was even more specific than that of Expert 3. She explains:

There's, like, a blind faith in testing, and teachers—especially inner-city school teachers—are drilling kids so they will do well on tests. So it's not testing, per se, that is so harmful, but it's all the *adult heteronomy* descending from the superintendent's order that says to all the principals, "Thou shalt raise test scores." Principals transmit that order down to teachers and Teachers are drilling, drilling, drilling kids. You must have heard some of the horror stories. [In this country], [t]he supposition is that teachers are lazy, therefore we have to check up on them and we have to make them work hard. That's the whole plan. There are many countries where teachers would just not put up with that kind of treatment, but most teachers [here] are heteronomous. They are HETERONOMOUS. "Yes, yes, yes. Anything you say. We'll comply with anything." Teachers are heteronomous. But...Okay, it's not the testing itself, because when I used to give achievement tests the test scores just went to the files and nobody

paid any attention to test scores. It's the adults who are taking the results so seriously who are at fault. (Expert 4)

Unlike Expert #1 and #3, Expert #4 expressed concerns about assessment that were related to more than content. She also expressed the belief that assessment should inform instruction in ways that promote learning rather than simply rank students.

[Currently], the results are of no use to teachers because if you see something like "symbolic notation" you don't know what that means. You can't see the items and you don't know what the kid did and how he messed up the question. So it's of no use to teachers. Besides, the tests come back too late for them to do anything... Another thing that is a problem is the norm-referenced thing. So that kids are competing against each other. If it's criterion-referenced, the teacher knows that helpful information. The test items also have some answers that children have to produce, in which case, teachers know—or learn—that drilling is just not going to produce anything. So if you're going to test, test intelligently rather than the stupid way—the harmful way—the cheap, but harmful way (Expert #4).

While current assessment practices were the most commonly identified obstacles, most of the experts also identified other obstacles, many of which were related to the same root causes of assessment-related problems. For example, Expert #3 identified narrow views on the purpose and scope of education as a root cause of reform obstacles as such views give rise to disconnected perspectives and influences that compete for educational resources. The quote below illustrates his view:

The narrowness of the concept of what an education is, is to me, the real source of most of our problems. Parents are not asking the right questions. They're saying, "How can my kid get a better grade?" They're not asking, "How can my kid develop a better character?" And "What can you do about it in school?" Those are really the key questions... and education includes those things. Parents somehow don't realize what their kids are missing when they're feeling good about their getting more of the same and studying the four basic subjects even more than they once were... Another obstacle is the commercialization that's coming in—The Channel One, and the advertising, and all of that. There's an effort of people with other agendas taking over the schools, or at least getting their oar into the water of the schools and trying to direct them.... Providing free and inexpensive materials which have a particular bias, or worse,

they're becoming—It's a terrible thing to leave to the media and to the advertisers and all that, the opportunities to influence people about what they believe and what they think is important and how they should act...For the schools to deny that is to leave to Madison Avenue and Hollywood, the establishment of one's values. And to me that's a terrible thing (Expert #3).

Expert #1 also identified the public's narrow conception of education and the increase in commercial programs for educational reform as major obstacles. Unlike Expert #3, Expert #1's discussion narrow scope focused on a specific circumstance related to school climate, rather than to the general issues of school purpose. She explained:

I believe that we need both the positive interpersonal relationships and the academically challenging mastery environment... [but] there are parents who think that has nothing to do with school—that they're not about warm relationships—so you get them attacking that. Or, there are parents who don't want children to have too much decision-making power, so then it gets attacked. And this has not only happened to the middle school, but it has happened to a lot of other progressive movements along the way (Expert #1).

With regard to commercialization, Expert #1 was less concerned about the possible biases or values promoted than about issues of over-generalization and the impact that inattentive implementation has on the reputation of reform goals and on educators' willingness to consider well-planned versions of reforms that involve the same goals. She states:

I think people try something and they believe it—They have a school, a group of students, whatever it might be, and it seems to work, and then they sort of package it. There are a lot of people who go around and try to sell these programs. "Here are the 12 steps to promoting success for all young adolescents." And then, because the new schools that they go into have not necessarily gone through all the thinking processes that perhaps the original schools did—or don't implement it in the same way, or there's no research conducted that really provides one with an understanding of what's working and what isn't, then you're kind of left with, "Well we tried that and it didn't work" (Expert 1#).

The opinion of Expert #2, whose work focused specifically on failing urban schools and the challenges of reform in that context, differed from the other experts—all of whom investigated particular issues and/or particular grade levels across localities. His perspective on obstacles were strongly related to his definition of at-risk students—which emphasized achievement disparities; and his frustrations were strongly influenced by his over-exposure to failed reform efforts in urban contexts—which he generalized to education at large.

I would say that biggest obstacles are the teacher's union, the "status quo", developmentalism, and the fact that the American public schools tend to be operated for the benefit of the educators rather than of the children. These are very unpopular thoughts. Maybe you shouldn't tell your professors [laughter]...Educators are not really true professionals like attorneys and physicians are because they're not paid individually by clients. So the clients of educators have relatively little power to shape the school, and if they have very incompetent teachers or teachers who...are not encouraging, there's very little that a parent can do...I think that we have major difficulties throughout K-12 schooling, but I think high school is particularly doing badly these days. And there's a lot of keen interest in education reform at the high school level. I think part of the problem is that they're large, [and] they tend to be specialized. In elementary school, the teacher teaches kids. In the high school, they teach civics or history, or other subjects, and it's just like hospitals that just treat diseases rather than people. You're not really being treated as an individual, you're being treated as a category. Bilingual, special education, at-risk, or something like that, and you wanted to be treated as a person. I think that that's a major difficulty with the high school level and one of the reasons why we have such high drop out rates in the United States (Expert #2).

While his views on the role of teachers' unions were strongly influenced by the urban high school context, and his opinions regarding to the usefulness and the effectiveness of developmentally appropriate education differed significantly from the other researchers, his concerns about school climate echoed the sentiments of the other researchers. Like Experts #1, #3, and #5, Expert #2 was concerned about the nature and

quality of teacher-student relationships and interactions. He was particularly concerned about the potential negative impact of a large student body and departmentalization on the interactions between teachers and students with special needs. In his view, political organizations (such as teachers unions) have interfered with the implementation of reforms that improve these interactions and reduce student alienation and withdrawal.

Theme #4: Overcoming Obstacles

When asked what they believed needed to happen in order to overcome the obstacles they identified, the experts emphasized the need for consensus regarding the purposes and scope of education. Without consensus, they feared that reform efforts would continue to be implemented in ways that were not intended, and lead to results that undermine the validity of the reform goals. Expert #1 expressed this in the following statement, which illustrates how—despite a great deal of effort to reform assessment—the lack of consensus about the purpose of assessment and the uses of assessment results can lead to a re-emergence of the same problems that the reforms were designed to address. She states:

There are people here that have been involved in improving standardized tests. And they're better than they used to be. But it's still...Let me just give you one little example. Evidently on many standardized tests [students are expected to] write an essay. You think, "Oh good, we're not just going to ask them about where the apostrophe goes." But now what's happened is that, of course, those who score the essays have to have criteria. So then the teachers teach the kids what the criteria are. "You have to have this, and then you have to have these three paragraphs, and then you have to have a summary." That squelches it. There has also been an effort to improve the science so that students are not just being asked for a formula or thing like that, but they have to design an experiment and so forth. I think that's a step forward, but I do think that it's not been a good, productive movement that—The goal to provide every student with a school where they're going to come out at grade 12 understanding something, knowing something, being ready to move forward in their

lives, is a great one, but I guess we just don't have it all figured out yet (Expert #1).

While Expert #1 remained hopeful that time and research would eventually support consensus about the purposes and scope of education, she remained uncertain as to how this might be done. She described her experience of working in a middle school for three years, attempting to promote heterogeneous grouping. To paraphrase her description: Although the teachers initially expressed concern about the possible negative effects of the practice, through in-services, interaction, and support from the administration, they began to see that doing away with ability grouping and gifted programs did not require them to "lower the ceiling or put a ceiling on some of these very talented young people." Unfortunately, as she went on to state, "there are some people you're never going to convince. I think we all know that parents of gifted and talented children have a lot of power and they often go storming to their superintendent of schools or to principals and say that their children are not being accommodated."

Her experience suggests that consensus is needed not simply within educational institutions, but also within society. Expert #3 concurred, but was much less hopeful that this will ever be achieved. He stated, "I find the public simply closed to the message. They don't want to hear. They think they know. And I have difficulty getting them to realize what all is involved."

The reference to "adult heteronomy" made by Expert #4 also suggests that overcoming the obstacles related to assessment is not simply a matter of agreeing on test content. Her description of the problem emphasized the need to come to consensus on appropriate uses of test results, and indirectly suggested a possible means of overcoming related obstacles. To paraphrase her opinion: Too many people are too willing to accept

the *status quo* and endorse a course of action because it mirrors their experience. Also, too many people oppose change based on their fear of possible negative consequences, and accept the opinions handed down by old authorities rather than evaluate the situation for themselves. In other words, people seem to be more comfortable with learning how to function in the current system—whatever its flaws—rather than devoting the time and energy required to learn more about the situation, form their own opinions, suggest a different course of action, and risk being incorrect.

Conclusions Arising from Interview Data

Based on the participants' responses to the interview questions, five major conclusions seem apparent. The first conclusion is that the experts interviewed in this study held two distinct views on the value of DAE at the middle level. One view (held by four of the experts) considered DAE to be a productive concept that promotes sensitivity to students' characteristics and needs, and helps educators set realistic expectations for student learning. The other view (held by Expert #2) considered DAE to be a destructive concept that promotes low standards and shifts the focus away from empirically supported contributors to student achievement.

The second conclusion is that they held similar views on the nature of intellectual autonomy and its value in middle level education and reform. All of the experts viewed intellectual autonomy as a productive concept that encourages educators to promote critical thinking and decision-making skills. In addition, they believed that these skills associated with intellectual autonomy promote more effective functioning in both academic situations and life situations.

The third conclusion is that they held similar views on the nature of at-riskness. Although features of at-riskness emphasized in recent literature were more salient to some (Expert #1, #3, and #4) than to others (Expert #2 and #5), all recognized that students who are members of groups traditionally associated with at-riskness tend to fare worse with regard to achievement and attainment. All also recognized that the nature of the learning environment contributes in some way to these outcomes, and they believed that caring interactions coupled with reasonably high expectations could help to reduce the incidence of negative outcomes.

The fourth conclusion is that they held similar views on the nature of educational resilience, but two distinct views on the value of the concept for middle level education and reform. All recognized that educational resilience is related to the general concept of resilience. In addition, they believed that the traits associated with resilience should be fostered in all students (at all grade levels), and that the recommended strategies for fostering the development of these traits should be common practice for *all* schools. They disagreed, however, about whether using this concept as a guide to reform would be productive. Two experts (#1 and #4) worried that its use would encourage educators to shift the responsibility (for coping) onto the students. The other three experts (#2, #3, and #5) believed that its use could encourage educators to alter learning environments in ways that facilitate the development of competence and commitment to school. With regard to these views, it is important to note that Experts #1 and #4 believed that the concept *would* lead to negative outcomes, and Experts #2, #3, and #5 believed that it *could* lead to positive outcomes. As I will discuss later, this distinction has significant

implications for the potential value of educational resilience in middle school transformation.

The final conclusion that arose from the interview data relates to the participants' perspectives on reform obstacles. All of the experts viewed "a narrow perspective on the purpose and scope of education" as the primary obstacle to reform progress. In their view, narrow perspective has contributed to an exclusive focus on subject-area content and facts, and created opposition to reforms designed to improve the school climate or foster student autonomy. In addition, two experts (#1 and #3) identified narrow vision as a contributor to disconnected and competing reform initiatives, and to assessment practices that emphasize fact acquisition rather than higher-order skills and progress toward expected levels of competence. Four of the experts (#1, #3, #4, and #5) expressed a great deal of concern about the role of norm-referenced standardized tests in maintaining the status quo with regard to educational practice. They also expressed concern about the tendency to use the results of these assessments in ways that undermine reform initiatives and in ways that create additional barriers for struggling students and urban schools. To overcome the obstacles presented by inappropriate assessment the participants suggested the use of curricula and assessments that are aligned with the specific goals for content and skill learning as well as a broader set of goals for education. They were uncertain, however, how to promote greater consensus regarding the content and skills to be learned and the broader set of educational goals. In the words of Expert #1, there are some people that you are never going to convince, because, in the words of Expert #3, some people are simply closed to the message.

Survey Results

As stated in the Chapter 8 (Empirical Methods), the interview data was analyzed to determine the degree of consensus about the meaning of particular concepts, their relationships to the other concepts, and their expected utility in educational practice and reform. This analysis yielded interpretations of the experts' views, which were then translated into statements that the participants were asked to consider during the survey. Survey responses were also analyzed to determine the degree of consistency/discrepancy between survey interview responses. As discussed in the previous chapter, three of the five experts (#2, #3, and #5) returned the survey. While Expert #1 was unable to complete the survey, Expert #4 declined to the opportunity to do so because she was uncomfortable with the statements. In her explanation of why she felt uncomfortable she said, "On the whole, I find your statements often impossible to respond to because I can't say anything about ALL criterion-referenced tests, for example."

Although I attempted to make it clear throughout the participation process that I wanted each expert to supply his or her *own* opinions and general impressions, it appears that Expert #4 held firm to the belief that she was being asked to represent everyone in her area of expertise, hold expertise in all five areas, and speak about practices as if one implementation represented all of the possibilities. This was unfortunate as it reduced the amount of survey data for analysis. However, due to multiple areas of expertise within among the three participants who returned the survey, four of the five topic areas were represented. The paragraphs below describe the content of the survey and present the results of analyses conducted on the data.

Concept Definitions

The following statements relate to the definitions of each of the five concepts as expressed in the interviews. They are organized by topic and followed by a summary of the participants' responses. The statements were derived from specific statements made in the interviews, and experts were informed that the interview responses were the source of the statements.

Developmentally Appropriate Education

During the interviews one expert (#2) expressed concern about the potential of developmentally appropriate education to be implemented in ways that limit students' opportunities to learn. Another expert (#4) expressed concern that failing to attend to students' developmental characteristics may lead to the inclusion of curriculum content (e.g., fractions) about which students are not yet capable of reasoning. While some of the other experts were asked about these different perspectives, everyone did not have an opportunity to respond to these statements. Because the experts' responses bear on the potential value and role of developmentally appropriate education in promoting constructive dialogue and identifying an organizing principle for reform, the statements below were presented for evaluation during the survey.

- When I hear the phrase, "developmentally appropriate education", I think primarily of the boundaries that the practice constructs around students' capabilities.
- When I hear the phrase, "developmentally appropriate education", I think primarily of the effort to meet student needs that the practice represents.

In response to the first statement, Expert #3 disagreed and Expert #5 strongly disagreed. In response to the second, Expert #3 agreed and Expert #5 strongly agreed.

These responses paralleled their interview responses, and indicate their support for educational practices that are responsive to students' developmental characteristics and needs. On the other hand, Expert #2's responses to both questions did not parallel his interview response. As reported in the interview results, he described developmentally appropriate education as "a terribly destructive idea because it encourages the idea that children can't learn until some golden moment or golden stage. However, in response to both of the above statements he wrote "??? I do not understand statement" on his survey form. These responses were not expected and I am not sure how to explain this outcome.

At-Risk Students

During the interviews I examined the ways in which the experts from the five focal topic areas think about the notion of at-riskness and characteristics of at-risk students. Their responses to the interview questions indicated that they view at-riskness as a concept that has a psychosocial component. Based on their responses I was interested in whether they perceived the characteristics of at-risk students in terms that are more traditional (e.g., based on specific negative outcomes) or in terms that are more modern/recent (e.g., based on psychosocial/socio-emotional precursors to a range of negative outcomes). Because their opinions about appropriate responses to addressing at-riskness (e.g., resilience education) may relate to the relative attention paid to traditional and modern features, I thought it was important to investigate how they perceived the relationship between outcomes (such as low achievement, delinquency, and dropping-out) and psychosocial features (such as alienation and disaffection). This relationship has implications for views on the potential value of educational resilience in addressing at-riskness, since resilience education programs emphasize a direct relationship

psychosocial features and outcomes such as those presented above. For this reason, the statements below were presented for evaluation during the survey.

- When I hear the phrase “at-risk students,” I think of students who are statistically more likely to receive poor grades and/or test scores, and/or to become teenage parents, and/or to become involved in criminal activities, and/or to drop out before graduating from high school.
- When I hear the phrase “at-risk students,” I think of students who—regardless of measured achievement—display signs of alienation/disaffection, and/or emotional immaturity, and/or social difficulty.

In response to these items, Expert #3 strongly agreed with both and Experts #2 and #5 agreed with both. These responses parallel their responses to the interview questions and indicate their support for a definition of at-risk students that incorporates both traditional and modern (i.e., psychosocial) features. Also important to note is that all of the experts gave equal weight to both statements. This indicates that they do not view at-riskness more in terms of precursors or outcomes, and suggests that they view the psychosocial features and negative outcomes associated with at-riskness as directly related to one another. This parallels their interview responses regarding the relationship between psychosocial issues and student behaviors/outcomes, and is consistent with the relationship presented in literature on resilience education.

Educational Resilience

In response to interview statements regarding images of coping (as opposed to responsiveness) that the phrase “educational resilience” triggered in Experts #1 and #4, I presented the following statements:

- When I hear the phrase “educational resilience,” I think primarily of the positive characteristics of students who meet or exceed normal expectations despite adverse life and/or learning conditions.
- When I hear the phrase “educational resilience,” I think primarily of the negative characteristics of the environments that students are expected to cope with.

In response to the first statement, Expert #2 strongly agreed and Experts #3 and #5 both agreed. With regard to the second statement, Expert #2 agreed, Expert #3 took a neutral stance, Expert #5 strongly disagreed. These responses indicate that the experts associate educational resilience more strongly with positive characteristics of students than with negative features of the environment.

Only Expert #2 associated educational resilience with negative features of environments. This was an unexpected response that I am unsure how to interpret. In the interview and survey Expert #2 offered many contradictory opinions about educational resilience. While his response to the second statement may be due to his view of educational resilience as overcoming adversity—hence the focus on negative features of the environment, his response may instead be related to a statement he made in the interview about his current perception of educational resilience. In the interview one statement he made was that educational resilience is not a particularly useful concept for reform, and that a focus on educational productivity might lead to fewer negative associations and to better school-based approaches to addressing the effects of adverse conditions on academic performance. For these reasons, I am not sure whether his response to the second survey statement suggests a negative view on educational resilience.

An additional item related to educational resilience was presented in list format. This item was designed to elicit the experts' reaction to a range of characteristics that are associated with educational resilience in the literature. The purpose of this item was to determine the degree of overlap in the characteristics the experts associated with educational resilience. Since the experts generally agreed in the interviews that schools should attempt to foster the traits of educational resilience in all students, I thought it was important to investigate the range of characteristics to which they referred. In addition, since one of my claims was that educational resilience is a concept that attends to intellectual and psychosocial issues, I thought it important to determine which intellectual and psychosocial characteristics the experts associated with the concept and examine how these related to the intellectual and psychosocial characteristics they associated with intellectual autonomy.

For the item below, the experts were asked to select from a list, the student characteristics that they associate with educational resilience. The relevant survey statement was as follows:

- If a group of students was described to me as “educationally resilient,” I would expect them to: (select all that apply)
 - ☐ achieve their maximum intellectual potential regardless of the educational circumstances
 - ☐ make the best of their educational situation
 - ☐ be persistent
 - ☐ set high goals for themselves
 - ☐ believe that effort is the key to success
 - ☐ believe that ability is the key to success
 - ☐ question expectations for their success in school and life
 - ☐ feel personally responsible for success
 - ☐ know how and when to seek help
 - ☐ behave responsibly in academic situations
 - ☐ behave responsibly in social situations

- ☐ be focused
- ☐ respect themselves
- ☐ respect others
- ☐ view themselves realistically
- ☐ view others realistically
- ☐ view situations realistically
- ☐ seem mature beyond their years
- ☐ be stunted in non-academic domains
- ☐ like school
- ☐ hold high career aspirations

In response to this prompt, Expert #2 selected all 21 options (including “be stunted in non-academic domains”). Expert #3 selected two of the options (“make the best of their educational situation” and “view situations realistically”), which were also selected by the other experts. Expert #5 selected 13 of the options—all of which were also selected by Expert #2. Based on the selections made by Expert #5, he expects educationally resilient students to:

1. achieve their maximum intellectual potential regardless of the educational circumstances
2. make the best of their educational situation
3. set high goals for themselves
4. be persistent
5. feel personally responsible for their success
6. know how and when to seek help
7. behave responsibly in academic situations
8. behave responsibly in social situations
9. be focused
10. view themselves realistically
11. view others realistically

12. view situations realistically, and
13. seem mature beyond their years

Due to the small number of options selected by Expert #3, the experts' expectations for educationally resilient students overlap only with regard to two characteristics—make the best of their educational situation, and view situations realistically. This may be due to the fact that Expert #3 was less familiar with educational resilience than the other two experts, however, it also indicates that he does not associate educational resilience with many of the characteristics identified in the literature as contributors to success in school and life. When I compared the responses of the experts who are more familiar with the concept, I found 13 overlaps—all of which are represented in the list above. While all of these are positive learner characteristics, Expert #2 also selected an option that suggests that he expects educationally resilient students to be stunted. In addition, Expert #5 did not select characteristics related to effort and ability attributions, questioning expectations, respect for self and others, liking school, and holding high career aspirations. The literature on educational resilience describes these characteristics as important contributors to motivation and an internal locus of control, as well as to autonomy, academic achievement, and educational attainment. These indicate that while Experts #5 associates educational resilience with 13 of the characteristics associated with success in school and life, he does not associate the concept with 7 of the others. In addition, the responses of Experts #3 and #5 suggest that they do not associate educational resilience with many of the characteristics associated with intellectual autonomy. This may be due either to the way that they view

educational resilience or to the way they view intellectual autonomy. Their responses to the next survey item were used to determine which was more likely the cause.

Intellectual Autonomy

As the experts did not express any conflicting views about the nature and meaning of intellectual autonomy, the only item on the survey that related to intellectual autonomy was presented in “list” format. As was the case with educational resilience, the purpose of this item was to determine the degree of overlap in the characteristics the experts associated with intellectual autonomy. Since the experts generally agreed in the interviews that schools should attempt to foster the traits of intellectual autonomy in all students, I thought it was important to investigate the range of characteristics to which they referred. Due to my interest in how the experts viewed the relationship between intellectual autonomy and educational resilience, I thought it was important to examine how the characteristics they associated with intellectual autonomy related to the characteristics they associated with educational resilience.

For the item below, the experts were asked to select from a list, the student characteristics that they associate with intellectual autonomy. The relevant survey statement was as follows:

- If a group of adolescent students was described to me as “intellectually autonomous,”

I would expect them to: (select all that apply)

- ☐ be able to set learning goals and evaluate their progress towards those goals
- ☐ be able to motivate themselves to persist through “drill and practice” tasks
- ☐ set acceptably high standards for themselves
- ☐ behave responsibly in academic situations
- ☐ behave responsibly in social situations
- ☐ know when to seek help and how to elicit help
- ☐ critically evaluate claims made in their textbooks and in the media
- ☐ hold steadfast to their beliefs

- ___ have difficulty taking the perspective of others
- ___ believe that they are always right
- ___ challenge adult authority in inappropriate situations

In response to this prompt, Expert #2, again, selected all available options (including “have difficulty taking the perspective of others,” “believe that are always right,” and “challenge adult authority in inappropriate situations”). Expert #3 selected three of the options, and Expert #5 selected five. The options selected by Expert #3 were, “be able to set learning goals and evaluate their progress towards those goals,” “behave responsibly in academic situations,” and “know when to seek help and how to elicit help.” These were among the options selected by Experts #2 and #5. In addition to these options, Expert #5 also selected, “set acceptably high standards for themselves,” and “critically evaluated claims made in their textbooks and in the media” —both of which were also selected by Expert #2. These results suggest that Expert #3 does not associate intellectual autonomy with 8 features emphasized in the literature, Expert #5 does not associate intellectual autonomy with 3 characteristics emphasized in the literature, and Expert #2 associates intellectual autonomy 3 negative characteristics that are not identified in the literature.

Also important to note is that Expert #3 did not associate intellectual autonomy with the tendency to for students to “critically evaluate claims made in their textbooks and in the media.” This response is not consistent with his interview response and I am not certain how to account for the differences between his interview and survey responses. In the interview, the first criterion that he mentioned with regard to intellectual autonomy was, “Not accepting on face value, what one reads or hears.” He went on to state:

Too many of our citizens are so blasé and naïve, and are not willing or able to be analytical and thoughtful and question what people are saying. We're seeing everyday, in the news and on television, all the trouble we're getting in because people are accepting at face value something that they've heard or read...Now most researchers would indicate that probably less than half of the American public has actually achieved the level of formal operations. By in large, too many of our citizens never really utilize their minds. They are never pushed, as they should have been pushed when they were young adolescents, to be analytical and thoughtful and perceptive. And so one can go through college and even graduate without, essentially, learning higher-order critical thinking skills. After all of that schooling they can leave with an inability to use their mental potential. What prevents us from overcoming this is that we do not sufficiently involve the students in deciding what to study and how to study it. We have not gotten the students actively involved as learners. They are the passive recipients of the judgments of the teacher and the textbook writers, as opposed to being the collaborating co-learners that they need to be. I think that this is the biggest single lack in education.

Similar to the case with educational resilience, due to the small number of options selected by Expert #3, the experts' expectations for intellectually autonomous students overlap only with regard to three characteristics. All three experts expected intellectually autonomous students to (1) be able to set learning goals and evaluate their progress towards those goals, (2) behave responsibly in academic situations, and (3) know when to seek help and how to elicit help. While Expert #5 was more familiar with the literature on intellectual autonomy than Experts #2 and #3, he selected fewer options than Expert #2 (who selected all of the 11 options). The five overlaps between the responses of Experts #2 and #5 are represented by the options selected by Expert #5 (three of which are shared with Expert #3).

According to the options selected by all of the experts, they expect intellectually autonomous students to:

- be able to set learning goals and evaluate their progress towards those goals
- behave responsibly in academic situations

- know when to seek help and how to elicit help.

Based on the additional shared options selected by Experts #2 and #5, they also tend to expect intellectually autonomous students to:

- set acceptably high standards for themselves, and
- critically evaluate claims made in their textbooks and in the media.

While there were no overlaps between the characteristics of intellectual autonomy and educational resilience in the responses of Expert #3, the three characteristics of intellectual autonomy that were shared by all three experts overlap with those for educational resilience selected by Experts #2 and #5. Additional overlaps between intellectual autonomy and educational resilience in the responses of Experts #2 and #5 related to persistence, setting high goals/standards for themselves, and behaving responsibly in social situations. The responses of Experts #2 and #5 indicate that intellectual autonomy can be considered a central feature of educational resilience, but the lack of overlap in the responses of Expert #3 indicates that, in his case, this is not a valid conclusion. He does not appear to view educational resilience and intellectual autonomy as related concepts.

General Perspectives

This section presents the results related to the participants' general views of education, reform, obstacles to reform, and educational resilience as a means of overcoming reform obstacles. Statements one, nine, ten, twenty, and twenty-one related to the current state of education and the progress of educational reform. The content of these statements is as follows:

1. When I consider the collection of educational issues that are of most importance to me, I evaluate the current state of American education as:
- ___ Much better than it was in previous years
- ___ Similar to previous years
- ___ Much worse than it was in previous years
9. In my opinion, efforts to improve the educational outcomes for at-risk students have been:
- ___ Largely successful
- ___ Marginally successful
- ___ Largely unsuccessful
10. In my opinion, efforts to improve the social outcomes for at-risk students have been:
- ___ Largely successful
- ___ Marginally successful
- ___ Largely unsuccessful
20. The current environment of the majority of middle schools is healthy for early adolescents' psychological/social development.
- | | | | | | |
|-------------------|---|---|---|---|----------------|
| Strongly Disagree | | | | | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | |
21. The current environment of the majority of middle schools is healthy for early adolescents' intellectual development.
- | | | | | | |
|-------------------|---|---|---|---|----------------|
| Strongly Disagree | | | | | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | |

In response to statement one, Experts #3 and #5 evaluated the current state of American education as “similar to previous years” and Expert #2 evaluated it as “much worse than it was in previous years.” In response to statement nine, all three experts

expressed the opinion that efforts to improve the educational outcomes for at-risk students have been largely unsuccessful. Expert #2 and Expert #5 held the same opinion about efforts to improve the social outcomes for at-risk students, while Expert #3 believed that these efforts have been marginally successful. When asked to consider the particular case of middle level schools, all three experts disagreed with the statement that the current environment of majority of middle schools is healthy for early adolescents' psychological/social development and intellectual development—with Expert #2 strongly disagreeing with the statement related to intellectual development.

The participants' responses to the survey items indicate that there is general consensus on three points: 1) in general, efforts to improve learning environments and student outcomes have not achieved their potential, 2) the middle school, in particular, is in need of reforms that improve both the intellectual and psychosocial aspects of students' education, and 3) increased emphasis on intellectual autonomy may provide the means to address these issues. However, there is a lack of consensus, and a notable degree of inconsistency with regard to assessment, which—as many researchers have bemoaned—both drives educational reform and influences educational practice.

Statements two through six in the survey related to assessment. Statements two through four were designed to elicit the experts' opinions with regard to the impact that norm-referenced standardized tests have had on educational standards, educational practice, and academic achievement. Statement five related to whether experts believed that the use of the results was more of a problem than the design of the tests. Statement six related to the experts' opinions with regard to the role that criterion-referenced tests

could play in addressing the problems that they associated with assessment. These survey statements were as follows:

2. **Norm-referenced standardized tests** have contributed to the creation of higher educational standards.

Strongly Disagree				Strongly Agree
1	2	3	4	5

3. Norm-referenced standardized tests have contributed to the improvement of educational practices.

Strongly Disagree				Strongly Agree
1	2	3	4	5

4. Norm-referenced standardized tests have contributed to increases in academic achievement.

Strongly Disagree				Strongly Agree
1	2	3	4	5

5. Norm-referenced standardized tests, themselves, are not the problem. It is the way that the results are used that is problematic.

Strongly Disagree				Strongly Agree
1	2	3	4	5

6. Increased use of **criterion-referenced** tests and other **alternative assessments** would have a more positive impact on educational practice and student achievement than norm-referenced tests have had.

Strongly Disagree				Strongly Agree
1	2	3	4	5

In response to the second statement, Experts #3 and #5 disagreed that “norm-referenced standardized tests have contributed to the creation of higher educational standards.” Expert #2, who expressed the strongest support for standardized testing,

strongly agreed with this statement. He also strongly agreed with the statements that “norm-referenced standardized tests have contributed to the improvement of educational practice” and “have contributed to increases in academic achievement.” With regard to the contribution to improving educational practice, Expert #3 disagreed and Expert #5 agreed, and with regard to its impact on achievement, Experts #3 and #5 both took a neutral stance.

When asked to rate their level of agreement with the statement that “Norm-referenced standardized tests, themselves, are not the problem. It is the way that the results are used that is problematic,” Expert #2 declined to answer stating that either or both could be the problem, while Expert #3 agreed and Expert #5 disagreed. With regard to the possibilities presented by criterion-referenced testing, Expert #3 strongly agreed and Expert #5 agreed with the statement that “Increased use of criterion-referenced tests and other alternative assessments would have a more positive impact on educational practice and student achievement than norm-referenced tests have had.” Expert #2 took a neutral stance.

These findings suggest that, in general, the experts believed that norm-referenced standardized tests have not contributed to higher education standards or higher achievement, but have contributed to improvements in educational practice. In addition, they generally believed that the use of criterion-referenced tests and other alternative assessments would have a more positive impact on educational practice and student achievement than norm-referenced tests have had.

Conclusions Arising from the Survey Data

As mentioned above, the survey was designed to investigate issues that emerged from the analysis of the interview data and to gather additional information that I did not have an opportunity to gather during the interviews. This data was analyzed for agreement between experts as well as for congruence between interview and survey responses. For items that related to issues that emerged from the interview responses, I presented a brief introduction that explained that relationship and presented conclusions related to each issue. When items gathered new information (i.e., the first set of general perspective items) I presented conclusions specific to those items. In the content above, I have also discussed parallel responses/congruence when this issue applied. In this section I do not present all of these conclusions again. Instead, look across the survey data and discuss the general conclusions that arose.

Congruence of Interview and Survey Responses

The survey responses of Experts #3 and #5 matched their interview responses in most of the five topic areas, but the survey responses provided by Expert #2 contradicted his interview responses in many cases. Expert #3's response to the list item for the concept definition of intellectual autonomy was not congruent with his interview response, however, his responses to the other items were consistent—although in some cases, less robust than the opinions expressed during the interview. None of Expert #5's responses to the survey items contradicted his responses to the interview questions, but in his case as well, some responses were less robust than expected. For example, he selected a smaller number of options than expected from the list in the concept definition

of intellectual autonomy, however all of the selected items were consistent with the view on intellectual autonomy that he expressed in the interview.

On the other hand, Expert #2 responded to a number of survey items in a manner that was inconsistent with his interview responses and also expressed opinions that were less robust in some cases. For example, his responses to the concept definitions of educational resilience and intellectual autonomy indicated negative associations that were not expressed in the interview. In addition, he declined to answer more questions than the other two experts. A specific instance of this that was particularly unexpected was his response to the survey questions about developmentally appropriate education. In the interview he expressed a strong distaste for “developmentalism,” and his reaction to the concept was the basis for the question regarding “ceiling effects.” But in the survey, he expressed confusion about the meaning of the statement and declined to respond to both statements about developmentally appropriate education.

Some of these inconsistencies and reduced answer strength may have been due to the wording of the statements. While I based the content of the questions and their wording on statements made in the interviews, Experts #2 and #3 were interviewed earlier in the process and did not have the opportunity to discuss the meaning or context of some of the statements. This was a flaw in the survey design that may have impacted the results. Another issue that may have impacted the survey responses was the time lag between the interview and the survey. For Experts #2 and #3, this interval was at least a month longer than the interval for Expert #5. In the interim, some of the context for the questions may have been forgotten or they may have changed some of their opinions. Also, the experts were less comfortable generalizing their views (as expected in the

survey) than they were in expressing strong views in the interview (where they had the opportunity to frame their answer and explain). I believe that these factors may account for much of the inconsistency between the interview and survey data, and to the reduced answer strength on several of the survey items.

General Conclusions Arising from the Empirical Component

This section of the chapter presents conclusions related to the potential value of five focus topics/concepts in promoting dialogue and reform. Based on the responses of the five experts interviewed, the concept of developmentally appropriate education may be useful in initiating discussions and in identifying issues of context that may influence opinions about the purposes and scope of education. However, based on the interview response of Expert #2, it does not appear that this using this concept to frame efforts to promote middle school transformation would lead to consensus in the current context. Although this conclusion is based on the views of five particular experts, the strong distinct opinions expressed also appear in debates regarding on the value of developmentally appropriate education in educational practice. For these reasons, this does not appear to be a concept that could be effectively used as an organizing principle for middle school reform.

With regard to middle level education, only two of the five experts—those whose expertise was in middle level education—fully understood the intended purposes of the institution. The other three experts viewed middle schools much as they viewed elementary schools and high schools. They emphasized the content to be learned in the included grades, and expressed the hope that the schools would provide caring learning environments, but were completely unaware that the provision of a nurturing learning

environment was the impetus behind the development of, and practices advocated in middle level education.

While Expert #2 expressed many of the same opinions as the other four experts with regard to school climate, he was unwilling to think about this in terms of students developmental needs, and vehemently opposed the validity of developmentally responsive schools. This expert held the strongest orientation towards academic achievement as measured by standardized tests. This finding lends support to the existence of the dichotomy described in the archival component, and further suggests that simply explaining the middle school philosophy is not sufficient to promote consensus.

Although the survey results indicate that the experts agree that the typical middle level learning environment is not healthy in the intellectual or psychosocial sense, it appears that the middle school reform efforts would benefit by anchoring themselves to concepts that are more familiar than the middle school philosophy. In addition, it appears that these efforts would face less opposition if they were connected to concepts other than—or in addition to—developmentally appropriate education.

Based on the experts' responses to interview and survey items related to at-riskness, they view it as a multi-faceted issue and think about it in intellectual/academic terms and psychosocial terms. However, based on the interview responses of two of the experts, and the survey response of one expert, it does not appear that the concept of at-riskness would be useful in building consensus and promoting transformation.

On the survey form, Expert #2 described at-riskness as pejorative term that really shouldn't be used. Expert #1 expressed a similar sentiment in the interview. In her interview response, Expert #4 said that that the term had been operationalized in so many

ways in so many different studies that she had dismissed the concept, was unwilling to consider or any possible re-definition, and was uncomfortable with all questions related to the topic. She was willing, however, to discuss the topic of “harm to students” and identified instructional practices and features of the learning environment that promote intellectual heteronomy as major sources of that harm. This suggests that underlying issues in at-riskness may be useful in initiating discussions about the range of intellectual and psychosocial outcomes that reforms should aim to address, but under the name “at-riskness” the concept is unlikely to serve as an effective organizing principle for middle school reform.

While educational resilience is the concept for which I held out the most hope, this concept carried negative connotations for two of the five experts interviewed. For these experts the concept triggered ideas related to students’ ability to cope with a bad educational environment rather than those related to creating appropriate learning environments and a fit between individuals and the learning environment. including the expert in educational resilience. While this was not found to be the case in the survey responses of Experts #3 and #5, the response by Expert #2 associated the concept with an emphasis on negative features of the environment and with a negative outcome for students. Although the issues underlying these associations remain unclear, when considered in relation to the concerns expressed during the interviews, they suggest a potential problem with using this concept as a guide to reform.

While all five of the experts believed that the school-related protective factors that correlate with educational resilience should be standard practice for all schools, and that the characteristics associated with educational resilience should be fostered in all

students, they did not believe that reform should be based on the concept of educational resilience. This belief was due to fears that using this concept as a guide to reform might encourage a “pull-yourself-up-by your-bootstraps” orientation towards students—especially struggling students. This is not the view that is encouraged in the literature on the concept. However, the fact that this phrase triggered such important concerns indicates that educational resilience is the concept that is the least likely of all five of the concepts to assist in the process of consensus-building and middle school transformation.

Of all of the concepts explored in this study, intellectual autonomy showed the most promise for promoting constructive dialogue and consensus regarding to purposes and scope of middle level education and the practices of middle level schools. For all five of the experts in this study, this concept tended to trigger discussion of the intellectual and psychosocial characteristics and needs of students, and led to specific descriptions of expected competencies in academic and social domains. The concept was also explicitly linked to educational practice, and triggered discussion about the consequences of unmet intellectual and psychosocial need. Last, but not least, the concept of intellectual autonomy carried no negative connotations for experts in any of the five fields. While Expert #2 associated three negative behaviors with intellectual autonomy, his interview and survey responses were overwhelmingly more positive toward the concept than negative. This finding suggests that experts from a variety of fields might be willing to engage in open-minded discussions about middle level reform initiatives whose explicit—and primary—goal is to promote intellectual autonomy among early adolescents.

CHAPTER 10: DISSERTATION CONCLUSION AND DISCUSSION

In this dissertation I have attempted to achieve two major goals. My first goal was to identify a concept that reflects shared understanding of (1) middle school students' intellectual and psychosocial needs, (2) consequences of not meeting them, and (3) effective approaches to addressing them. My second goal was to identify perspectives and perceptions that could facilitate (or hinder efforts) to use this concept to promote middle school transformation. In an effort to achieve these goals, I examined selected literature in five research areas, and I interviewed and surveyed five prominent researchers in those areas. With this data, I looked for conceptual commonalities that could facilitate constructive dialogue about the purpose and goals of middle level education and for indications that the chosen concept could serve as an organizing principle under which reform designers could unite.

As discussed in the Chapter 1, this dissertation contained two components—an archival and an empirical component. While the research in both components contributed to achieving the major goals of the dissertation, the archival component contributed more toward achieving the first goal, and the empirical component contributed more toward achieving the second. In Chapter 7, I presented a summary of the conclusions that arose from the archival work. In Chapter 9, I presented the results and conclusions that arose from the empirical work. Here I reacquaint the reader with the major activities of archival and empirical components, summarize and integrate the conclusions that arose from each, discuss the limitations and implications of the study, and present suggestions for future research.

The Archival Component

Prior to the dissertation, I reviewed a small subset of literature on *developmentally appropriate education, middle level education, at-riskness, educational resilience, and structural and instructional reform*. During this review I noticed that most of the middle level education literature emphasized middle school transformation and the difficulty in achieving it. One particularly salient difficulty related to the obstacles to transformation presented by the range of diverse priorities and perspectives that influence programs and practices in middle level schools (Brough, 1995). During my review of the literature I also noticed several similarities in the content that suggested the existence of conceptual connections that could be useful in overcoming this difficulty and supporting the middle school transformation effort. These connections related to the ways in which the literature in these areas described early adolescents' intellectual and psychosocial needs, consequences of unmet need, and effective approaches to meeting students' needs.

Based on these similarities I decided to devote the dissertation to a more rigorous process for selecting literature from the five topic areas and analyzing that literature using archival methods. I employed this method for the purpose of (1) determining whether the connections that I first noticed would also be found in the rigorously selected literature, and if so, to (2) investigate two major claims (i.e., hypotheses) that arose from the preliminary review. The first claim was that all early adolescents are at risk for unnecessary academic and social difficulties if they attend middle schools with an unbalanced approach to addressing students' intellectual and psychosocial needs. The second claim was that middle schools could effectively address these risks if they use educational resilience as a guiding concept in reform.

The results from the content analysis performed on the rigorously selected literature on *developmentally appropriate education*, *middle level education*, *at-riskness* and *educational resilience*, and *structural and instructional reform* suggest that conceptual connections (i.e., shared understandings) exist across these topics. According to the literature reviewed, researchers/authors in all five areas recognize early adolescents' psychosocial needs for belonging, support, guidance, and autonomy, and student intellectual needs for problem-solving and decision-making skills, and challenging and interesting curricula. The researchers in these areas also appear to agree that failing to meet this set of needs frequently leads to declines in achievement and increases in behavior problems. When this failure is extreme or prolonged, students frequently exhibit high rates of disaffection, disengagement, school failure, and dropping out. In other words, they develop characteristics—and engage in behaviors—indicative of being “at-risk.”

To prevent these outcomes, or reverse emerging signs, the literature across topics encourages educators to identify and capitalize on students' characteristics and strengths, emphasize critical thinking and inquiry, eliminate practices that stigmatize students, and foster the development of caring and supportive relationships. These recommendations overlap considerably with recommendations in the literature on educational resilience.

Based on these findings, I concluded that *at-riskness* is a concept that has intellectual and psychosocial features—both of which must be addressed in order to avoid unnecessary academic and social difficulties for students. In addition, I concluded that that educational resilience is a concept that addresses both types of features, and reforms based on educational resilience could effectively reduce the risk of harm to students.

These conclusions closed the archival component of the work and gave rise to additional issues that I investigated in the empirical component.

The Empirical Component

This component proceeded from the assumption that identifying a problem and potential solution is not sufficient to produce an intellectual consensus, much less channel political will and resources into implementing that “solution.” This assumption was based on the beliefs that political will drives resource allocation, consensus drives political will, and constructive dialogue about purposes and goals promotes consensus. With this logic in mind, I hypothesized that *educational resilience* could be used to promote constructive dialogue and consensus since it is a concept that reflects many shared understandings about students intellectual and psychosocial needs, and effective approaches to meeting those needs. I also hypothesized that the consensus facilitated by adopting *educational resilience* as a guiding concept in reform could help to transform middle level education in ways that promote robust development in both the intellectual and the psychosocial domain. Such an outcome could help middle level educators and advocates achieve the long-held goal of providing early adolescents with “the best of both.”

To investigate these hypotheses, I enlisted the assistance of five prominent researchers with expertise in at least one of the five topic areas. I conducted interviews and then administered surveys in an effort to determine the experts’ views on each of the five topics, connections between them, possible contributions to reform, and obstacles to reform. While my specific aim was to assess the potential of *educational resilience* as a organizing concept, I also attempted to identify general perspectives on education and

reform that might suggest alternative or additional concepts that could be used to promote consensus and transformation.

The interview and survey results indicated that most of the experts also saw numerous connections between *developmentally appropriate education*, *middle level education*, *at-riskness* and *educational resilience*, and *structural and instructional reform* (in the forms of detracking and intellectual autonomy). While the number of experts who saw specific connections varied—as did the strength of connections between the topics—they were generally favorable toward concepts and approaches that attempt to address both intellectual and psychosocial needs. They described at-riskness as a concept that has intellectual and psychosocial features, and they believed that the traits associated with *educational resilience* should be fostered in all students.

However, the experts' responses to questions about the role that *educational resilience* should play in education reform, disconfirmed my hypotheses. Two of the experts believe that using *educational resilience* as a guide to reform would probably be harmful to students. The other three believed that its use could lead to some positive effects, but they also thought it could be harmful. These negative views of the concept were related more to impressions of the phrase “educational resilience” rather than to literature describing the concept and programs based on the concept. However, based on these findings, I concluded that educational resilience is a “negatively loaded” concept that triggered images of students being abandoned to cope with and overcome the challenges presented by inappropriate learning environments. In addition, I concluded that attempting to use this concept as a guide to reform is as likely to promote acrimonious debate as it is to promote constructive dialogue. However, sufficient

outreach efforts that present the rationale, describe resilience education programs, and present empirical results that demonstrate effectiveness at reducing negative outcomes could possibly reduce the negative connotations associated with the concept to a degree that facilitates consistently constructive dialogue.

In contrast, the interview and survey data suggest that *intellectual autonomy* is the concept with the most potential for promoting constructive dialogue and transformation. All of the experts were open to discussing the concept, its potential definition, practices that might promote it, and its value for “at-risk” students. For all of the experts the phrase “intellectual autonomy” triggered descriptions of positive intellectual traits and dispositions, as well as positive descriptions of the potential effects of *intellectual autonomy* on students’ functioning in life outside of school.

Overall Conclusion

While many Third-wave instructional reforms (1989-present) incorporated practices that are consistent with the recommendations in literature on *intellectual autonomy*, few explicitly connected their goals to this concept or the related literature. It is my belief that, without this organizing principle, these initiatives were misperceived, improperly implemented, and rejected at a higher rate than would be expected based on the degree of shared understanding about intellectual and psychosocial needs that these initiatives represented.

While I now endorse intellectual autonomy as a key concept in promoting middle school transformation, I am not suggesting that this is the only concept capable of promoting constructive dialogue, consensus, or concerted action. Literature on concepts or topic that were not included in this dissertation may also describe ideas and approaches

that could serve to channel political will and resources in ways that facilitate transformation efforts. I hope that this dissertation has shown, at least, that there are methods for identifying shared understandings and potential solutions to common problems in education and reform.

Limitations of the Study

Several limitations of the present study are important to note. These relate to both the archival and empirical components. I will discuss the limitations related to the archival component first. As mentioned in Chapter 2 (Archival Methods), limitations of the Social Science Citation Index (SSCI) restricted my ability to rely entirely on that process to select literature for analysis. In an effort to overcome this limitation I used additional methods for selecting literature. These methods were more subjective than the SSCI process, and may have contributed to the discrepancy between the archival results regarding *educational resilience* and the empirical results on that topic. However, I believe that by conducting the empirical component as a reinvestigation of connections and as an extension of the archival work, I was able to assess the degree to which higher subjectivity influenced the connections that I found. Based on the similarities in the connections found in the archival and empirical components, I concluded that the overall effect was small.

Another limitation arose from the small number of empirical implementation studies included in the dissertation. The search methods I employed in this study generated a majority of texts that explained theoretical frameworks and rationales, but few studies that described the results of implementation efforts. This limitation was partly due to my interest in conceptual connections but was also largely the result of the

lower citation frequency for individual empirical studies. This situation presented particular challenges in the sections devoted to effective approaches. I tried to mitigate the impact of this by focusing on general strategies and specific recommendations in the literature, but the paucity of empirical studies had an impact that was deeply felt.

A third limitation of the study concerns the small number of experts who participated in the empirical component. While I hoped to recruit five experts from each field, I was unable to enlist that number of participants. Had I been able to do so, I would have conducted analyses that examined similarities and differences between experts in a particular area. This would have assisted my efforts to understand the relationship between area of expertise and responses to the interview and survey items. With a total of five participants—and the loss of two participants between the interview and the survey—I had to conduct complex comparisons between interview and survey responses in an effort to separate expert effects from topic/concept effects. Inconsistencies between interview and survey responses and reduced answer strength on survey items further complicated this effort. As reported in Chapter 9, these analyses were sometimes inconclusive.

Implications of the Study

Literature selection and synthesis represent the first critical steps in any review or study. The literature that we select and the way that we interpret that literature frames our hypotheses, influences our methods, and ultimately, influences our conclusions. The body of literature devoted to particular topics or issues grows by volumes every day. Few researchers have the time to review all of the theoretical, implementation, and empirical evaluation literature on even one concept, and few researchers work centers around only

one concept. In broad topics like middle level education and reform the quantity of research literature can be especially overwhelming. This study has described a method of selecting and synthesizing literature that reduce some of the burden. It has also identified issues regarding consensus-building that could be useful in the early stages of reform design and implementation.

With regard to middle level education, the early stages of design and implementation are a distant memory to most educators. But these institutions are continually trying to fulfill long-held goals and adapt to new demands. The process used in this dissertation could potentially be adapted to serve the needs of reform designers, professional development program designers, and middle level educators, themselves. It is my hope that they could also find that *intellectual autonomy* is a potentially effective organizing concept for continuing with the task of middle school transformation.

Suggestions for Future Research

As stated in the introduction, this dissertation was not designed to produce a ready-to-use solution to the problem of reform stagnation at the middle level. However, the results of the study indicate that there are germs of shared understanding that could potentially be exploited to promote consensus, channel political will and resources, and transform middle level education. In the conclusion to the dissertation I nominated *intellectual autonomy* as a concept that might aid in this effort. This is an important first step in the long process of translating shared views into common goals and actions. However, additional research is needed.

One potential direction for that research could build on the findings of this dissertation by focusing exclusively on *intellectual autonomy* and delving deeply into the

literature on this concept and the views of researchers and educators. Such a study might provide more detailed information about the potential of the concept in consensus-building and reform. Other studies could focus on a different set of topics, or focus exclusively on a topic that was not addressed in this dissertation. Regardless of the specific focal topic(s), it is important to continue—and to improve—our efforts to design reforms that will be fully-implemented and maintained so that frequent reversals and dismantling initiatives will not continue to impede our progress.

APPENDIX A: INTERVIEW PROTOCOLS

Note: All information that might reveal the experts' identity has been removed.

Interview Questions, Expert #1

1. In the chapter, "xxxxx", early adolescent's cognitive abilities are described and the xxxxx between those abilities and level of critical thinking encouraged in their learning environments. Based on your knowledge of early adolescent development, could you explain to me what you think it means for education to be developmentally appropriate in this sense?
2. What theory or theories of development guide your view on this? What aspects of this theory (these theories) have been most influential in your views on developmentally appropriate practices? [prompt for information about both intellectual and psychosocial development if not offered spontaneously].
3. One of the experts I interviewed took exception to the idea of developmentally appropriate education. He believed DAE to be intellectually restrictive for students who are capable of achieving more than that which is typically attributed to his or her developmental stage. How would you respond to the criticism that developmentally appropriate education constructs a ceiling for intellectual development and achievement?
4. What is your basic orientation towards schooling? Do you believe that it should be more focused on the struggling students, or those who seem to have the most potential to succeed? How does this orientation influence the way you evaluate the motivational climates of schools?
5. In the piece, "xxxxx" you present several descriptions of studies that show ability-focused classrooms have negative effects on both high and low achieving students. Does the same hold true for middle-ability students? [If yes, ask Does a change in goal structure affect these students in ways more similar to high-ability students or to low-ability students?]
6. In reference to high, middle, and low ability students, is there one particular group that you feel is most negatively affected by ability-focused learning environments? Why or why not?
7. Of all of the learning behaviors that ability-focused environments can produce, which do you believe are the most negative consequences for motivation. [List the characteristics from her work if asked?]
8. In "xxxxx" you describe a study that involved xxxxx Middle School. When describing the setting, you explained that most residents are "blue collar", and that the school has an increasing low-income population. Later when you describe the program as a collaborative effort to promote task focus to enhance motivation, you refer to "at-risk students". Do you consider the students at xxxxx to be at-risk?
9. Can you explain in a little more detail how you define "at-risk" students? What are their characteristics. Are there any characteristics that are specific to early adolescence, as opposed to other developmental periods. If so, why?
10. When you discuss xxxxx theory, you emphasize the interaction between xxxxx in producing both positive and negative outcomes for motivation. Do you think about students whose interactions produce negative motivational outcomes as "at-risk"? If

- yes, in your opinion, what are the long-term effects of being at-risk in this way? If no, in your opinion, how are these students different from at-risk students?]
11. What role, if any, does developmentally appropriate education play in reducing the level of risk experienced by at-risk students?
 12. In the conclusions to “xxxxx” and in “xxxxx” you say that “xxxxx provides a theoretical and empirical foundation upon which to build a science of adolescent schooling.” In “xxxxx”, you suggest that xxxxx theory would provide an organizing framework within which to grapple with issues of purpose and function.” In all of these pieces, you stress that that task-oriented or mastery goals are better goals to strive towards. You also discuss the relationship between the goals adopted, and views on the purposes of education. In your opinion, what is the purpose of education, or what do you think it should be? What kind of students would be produced if your vision for middle schools was realized?
 13. Are you familiar with the concept of intellectual autonomy? If yes, do you believe that task-oriented learning environments promote intellectual autonomy.
 14. If no, If you were told that a student is intellectually autonomous, what characteristics would you expect that student to have, and what behaviors would you expect him or her to display? Do you believe that task-oriented educational experiences foster the development of these qualities?
 15. In your opinion, to what degree, if any, would designing environments that foster intellectual autonomy, also result in environments that foster task-oriented goals during learning?
 16. Is fostering intellectual autonomy something that you believe should be a central goal in education? Why or why not?
 17. Are you aware of the concept of educational or academic resilience? [If so, do you see any connection between this concept and developmentally appropriate education; between educational resilience and intellectual autonomy? If so, What connections do you see?
 18. If not, If you were told that a student is educationally resilient, what characteristics would you expect that student to have, and what behaviors would you expect him or her to display? Do you believe that task-oriented educational experiences foster the development of these qualities?
 19. In your opinion, to what degree, if any, would designing environments that foster educational resilience, also result in environments that foster task-oriented goals during learning?
 20. Is fostering educational resilience something that you believe should be a central goal in education? Why or why not?
 21. In my dissertation, I posit the belief that of intellectual autonomy is the central component of educational resilience. And that educational resilience should be at the foundation of future middle level reform. This is the belief that I am ultimately trying to test against expert opinions in these interviews. Please tell me in as much detail you can whether [or not] and why you believe [or do not believe] that intellectual autonomy is or is not, [or could or could not be] considered the central component of educational resilience.
 22. In “xxxxx” you mentioned incomplete or improper implementation of programs as an obstacle to successful reform. What do you think are the major within-school

- impediments to complete and proper implementation? What are the larger issues that impede proper implementation?
23. Can you identify for me, the issues that you believe are the major obstacles to systematic and wide-spread (national?) middle level reforms such as those you describe in the xxxxx Study? [the one involving xxxxx Middle School.]
 24. What would you suggest as a means for overcoming these obstacles?

Interview Questions, Expert 2

1. It is clear from your work that you are very familiar with the concepts of risk and resilience. In the book, "xxxxx" you explain the relationship you see between at-riskness and resilience? Can you explain to me in more detail how you define at-risk students?
2. Can you tell me in more detail why at-risk students are of particular interest to you [i.e. what is it about them that makes their situation or story particularly interesting to you?].
3. Can you tell me why you have chosen to focus on educational resilience in your work?
4. In the book you define educational resilience in terms of students ability to succeed despite environmental adversities. Do you view the problems of at-risk students as primarily the result to their exposure to negative external factors? What role, if any, do the internal characteristics of students play?]
5. In your opinion, what is the mechanism by which fostering educational resilience also fosters academic success?
6. What are the characteristics of academically successful students?
7. What are the implications of educational resilience for students' psychological development?
8. Are you familiar with Constance Kamii's definition of intellectual autonomy? Are you at all familiar with the general concept [of intellectual autonomy]. If you were told that a student is intellectually autonomous, what characteristics would you expect that student to have, and what behaviors would you expect him or her to display?
9. Do you believe that educational resilience also fosters the development of these qualities?
10. In your opinion, to what degree, if any, does fostering intellectual autonomy also foster educational resilience?
11. Is intellectual autonomy something that you believe should be a central goal in the education of all students? Why or why not?
12. Is educational resilience something that you believe should be a central goal in the education of all students? Why or why not?
13. I have a sense from your publications, but could you describe in detail, what the implications of educational resilience are for educational practice? [If not mentioned, also prompt: do you believe it has implications for teacher-student interactions, peer interactions, grouping practices, and assessment].
14. Are there any specific instructional practices that you think are especially important for promoting educational resilience?
15. Do you believe that there is a developmental period when the possession educational

- resilience is critical? If so, which developmental period, and why it educational resilience critical at this point.
16. Do you possess any specific information about adolescent development? If so, with which theories are you most familiar?
 17. Have any of these theories influenced your description of educational resilience? [prompt for information about both intellectual and psychosocial development if not offered spontaneously].
 18. If you were required to identify [any or certain] middle school at-risk students, would there be any difference in the specific criteria you would use in making that determination (versus those used in general)? [If they would differ how. If they would not differ, why not]?
 19. How familiar are you with the concept of developmentally appropriate education? Based on your knowledge of middle school students and early adolescent development, could you explain to me what you think it means for education to be developmentally appropriate for early adolescents?
 20. What do you think the consequences would be for early adolescents if their education was not developmentally appropriate? [Prompt for both intellectual and psychosocial consequences].
 21. Do you believe that educational experiences that are not developmentally appropriate place students at-risk for educational problems? If so, which educational problems do you believe these experiences place them at risk for? If not, why not?
 22. Can you identify for me, the issues that you believe are the major obstacles to the implementation of systematic resilience-fostering reforms. Are there any additional issues that you believe affect middle school reform more so than elementary school reform?
 23. In your opinion, what role could or should the concept of educational resilience play in future middle school reform, or reform at other levels?

Interview Questions, Expert #3

1. In the article, “xxxxx” you argue that “the purported academic failure of the middle school is due to the fact that the tenets of the middle school have not been sufficiently implemented” rather than to the fact that they have. I am quite familiar with the body of tenets to which you are referring, but I was wondering if there are any particular tenets that you believe are more essential than others, or if you conceptualize the middle school concept as an indivisible set of tenets?
2. When you stated that the tenets have not been sufficiently implemented, were you referring to the low prevalence of recommended middle school practices, or the high rate of improper or incomplete implementation, or both?
3. In your opinion, which tenet or tenets are most commonly ignored or improperly implemented?
4. Please tell me in as much detail as you can, what impact you believe this has on students academically and socially, now and in the future.
5. In the piece, “xxxxx” you discuss growing up as a risky business these days. In that piece you list alcohol, drugs, and the prevalence of violence, promiscuity, and family and community instability as issues that place all young people at risk for difficulties.

You also assert that schooling practices play a significant role in the educational and social difficulties of many students. Are you suggesting that improper implementation of the middle school concept places all of the students in those schools at risk for underachievement and socially unacceptable/inappropriate behavior?

6. To what degree do you believe that correcting the problems in the schools would impact students' response to the risk factors they face outside of school [substances, violence, sex, family and community instability]? How or why not?
7. In your opinion, what primary benefit or benefits would properly functioning middle schools confer on early adolescents that most middle schools are currently not fostering? [i.e., what characteristics would you expect students to develop as a result of an exemplary middle school experience?]
8. What features of an exemplary middle school experience would foster these characteristics?
9. Are you relying on any particular theory or theories of human development to determine this? If so, which theory/theories and what are their most relevant features? If not, what are your expectations based on? [e.g. empirical evidence?]
10. Are you at all familiar with the concept of intellectual autonomy? If you were told that a student is intellectually autonomous, what characteristics would you expect that student to have, and what behaviors would you expect him or her to display?
11. Do you believe that properly functioning middle schools also foster the development of these qualities?
12. How high a priority do you believe middle schools should place on the development of these qualities?
13. How familiar are you with the concept of resilience? [If not, define it for him as the ability to avoid negative consequences of adverse circumstances—and, in some cases, grow beyond the norm as a result of adverse experiences.]
14. Some have suggested that resilience is an essential concept because it emphasizes individuals' abilities rather than focusing on their deficiencies, thereby encouraging a positive outlook—instead of a defeatist attitude—towards struggling students. Others have suggested that resilience is a harmful concept because it emphasizes individual coping skills over person-environment interaction thereby detracting from our motivation to provide students with appropriately supportive environments. What are our thoughts on this?
15. Now I would like to ask you a couple of questions about the challenges facing middle schools. In "xxxxx" you argued that middle school have become too utilitarian. In your opinion, what is driving this? [i.e. Is it the result of reliance on standardized testing or is the reliance on testing a product of the utilitarian view?]
16. In this piece you also mentioned that the security measures that are commonly implemented in response to problem behavior among students are not solutions to the problem. I believe that your writings make it clear what you think more appropriate responses would be, but I am wondering: what do you think needs to be understood, or needs to take place, in order for more appropriate responses to occur?
17. How optimistic are you that this will ever actually happen?

Interview Questions, Expert #4

1. I became aware of the concept of *intellectual autonomy* once I began reading about mathematics learning. This is the only context where I have ever come across that exact term. When reading about other subjects and about education in general, I have come across terms like *critical literacy*, *scientific literacy*, *critical thinking*, and *critical reasoning*. In your opinion, what is the relationship between these terms? [In other words, if a person were to fully understand the critical reasoning, to what degree would they also understand the concept of intellectual autonomy?]
2. Are these terms equivalent? [Does the concept of intellectual autonomy fit under the umbrella of critical reasoning, or is critical reasoning a less encompassing concept than intellectual autonomy?]. In what way or ways...are they equivalent or different? If different, what are the educational implications of these differences? (i.e. What is the difference in students that you think would result if education was designed in specific accordance with one or the other concept?)
3. I am aware from your writings that you believe that intellectual autonomy is an important educational aim in all subjects, but that most of your writings discuss it in the context of mathematics. Why did you choose to emphasize mathematics over other subjects in your research and writing?
4. [Entire sentence omitted]. Your writings provide several clear examples of what you mean by developmentally appropriate education, so I won't ask you to explain that. Instead I'll ask you to respond to a comment made by one of the people I interviewed. This person took exception to the idea of developmentally appropriate education. He believed DAE to be intellectually restrictive for students who are capable of achieving more than is typically attributed to a child at his or her developmental stage. How would you respond to this statement that developmentally appropriate education constructs a ceiling for intellectual development and achievement?
5. How often do you think about the concept of developmentally appropriate education in relation to middle and high schools?
6. How familiar are you with middle schools?
7. I know that you have argued that it is important to emphasize intellectual autonomy very early on. [Entire sentence omitted]. I was wondering, though, since you emphasize beginning early, do you think that there is a developmental window for the intellectual autonomy? [i.e. Is it too late once students reach middle school? High school?]
8. In the article "xxxxx" written by xxxxx and yourself xxxxx you note that children's mental action can be enhanced or hindered by the social context of the classroom. I am not sure how familiar you are with the literature on at-risk students, but some argue that learning environments that promote passive learning place students at-risk—not necessarily for low achievement on standardized tests, but certainly for underachievement of their intellectual potential. I get the impression from your work that you concur, but I would like to know more about how you think about the concept of at-riskness?
9. In your article, "xxxxx" you argue that promoting xxxxx in the classroom also promotes xxxxx in social situations where obedience can be dangerous—for instance, you refer to peer pressure to use drugs. Are you suggesting, then, that students in

typical classrooms around the nation are placed at-risk educationally and socially by traditional approaches to instruction? Are they placed at-risk psychologically by traditional approaches to instruction?

10. Thinking of early adolescents, are they more at-risk or less at risk than younger students? Than older students? If yes, How and Why? If not, why not?
11. How familiar are you with the concept of educational or academic resilience? Resilience?
12. Some have suggested that resilience is an essential concept in education because it emphasizes individuals' abilities rather than focusing on their deficiencies, thereby encouraging a positive outlook—instead of a defeatist attitude—towards struggling students. Others have suggested that resilience is a harmful concept to apply to education because it emphasizes individual coping skills over person-environment interaction thereby detracting from our motivation to provide students with developmentally appropriate learning environments. What are our thoughts on this?
13. Now, in reference to non-instructional educational practices, I get the impression from your writings that you do not support tracking or homogeneous ability grouping? Is this true? If yes, Is this because you believe that the practice is harmful for middle and low ranked students, or is your opposition more related to the low quality-ceiling that it encourages even in the high ability classes, or both?
14. I only have a few more questions for you. These relate to the relationship between the concepts of intellectual autonomy and educational resilience. In my dissertation, I posit the belief that of intellectual autonomy is the central component of educational resilience. And that educational resilience should be at the foundation of future middle level reform. This is the belief that I am ultimately trying to test against expert opinions in these interviews. Please tell me in as much detail you can whether [or not] and why you believe [or do not believe] that intellectual autonomy is or is not, [or could or could not be] considered the central component of educational resilience.
15. When you think about educational reform, what do you see as the major obstacles to improving the quality of education? What do you think needs to happen in order for these obstacles to be overcome? Do you think this will ever actually happen?

Interview Questions, Expert #5


1. I have read everything that I could locate that you have written or participated in writing. These writings covered the years from 1982 to 1999. When I organized them according to date, I noticed that around 1988 you began to explicitly focus on at-risk students. What triggered this shift of emphasis in your research? [i.e. what was it that made at-risk students interesting at this particular time].
2. I know that you are particularly interested in how the schooling process impacts the life course, rather than simply the academic achievement, of students. How does this interest influence how you define at-risk students? [i.e. does the life course perspective encourage you to think more about *certain types* of outcomes than other perspectives do?]
3. I noticed that the article "xxxxx" written in 19xx with xxxxx and xxxxx, you provided various indicators of disadvantage. According to these indicators students

who are members of a minority group, or are non-native English speakers, who live in poverty, in single-parent families, or have poorly educated mothers are considered disadvantaged based on the correlation of these traits with poor school performance. This was a fairly common way to describe at-risk students at that time. What I was wondering is if you were asked to define at-risk students today, would you use these same criteria or are there any additional traits that you would add to the list? If no additional traits, Are there any traits that are not currently measured by grades, standardized tests, and graduation rates that you believe may be indicators of educational risk?

4. I noticed that in the early 19xxs your writings began to emphasize assessment and reform. Do you still keep track of the literature on at-riskness?
5. In the last several years researchers and educators have turned their attention towards the psychological aspects of being at-risk. Do you have an opinion on this shift in emphasis away from traditional indicators and towards issues of student disaffection in defining at-risk students? [i.e. some worry that this shift is detrimental to traditionally at-risk students because of its potential to divert intervention resources to disaffected students in wealthier suburbs].
6. In the piece, "xxxxx" you encourage the creation of "appropriate academic and non-academic programs and services" and the correct matching of students to these programs as a way to meet the needs of at-risk students. In your opinion, how much progress has been made in doing this? Have you noticed an improvement in the situation of at-risk students? If so, which improvements have you noticed?
7. As schools have no control over any of the traits that traditional definitions of at-riskness use to define these students, and as various programs are currently in place to address the consequences of these traits (e.g. free lunch, linked services, compensatory education, etc.) in your opinion, how much more could be accomplished by implementing interventions aimed at reducing disaffection among students at the middle and high school levels? Nothing more, a bit more, or much more?
8. Now I would like to ask you a few questions based on the piece, "xxxxx." In that piece you found substantial evidence that xxxxx effects exist, but that this was not the case for xxxxx and xxxxx effects. Later, when discussing the institutional perspective you suggest that although this did not seem to have an impact on first-graders, it might plausibly have effects on college students. In your opinion, is it also plausible that there might be xxxxx effects on middle school or high school students? If not, why not? What about with regard to the xxxxx effects? [i.e. might this affect middle and high school students?].
9. Is your view on this guided by any particular theory or theories of adolescent development guide? If so, which one(s)? [prompt for information about both intellectual and psychosocial development if not offered spontaneously].
10. Based on your knowledge of socialization and the process of identity development, are there any characteristics that are specific to adolescence, as opposed to other developmental periods, that place these students at greater risk than younger students?
11. Now I'm going to shift to discuss some of the other concepts that my dissertation examines. I'm going to ask you how much you have read or hear about each, and your opinion about the implications of each for the education of early adolescents.

These concepts include developmentally appropriate education, intellectual autonomy, educational resilience, and school reform, but first I want to ask you this: What is your basic orientation towards schooling? Do you believe that it should be more focused on the struggling students, or those who seem to have the most potential to succeed? How does this orientation influence the way you evaluate the motivational climates of schools?

12. How much do you know about developmentally appropriate education? [If something] Where does this information come from? Do you have an opinion about the usefulness of this concept for the education of early adolescents? If so, what is that opinion?
13. One of the experts I interviewed took exception to the idea of developmentally appropriate education. He believed DAE to be intellectually restrictive for students who are capable of achieving more than is typically attributed to his or her developmental stage. What role, if any, do you think developmentally appropriate education could play in reducing the level of risk experienced by at-risk students? Do you believe that we, researchers and educators, know enough about early adolescent development to design educational environments that do not construct a ceiling for intellectual development and achievement?
14. How much do you know about the concept of intellectual autonomy? If you were told that a student is intellectually autonomous, what characteristics would you expect that student to have, and what behaviors would you expect him or her to display? What sort of educational experiences do you believe would contribute to the development of intellectual autonomy in early adolescents? In your opinion, to what degree, if any, would designing environments that foster intellectual autonomy, also reduce educational risk? Is fostering intellectual autonomy something that you believe should be a central goal in education? Why or why not?
15. Are you aware of the concept of educational or academic resilience? [If so, do you see any connection between this concept and developmentally appropriate education; between educational resilience and intellectual autonomy? If so, What connections do you see?
16. If not, If you were told that a student is educationally resilient, what characteristics would you expect that student to have, and what behaviors would you expect him or her to display? Do you believe that task-oriented educational experiences foster the development of these qualities?
17. In your opinion, to what degree, if any, would designing environments that foster educational resilience, also result in environments that reduce educational risk?
18. Is fostering educational resilience something that you believe should be a central goal in education? Why or why not?
19. In my dissertation, I posit the belief that of intellectual autonomy is the central component of educational resilience. And that educational resilience should be at the foundation of future middle level reform. This is the belief that I am ultimately trying to test against expert opinions in these interviews. Please tell me in as much detail you can whether [or not] and why you believe [or do not believe] that intellectual autonomy is or is not, [or could or could not be] considered the central component of educational resilience.

- 
20. Can you identify for me, the issues that you believe are the major obstacles to high quality education
 21. What would you suggest as a means for overcoming these obstacles?

APPENDIX B: SURVEY FORM

Instructions

Please indicate your level of agreement with the following statements by marking the appropriate number on the scale provided.

1. When I consider the collection of educational issues that are of most importance to me, I evaluate the current state of American education as:
☐ Much better than it was in previous years
☐ Similar to previous years
☐ Much worse than it was in previous years

2. **Norm-referenced standardized tests** have contributed to the creation of higher educational standards.

Strongly Disagree				Strongly Agree
1	2	3	4	5

3. Norm-referenced standardized tests have contributed to the improvement of educational practices.

Strongly Disagree				Strongly Agree
1	2	3	4	5

4. Norm-referenced standardized tests have contributed to increases in academic achievement.

Strongly Disagree				Strongly Agree
1	2	3	4	5

5. Norm-referenced standardized tests, themselves, are not the problem. It is the way that the results are used that is problematic.

Strongly Disagree				Strongly Agree
1	2	3	4	5

6. Increased use of **criterion-referenced** tests and other **alternative assessments** would have a more positive impact on educational practice and student achievement than norm-referenced tests have had.

Strongly Disagree				Strongly Agree
1	2	3	4	5

7. When I hear the phrase “at-risk students”, I think of students who are statistically more likely to receive poor grades and/or test scores, and/or to become teenage parents, and/or to become involved in criminal activities, and/or to drop out before graduating from high school.

Strongly Disagree Strongly Agree
1 2 3 4 5

8. When I hear the phrase “at-risk students”, I think of students who—regardless of measured achievement—display signs of alienation/disaffection, and/or emotional immaturity, and/or social difficulty.

Strongly Disagree Strongly Agree
1 2 3 4 5

9. In my opinion, efforts to improve the **educational** outcomes for at-risk students have been:

☐ Largely successful
☐ Marginally successful
☐ Largely unsuccessful

10. In my opinion, efforts to improve the **social** outcomes for at-risk students have been:

☐ Largely successful
☐ Marginally successful
☐ Largely unsuccessful

11. If a group of adolescent students was described to me as “intellectually autonomous”, I would expect them to: (select all that apply)

☐ be able to set learning goals and evaluate their progress towards those goals
☐ be able to motivate themselves to persist through “drill and practice” tasks
☐ set acceptably high standards for themselves
☐ behave responsibly in academic situations
☐ behave responsibly in social situations
☐ know when to seek help and how to elicit help
☐ critically evaluate claims made in their textbooks and in the media
☐ hold steadfast to their beliefs
☐ have difficulty taking the perspective of others
☐ believe that they are always right
☐ challenge adult authority in inappropriate situations

12. When I hear the phrase “educational resilience”, I think **primarily** of the positive characteristics of students who meet or exceed normal expectations despite adverse life and/or learning conditions.

Strongly Disagree Strongly Agree
1 2 3 4 5

13. When I hear the phrase “educational resilience”, I think **primarily** of the negative characteristics of the environments that students are expected to cope with.

Strongly Disagree Strongly Agree
1 2 3 4 5

14. If educational resilience is thought of in terms of positive student characteristics, I believe that it can support the creation healthy school environments.

Strongly Disagree Strongly Agree
1 2 3 4 5

15. If a group of students was described to me as “educationally resilient”, I would expect them to: (select all that apply)

- ☐ achieve their maximum intellectual potential regardless of the educational circumstances
- ☐ make the best of their educational situation
- ☐ be persistent
- ☐ set high goals for themselves
- ☐ believe that effort is the key to success
- ☐ believe that ability is the key to success
- ☐ question expectations for their success in school and life
- ☐ feel personally responsible for success
- ☐ know how and when to seek help
- ☐ behave responsibly in academic situations
- ☐ behave responsibly in social situations
- ☐ be focused
- ☐ respect themselves
- ☐ respect others
- ☐ view themselves realistically
- ☐ view others realistically
- ☐ view situations realistically
- ☐ seem mature beyond their years
- ☐ be stunted in non-academic domains
- ☐ like school
- ☐ hold high career aspirations

16. When asked to consider the application of “educational resilience” to schooling, I am not sure how the two are related.

Strongly Disagree Strongly Agree
1 2 3 4 5

17. Educational resilience can and should be fostered in students.

Strongly Disagree Strongly Agree
1 2 3 4 5

18. When I hear the phrase, “developmentally appropriate education”, I think **primarily** of the boundaries that the practice constructs around students’ capabilities.

Strongly Disagree Strongly Agree
1 2 3 4 5

19. When I hear the phrase, “developmentally appropriate education”, I think **primarily** of the effort to meet student needs that the practice represents.

Strongly Disagree Strongly Agree
1 2 3 4 5

20. The current environment of the majority of middle schools is healthy for early adolescents’ **psychological/social** development.

Strongly Disagree Strongly Agree ___ Don’t know/Not Sure
1 2 3 4 5

21. The current environment of the majority of middle schools is healthy for early adolescents’ **intellectual** development.

Strongly Disagree Strongly Agree ___ Don’t know/Not Sure
1 2 3 4 5

REFERENCES

- Adams, G., & Gullotta, T. (1983). *Adolescent life experiences*. Monterey, CA: Brooks/Cole.
- Ainley, M. D. (1993). Styles of engagement with learning: Multidimensional assessment of their relationship with strategy use and school achievement. *Journal of Educational Psychology*, 85, 395-405.
- Alexander, W., & Williams, E. (1965). Schools in the Middle Years. *Educational Leadership*, 23(3), 217-223.
- Alexander, W. M., & George, P. S. (1981). *The exemplary middle school*. New York: Holt Rinehart and Winston.
- American Association for the Advancement of Science. (1993). *Benchmarks for science literacy: Project 2061*. New York: Oxford University Press.
- Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivational processes. *Journal of Educational Psychology*, 84, 261-267.
- Anderman, L. H., & Midgley, C. (1997). Motivation and middle school students. In J. L. Irvin (Ed.), *What current research says to the middle level practitioner*. (pp. 41-48). Columbus: National Middle School Association.
- Asplough, J. W., & Harting, R. D. (1998). Interdisciplinary team teaching versus departmentalization in middle schools. *Research in Middle Level Education Quarterly*, 21(4), 31-42.
- ASCD. (1975). *The middle school we need*. Washington, D.C.: Association for Supervision and Curriculum Development.
- Bandlow, R. J. (2001). The misdirection of middle school reform: Is a child-centered approach incompatible with achievement in math and science? *The Clearing House*, 75(2), 69-73.
- Barber, L. W., & McClellan, M. C. (1987). Looking at America's dropouts: Who are they? *Phi Delta Kappan*, 69(4), 264-267.
- Beane, J. (1990a). *Affect in the curriculum: Toward democracy, dignity, and diversity*. New York: Teachers College Press.
- Beane, J. (1990b). *A middle school curriculum: From rhetoric to reality*. Columbus, OH: National Middle School Association.
- Beane, J. (1999a). Middle schools under siege: Points of attack. *Middle School Journal*, 30(4), 3-9.

- Beane, J. (1999b). Middle schools under siege: Responding to the attack. *Middle School Journal*, 30(5), 3-6.
- Beane, J. (2001). Reform and Reinvention. In T. S. Dickson (Ed.), *Reinventing the middle school*. (pp. xii-xxii). New York: RoutledgeFalmer.
- Beane, J. A., & Lipka, R. P. (2000). *When the kids come first: enhancing self-esteem*. Troy, NY: Educator's International Press.
- Becker, J. P., & Jacob, B. (2000). The politics of California school mathematics: The anti-reform of 1997-99. *Phi Delta Kappan*, 81(7), 529-537.
- Benard, B. (1991). *Turning it All Around For All Youth: From Risk to Resilience* (126). New York: Columbia University.
- Benard, B. (1995). *Fostering Educational Resilience in Children* (EDO-PS-95-9). Champaign: University of Illinois at Urbana-Champaign:.
- Blom, F. S., Gerard, G. K., Kinsinger, A., & Michigan Association of Middle School Educators. (1979). *Focus on a middle school belief system*. East Lansing, Mich.: Michigan Association of Middle School Educators.
- Benton-Kupper, J. (1999). Teaching in the block: Perceptions from within. *The High School Journal*, 83(1), 26-38.
- Bosworth, K., Espelage, D., & Simon, T. (1999). Factors associated with bullying behavior in middle school students. *Journal of Early Adolescence*, 19(3), 341-362.
- Braddock, J. (1990). Tracking in the middle grades: National patterns of grouping for instruction. *Phi Delta Kappan*, 71(6), 445-449.
- Braddock, J., & McPartland, J. M. (1990). Alternatives to tracking. *Educational Leadership*, 47(7), 76-79.
- Braddock, J., & Slavin, R. (1992). *Why ability grouping must end: Achieving excellence and equity in American education*. (ED355296). Baltimore, MD: Center for Research on Effective Schooling for Disadvantaged Students.
- Bradley, A. (1998, April 15). Muddle in the middle. *Education Week*, 17, 38-42.
- Breaux, G., Danridge, J., Pearson, P. D. (2002). Scott elementary school: Home grown school improvement in the flesh. In B. Taylor and P. D. Pearson (Eds.) *Teaching Reading: Effective schools, accomplished teachers*. (pp. 217-236). Mahwah, NJ: Lawrence Erlbaum Associates.

- Bredekamp, S. (Ed.). (1987). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8*. Washington, DC: National Association for the Education of Young Children.
- Bredekamp, S., & Rosegrant, T. (Eds.). (1992). *Reaching potentials: Appropriate curriculum and assessment for young children* (Vol. 1). Washington, DC: National Association for the Education of Young Children.
- Brewer, D. J., Rees, D. I., & Argys, L. M. (1995). Detracking America's schools: The reform without cost. *Phi Delta Kappan*, 78(3), 210-215.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32, 513-531.
- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.
- Brown, J. H., D'Emedio-Caston, M., & Benard, B. (2001). *Resilience education*. Thousand Oaks: Corwin Press.
- Briggs, T. H. (1920). *The junior high school*. Boston: Houghton Mifflin.
- Brophy, J. (1998). *Failure syndrome students*. Champaign, IL: ERIC Clearinghouse.
- Brough, J. (1995). Middle level education: an historical perspective. In M. J. Wavering (Ed.), *Educating young adolescents: life in the middle* (pp. 27-51). New York: Garland publishing.
- Brundrett, M. (1999). Transforming Learning With Block Scheduling: A Guide for Principals / Strategies for Teaching Differently: On the Block or Not. *School Leadership & Management*, 19(3), 390-391.
- Bryant, C., & Bryant, R. (2000). Social studies in the block schedule: A model for effective lesson design. *The Social Studies*, 91(1), 9-16.
- Byrnes, J. P. (1988). Formal operations: A systematic reformulation. *Developmental Review*, 8, 66-87.
- Caine, R., & Caine, G. (1991). *Making connections: Teaching and the human brain*. New York: Addison-Wesley.
- Calweti, G. (1994). *High school restructuring: A national study*. Arlington, VA: Educational Research Service.
- Canady, R. L., & Rettig, M. D. (1995a). The power of innovative scheduling. *Educational Leadership*, 53(3), 4-10.

- Canady, R. L., & Rettig, M. D. (1995b). Unlocking the lockstep high school schedule. *Phi Delta Kappan*, 75(4), 310-314.
- Carnegie Council on Adolescent Development. (1989). *Turning points: preparing American youth for the 21st century*. New York: Carnegie Corporation.
- Casteel, J. D. (1981). *Learning to think and choose: decision-making episodes for the middle grades*. Glenview, IL: Scott Foresman.
- Chubb, J. E., & Moe, T. M. (1990). *Politics, Markets, and America's Schools*. Washington D.C.: The Brookings Institute.
- Clark, D. J. (1986). *Articulating a rationale for middle school curriculum development based on principles of early adolescent growth and development*.
- Clark, S. N., & Clark, D. C. (1993). Middle level school reform: the rhetoric and the reality. *The Elementary School Journal*, 93(5), 447-460.
- Clark, S. N., & Clark, D. C. (1994). *Restructuring the middle level school: implications for school leaders*. Albany, NY: State University of New York Press.
- Clifford, M. M. (1984). Thoughts on a theory of constructive failure. *Journal of Educational Psychology*, 19, 108-120.
- Clifford, M. M. (1988). Failure tolerance and academic risk-taking in ten- to twelve-year-old students. *British Journal of Educational Psychology*, 58, 15-27.
- Cobb, N. (Ed.). (1994). *The future of education: perspectives on national standards in America*. New York: College Entrance Examination Board.
- Cohen, J. (1999). *Educating minds and hearts: social emotional learning and the passage into adolescence*. New York: Teachers College Press.
- Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy and relatedness: A motivational analysis of self-system processes. In M. Gunnar & L. A. Sroufe (Eds.), *Minnesota symposium of child psychology* (Vol. 22, pp. 43-77). Minneapolis: University of Minnesota Press.
- Cooper, C., & Henderson, N. (1995). *Motivating schools to change: Integrating the threads of school restructuring*. Tasmania, Australia: Global Learning Communities.
- Corno, L., & Snow, R. E. (1986). Adapting teaching to individual differences among learners. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (pp. 605-629). New York: Macmillan.
- Covington, M. V. (1984). The self-worth theory of achievement motivation: Findings and implications. *The Elementary School Journal*, 85, 5-19.

- Covington, M. V. (1992). *Making the grade: A self-worth perspective on motivation and school reform*. Cambridge: Cambridge University Press.
- Cuban, L. (1992). What happens to reforms that last? The case of the junior high school. *American Educational Research Journal*, 29, 227-251.
- De Corte, E. (1995). Fostering cognitive growth: a perspective from research on mathematics learning and instruction. *Educational Psychologist*, 30(1), 37-46.
- Deuel, L.-L. S. (1999). Block scheduling in large, urban high schools: Effects on academic achievement, student behavior, and staff perceptions. *High School Journal*, 83(1), 14-24.
- DiBiase, W. J., & Queen, J. A. (1999). Middle school social studies on the block. *The Clearing House*, 72(6), 377-384.
- Dickinson, T. S. (2001). Reinventing the middle school: A proposal to counter arrested development. In T. S. Dickson (Ed.), *Reinventing the middle school* (pp. 1-20). New York: RoutledgeFalmer.
- Duffy, G. G., & International Reading Association. (1990). *Reading in the middle school* (2nd ed.). Newark, Del.: International Reading Association.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95, 256-273.
- Eccles, J., & Midgley, C. (1989). Stage-environment fit: developmentally appropriate classrooms for young adolescents. In C. Ames & R. Ames (Eds.), *Research on motivation in education* (Vol. 3, pp. 139-185). San Diego, CA: Academic Press.
- Eccles, J., Midgley, C., & Adler, T. F. (1984). Grade-related changes in the school environment: Effects on achievement motivation. In M. L. Maehr (Ed.), *Advances in motivation and achievement* (Vol. 3, pp. 283-331). Greenwich: JAI Press.
- Eccles, J. S., Buchanan, C. M., Flanagan, C., Fuligni, A., & Yee. (1991). Control versus autonomy during early adolescence. *Journal of Social Issues*, 47(4), 53-68.
- Eccles, J. S., & Jacobs, J. E. (1986). Social forces shape math attitudes and performance. *Signs*, 11(2), 367-380.
- Eccles, J. S., Lord, S., & Midgley, C. (1991). What are we doing to early adolescents? The impact of educational contexts on early adolescents. Special Issue: Development and education across adolescence. *American Journal of Education*, 99(4), 521-542.
- Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., & et al. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents'

- experiences in schools and in families. Special Issue: Adolescence. *American Psychologist*, 48(2), 90-101.
- Eccles, J. S., Wigfield, A., Midgley, C., Reuman, D., Mac Iver, D. J., & Feldlaufer, H. (1993). Negative effects of traditional middle schools on students' motivation. *Elementary School Journal*, 93(5), 553-574.
- Edwards, C., Gandini, L., & Foreman, G. (Eds.). (1993). *The hundred languages of children*. Norwood, NJ: Ablex.
- Elias, M., Zins, J., R., W., Frey, K., Greenberg, M., Haynes, N., Kessler, R., Schwab-Stone, M., & Shriver, T. (1997). *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Elkind, D. (1967). Egocentrism in adolescence. *Child Developmental*, 38, 1025-1034.
- Elkind, D., & Bowen, R. (1979). Imaginary audience behavior in children and adolescents. *Developmental Psychology*, 15, 38-44.
- Erikson, E. H. (1959). *Identity and the life cycle; selected papers*. New York: International Universities Press.
- Erikson, E. H. (1968). *Identity, youth, and crisis* (1st ed.). New York: W. W. Norton.
- Evans, R. I., & Piaget, J. (1973). *Jean Piaget, the man and his ideas* (1st ed.). New York: E. P. Dutton.
- Feldlaufer, H., Midgley, C., & Eccles, J. S. (1988). Student, teacher, and observer perceptions of the classroom environment before and after the transition to junior high school. *Journal of Early Adolescence*, 8(2), 133-156.
- Felner, R. D., Jackson, A. J., Kasak, D., Mulhall, P., Brand, S., & Flowers, N. (1997). The impact of school reform for the middle years: Longitudinal study of a network engaged in Turning Points-based comprehensive school transformation. *Phi Delta Kappan*, 78, 528-532, 541-550.
- Fiske, E. B. (1992). *Smart schools, smart kids*. New York: Simon and Schuster.
- Fritz, D. (1996). Teaching for ninety minutes: Conversations with teachers using block scheduling. *Leadership Nebraska, Spring*, 10-12.
- Fuligni, A. J., Eccles, J. S., & Barber, B. L. (1995). The long-term effects of seventh-grade ability grouping in mathematics. Special Issue: Middle grades schooling and early adolescent development: II. Interventions, practices, beliefs, and contexts. *Journal of Early Adolescence*, 15(1), 58-89.
- Gamoran, A. (1992). Is ability grouping equitable? *Educational Leadership*, 50(1), 11-17.

- George, P. S., & Alexander, W. M. (1993). *The exemplary middle school* (2nd edition). New York: Harcourt Brace Jovanovich.
- George, P. S., & Oldaker, L. (1985a). *Evidence for the middle school*. Columbus, OH: National Middle School Association.
- George, P. S., & Oldaker, L. (1985b). A national survey of middle school effectiveness. *Educational Leadership*, 43(4), 79-85.
- George, P. S., Stevenson, C., Thomason, J., & Beane, J. (1992). *The Middle school--and beyond*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Gewirtz, S., Ball, S. J., & Bowe, R. (1995). *Markets, Choice and Equity in Education*. Philadelphia: Open University Press.
- Gheen, M. H., Hruda, L. Z., Middleton, M. J., & Midgley, C. (2000). *Using goal orientation theory to examine the transition from middle to high school*. New Orleans, LA: Paper presented at the annual conference of the American Educational Research Association.
- Goleman, D. (1995). *Emotional Intelligence*. New York: Bantam.
- Grantes, J., Noyce, C., Petterson, F., & Robertson, J. (1961). *The junior high school we need*. Washington, D.C.: Association for Supervision and Curriculum Development.
- Green, R. L. (2001). New paradigms in school relationships: Collaborating to enhance student achievement. *Education*, 121(4), 737-742.
- Gruber, C. D., & Onwuegbuzie, A. (2001). Effects of block scheduling on academic achievement among high school students. *High School Journal*, 84(4), 32-42.
- Gruhn, W., & Douglass, H. (1947). *The modern junior high school*. New York: The Ronald Press.
- Hansen J. H., Hearn, A. C. (1971). *The middle school program*. Chicago, IL: Rand McNally.
- Hargreaves, A., Earl, L., Moore, S., & Manning, S. (2001). *Learning to change: Teaching beyond subjects and standards*. San Francisco, CA: Jossey-Bass.
- Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in early adolescents and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, 112, 63-105.
- Henderson, N., & Milstein, M. (1996). *Resiliency in Schools: Making it Happen for Students and Educators*. Thousand Oaks: Corwin Press.

- Henry III, W. (1994). *In Defense of Elitism*. New York: Anchor Books.
- Hill, J. P. (1980). *Understanding early adolescence: A framework*. Chapel Hill, NC: Center for Early Adolescence.
- Hirschi, T. (1969). *Causes of delinquency*. Los Angeles, CA: University of California Press.
- Hixson, J., & Tinzmann, M. (1990). *Who Are the "At-Risk" Students of the 1990s (equity)*. Oak Brook, IL: Northcentral Regional Educational Laboratory.
- Hoy, W. K., & Miskel, C. G. (1996). *Educational administration: Theory, research, and practice*. (5th ed.). New York: McGraw-Hill.
- Hoy, W. K., Sabo, D. J., Barnes, K. M., Hannum, J. W., & Hoffman, J. D. (1998). *Quality middle schools: open and healthy*. Thousand Oaks, Calif.: Corwin Press.
- Huff, A. (1995). Flexible block scheduling: It works for us! *NASSP Bulletin*, 79(571), 19-22.
- Hunt, D. E. (1975). Person-Environment Interaction: A challenge found wanting before it was tried. *Review of Educational Research*, 45, 209-230.
- Hunter, E. (1998). Adolescent attraction to cults. *Adolescence*, 33(131), 709-714.
- Irvin, J. L. (1992). *Transforming middle level education: perspectives and possibilities*. Boston: Allyn and Bacon.
- Jackson, A. W., & Davis, G. A. (2000). *Turning points 2000: Educating adolescents in the 21st century*. New York: Teachers College Press.
- Johnson, J., Dupuis, V., Musial, D., & Hall, G. S. (1994). *Introduction to the foundations of american education*. Needham Heights, MA: Allyn and Bacon.
- Johnston, J. H. (1985). *Four climates of effective middle level schools: A report on trends and practices*. Reston, VA: National Association of Secondary School Principals.
- Kamii, C. (1984a). Obedience is not enough. *Young Children*, 11-14.
- Kamii, C. (1984b). Autonomy: The aim of education envisioned by Piaget. *Phi Delta Kappan*, 65(6), 410-415.
- Kamii, C. (1985). *Young children reinvent arithmetic*. New York: Teachers College Press.
- Kamii, C. (1991). Toward autonomy: The importance of critical thinking and choice making. *School Psychology Review*, 20(3), 382-388.

- Kamii, C. (1995). Are violence-prevention curricula the answer? *Dimensions of Early Childhood*, 23(3), 10-13.
- Kamii, C., & Clark, F. B., (1995). Equivalent fractions: Their difficulty and educational implications. *Journal of Mathematical Behavior*, 14(4), 365-378.
- Kamii, C., Clark, F. B., Dominick, A. (1994). The six national goals: A road to disappointment. *Phi Delta Kappan*, 75(9), 672-677.
- Kamii, C., & DeClark, G. (1985). *Young children reinvent arithmetic: implications of Piaget's theory*. New York: Teachers College Press.
- Kamii, C., & Ewing, J. K. (1996). Basing teaching on Piaget's constructivism. *Childhood Education*, 72(5), 260-264.
- Kamii, C., & Joseph, L. L. (1989). *Young children continue to reinvent arithmetic -- 2nd grade: implications of Piaget's theory*. New York: Teachers College Columbia University.
- Kamii, C., Manning, M. M. (1999). Before "invented" spelling: Kindergartners' awareness that writing is related to the sounds of speech. *Journal of Research in Childhood Education*, 14(1), 16-25.
- Kamii, C., Warrington, M. (1995). Division with fractions: A Piagetian, constructivist approach. *Hiroshima Journal of Mathematics Education*, 3, 53-62.
- Kindred, L., Wolotkiewicz, R., Mickelson, J., Coplein, L., & Dyson, E. (1976). *The middle school curriculum: A practitioners handbook*. Needham Heights, MA: Allyn Bacon.
- Koos, L. V. (1927). *The junior high school*. Boston: Ginn & Co.
- Kostelnik, M., Soderman, A., & Whiren, A. (1993). *Developmentally appropriate education programs in early childhood education*. New York: Macmillan.
- Kramer, S. L. (1997a). What we know about block scheduling and its effects on math instruction, part i. *NASSP Bulletin*, February, 18-42.
- Kramer, S. L. (1997b). What we know about block scheduling and its effects on math instruction part ii. *NASSP Bulletin*, March, 69-82.
- Krovetz, M. (1999). *Fostering Resiliency: Expecting All Students to Use Their Minds and Hearts Well*. Thousand Oaks: Corwin Press.
- Kruse, S. D., & Louis, K. S. (1997). Teacher teaming in middle schools: Dilemmas for school-wide community. *Educational Administration Quarterly*, 33(3), 261-289.

- Lee, V. E., & Smith, J. B. (1993). Effects of school restructuring on the achievement and engagement of middle-grade students. *Sociology of Education*, 66, 164-187.
- Liddle, H. (1994). Chapter 12: Contextualizing Resiliency. In M. Wang & E. Gordon (Eds.), *Educational Resilience in Inner-City America: Challenges and Prospects* (pp. 167-177). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Lipsitz, J. (1983). *Making it the hard way: Adolescents in the 1980s*.
- Lipsitz, J. (1984). *Successful schools for young adolescents*. New Brunswick, N.J.: Transaction Books.
- Lipsitz, J., Mizell, M. H., Jackson, A. W., & Austin, L. M. (1997). Speaking with one voice: A manifesto for middle-grades reform. *Phi Delta Kappan*, 78(7), 533-540.
- Lounsbury, J. H. (Ed.). (1984). *Perspectives: Middle school education 1964-1984*. Columbus, OH: National Middle School Association.
- Lounsbury, J. H. (1991a). *As I see it*. Columbus, OH: National Middle School Association.
- Lounsbury, J. H. (1991b). A fresh start for the middle school curriculum. *Middle School Journal*, 23(2), 29-35.
- Lounsbury, J. H. (1992). Perspectives on the middle school movement. In J. L. Irvin (Ed.), *Transforming middle level education* (pp. 295-313). Needham Heights, MA: Allyn and Bacon.
- Lounsbury, J. H., & Marani, J. (1964). *The junior high school we saw: One day in the eight grade*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Lounsbury, J. H., & Vars, G. F. (1978). *A curriculum for the middle school years*. New York: Harper & Row.
- Lounsbury, J. H., & Clark, D. C. (1990). *Inside grade eight: from apathy to excitement*. Reston, Va. (1904 Association Dr., Reston 22091): National Association of Secondary School Principals.
- Mac Iver, D., & Epstein, J. L. (1993). Middle grades research: Not yet mature, but no longer a child. *The Elementary School Journal*, 93, 519-533.
- Manning, M. L. (1993). *Developmentally appropriate middle level schools*. Wheaton, MD: Association for Childhood Education International.
- Manzo, K. (2000, October 4th). Missed Opportunities. *Education Week*.

- Marcia, J. E. (1980). Identity in adolescence. In J. Adelson (Ed.), *Handbook of adolescent psychology* (pp. 159-187). New York: Wiley.
- Maryland Middle Years Learning Task Force. (2000). *Middle grades matter: Meeting the challenge for systemic reform*. Baltimore, MD: Maryland State Department of Education.
- Mergendoller, J. R. (1993). Introduction: The role of research in the reform of middle grades education. *The Elementary School Journal*, 93, 443-446.
- Midgley, C. (In press). A goal theory perspective on the current status of middle level schools. In T. Urdan & F. Pajares (Eds.), *Adolescence in education*. CT: Information Age Publishing.
- Midgley, C., Arunkumar, R., & Urdan, T. C. (1996). "If I don't do well tomorrow, there's a reason": predictors of adolescents' use of academic self-handicapping strategies. *Journal of Educational Psychology*, 88(3), 423-434.
- Midgley, C., & Feldlaufer, H. (1987). Students' and teachers' decision-making fit before and after the transition to junior high school. *Journal of Early Adolescence*, 7, 225-241.
- Midgley, C., Feldlaufer, H., & Eccles, J. S. (1989). Change in teacher efficacy and student self- and task-related beliefs in mathematics during the transition to junior high school. *Journal of Educational Psychology*, 81(2), 247-258.
- Midgley, C., Kaplan, A., & Middleton, M. (2001). Performance-approach goals: Good for what, for whom, under what circumstances, and at what cost? *Journal of Educational Psychology*, 93(1), 77-86.
- Midgley, C., Middleton, M., Gheen, M., & Kumar, R. (in press). A goal theory approach to examining school transitions. In C. Midgley (Ed.), *Goals, goal structures, and patterns of adaptive learning*. New Jersey: Lawrence Erlbaum Associates.
- Milgram, J. (1992). A portrait of diversity: The middle level student. In J. L. Irvin (Ed.), *Transforming middle level education: Perspectives and possibilities* (pp. 16-27). Boston: Allyn & Bacon.
- Miserandino, M. (1996). Children who do well in school: individual differences in perceived competence and autonomy in above-average children. *Journal of Educational Psychology*, 88(2), 203-214.
- Mitchell, J. (1974). *Human life: The early adolescent years*. Toronto: Holt, Rinehart, and Winston.
- Mitchener, C. P., & Schmidt, E. S. (1998). Making schools meaningful. *Child and Adolescent Social Work Journal*, 15(5), 335-356.

- Murdock, T. B. (1999). The social context of risk: Status and motivational predictors of alienation in middle school. *Journal of Educational Psychology*, 91(1), 62-75.
- Murphy, J., & Hallinger, P. (1993). *Restructuring schools: Learning from ongoing efforts*. Newbury Park, CA: Corwin.
- Music Educators National Conference. (1994). *National standards for arts education*. Reston, VA: National Association for Music Education.
- Muuss, R. E. (1996). *Theories of Adolescence* (Sixth ed.). New York: McGraw-Hill.
- National Academy of Sciences. (1993). *National Standards for Science Education*. Washington, D. C.: National Academy Press.
- NASSP. (1985). *An agenda for excellence at the middle level: A statement*. Reston, Va.: National Association of Secondary School Principals.
- NASSP Council on Middle Level Education. (1989). *Middle level education's responsibility for intellectual development*. Reston, Va.: National Association of Secondary School Principals.
- NASSP Council on Middle Level Education. (1993). *Achieving excellence through the middle level curriculum*. Reston, VA: National Association of Secondary School Principals.
- National Commission on Excellence in Education. (1983). *A nation at risk: The imperative for educational reform*. Washington, D.C.: U.S. Government printing office.
- NCSS. (1994). *Curriculum standards for the social studies*. Washington, D.C.: National Council for the Social Studies.
- National Council of Teachers of English/International Reading Association. (1996). *Standards for the English language arts*. Urbana, IL: NCTE/IRA.
- National Council of Teachers of Mathematics. (1989). *Curriculum and evaluation standards for school mathematics*. Reston, VA: National Council of Teachers of Mathematics.
- NCTM. (1991). *Professional standards for teaching mathematics*. Reston, VA: National Council of Teachers of Mathematics.
- NCTM. (2000). *Principles and standards for school mathematics*. Reston, VA: National Council of Teachers of Mathematics.
- NMSA. (1982). *This we believe*. Columbus, OH: National Middle School Association.

- NMSA. (1989). National Middle School Association 1988-89 Resolutions. *Middle School Journal*, 20(3), 18-20.
- NMSA (1992). *This we believe*. Columbus, OH: National Middle School Association.
- NMSA (1995). *This we believe: developmentally responsive middle level schools*. Columbus, OH: National Middle School Association.
- Nelson, K., Kamii, C., & Pritchett, M. (1996). Fourth graders invent ways of computing averages. *Teaching Children Mathematics*, 3(2), 78-82.
- Newman, B., & Newman, P. (2001). Group identity and alienation: Giving the we its due. *Journal of Youth and Adolescence*, 30(5), 515-538.
- Noddings, N. (1992). *The challenge to schools*. New York: Teachers College Press.
- Novick, R. (1996). *Developmentally appropriate and culturally responsive education: Theory in practice* [<http://nwrel.org/cfc/publications/dap2.html>]. Northwest Regional Education Laboratory. Retrieved 5/7/2003, from the World Wide Web.
- Oakes, J. (1985). *Keeping track: how schools structure inequality*. New Haven: Yale University Press.
- Oakes, J. (1986). Keeping track, part 1: The policy and practice of curriculum inequity. *Phi Delta Kappan*, 68(1), 12-17.
- Oakes, J. (1988). Tracking in mathematics and science education: A structural contribution to unequal schooling. In L. Weis (Ed.), *Class, race, and gender in American education* (pp. 106-125). Albany: State University of New York Press.
- Oakes, J. (1991). *Multiplying inequalities: The effects of race, social class, and tracking on opportunities to learn mathematics and science*. Santa Monica, CA: RAND.
- Oakes, J. (1995). Two cities' tracking and within-school segregation. *Teachers College Record*, 96(4), 681-690.
- Oakes, J., & Lipton, M. (1993). Tracking and ability grouping: a structural barrier to access and achievement. In J. B. a. E. Swartz (Ed.), *The challenge of detracking: a collection*. Palatine: Skylight.
- O'Neil, J. (1995). Finding time to learn. *Educational Leadership*, 53(3), 11-15.
- Orrill, R. (1994). Titanic structure or human scale: School reform at the close of the twentieth century. In N. Cobb (Ed.), *The future of education: Perspectives on national standards in America* (pp. 3-14). New York: College Entrance Examination Board.

- Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of Educational Research*, 70(3), 323-367.
- Pallas, A., Natriello, G., & McDill, E. (1989). The changing nature of the disadvantaged population: Current dimensions and future trends. *Educational Researcher*, 18(5), 16-22.
- Petrie, G., Lindauer, P., Dotson, K., & Tountaskis, M. (2001). The non-graded middle school: Can it improve life for early adolescents? *Education*, 121(4), 781-786.
- Piaget, J. (1959). *Judgment and reasoning in the child*. Paterson, N.J.: Littlefield Adams.
- Piaget, J. (1976). *Piaget sampler: an introduction to Jean Piaget through his own words*. New York: Wiley.
- Rak, C., & Patterson, L. (1996). Promoting resilience in at-risk children. *Journal of Counseling & Development*, 744, 368-373.
- Renninger, K. A., Hidi, S., & Krapp, A. (1992). *The role of interest in learning and development*. Hillsdale, NJ: Erlbaum.
- Rettig, M. D., & Canady, R. L. (Eds.). (1996). *Teaching in the block: Strategies for engaging active learners*. Princeton, NJ: Eye on Education.
- Rettig, M. D., & Canady, R. L. (2000). *Scheduling strategies for middle schools*. Larchmont, NY: Eye On Education.
- Richardson, G. E., Neiger, B. L., Jensen, S., & Kumpfer, K. L. (1990). The resiliency model. *Health Education*, 21(6), 33-39.
- Rinehart, J. S., & Short, P. M. (1991). Viewing reading recovery as restructuring phenomenon. *Journal of School Leadership*, 1, 370-399.
- Roeser, R. W., Midgley, C., & Urdan, T. C. (1996). Perceptions of the school psychological environment and early adolescents' psychological and behavioral functioning in school: the mediating role of goals and belonging. *Journal of Educational Psychology*, 88(3), 408-422.
- Rosenholtz, S. (1989a). *Teacher's workplace: The social organization of schools*. New York: Longman.
- Rosenholtz, S. (1989b). Workplace conditions that affect teacher quality and commitment: Implications for teacher induction programs. *The Elementary School Journal*, 89, 421-439.
- Ryan, R. M. (1991). The nature of the self in autonomy and relatedness. In G. R. Goethals & J. Strauss (Eds.), *Multidisciplinary perspectives on the self* (pp. 203-238). New York: Springer-Verlag.

- Ryan, R. M. (1995). Psychological needs and the facilitation of integrative processes. *Journal of Personality, 63*(3), 397-427.
- Ryan, A. M., Gheen, M. H., & Midgley, C. (1998). Why do some students avoid asking for help? An examination of the interplay among students' academic efficacy, teachers' social-emotional role, and the classroom goal structure. *Journal of Educational Psychology, 90*(3), 528-535.
- Ryan, A. M., Hicks, L., & Midgley, C. (1997). Social goals, academic goals, and avoiding seeking help in the classroom. *Journal of Early Adolescence, 17*(2), 152-171.
- Ryan, A., & Pintrich, P. (1997). "Should I ask for help?" Adolescent perceptions of costs and benefits of help seeking in math class. *Journal of Educational Psychology, 89*, 329-341.
- Ryan, R. M., & Powelson, C. L. (1991). Autonomy and relatedness as fundamental to motivation and education. *Journal of Learning Disabilities, 19*, 500-503.
- Scales, P. C. (1991). *A portrait of young adolescents in the 1990s: implications for promoting healthy growth and development*. Minneapolis: Center for Early Adolescence.
- Schermerhorn, J. R., Hunt, J. G., & Osborn, R. N. (1994). *Managing organizational behavior*. New York: Wiley.
- Simmons, R. G., & Blythe, D. A. (1987). *Moving into adolescence: The impact of pubertal change and school context*. New York: Aldine de Gruyter.
- Skinner, E. S., & Wellborn, J. G. (1994). Coping during childhood and early adolescence: A motivational perspective. In D. L. Featherman & R. M. Lerner & M. Perlmutter (Eds.), *Life-span development and behavior* (Vol. 12, pp. 91-133). Hillsdale, NJ: Erlbaum.
- Skrobarcek, S., Chang, H., Thompson, C., Johnson, J., Atteberry, R., Westbrook, R., & Manus, A. (1997). *NASSP Bulletin, 81*(589), 104-111.
- Speaker's Task Force. (1984). *The forgotten years: report of the speaker's task force on middle childhood education*. Tallahassee, FL: Florida House of Representatives.
- Spear, A. (1992). Middle level team scheduling: Appropriate grouping for adolescents. *Schools in the Middle, 2*(1), 30-34.
- Sroufe, L. A., Cooper, R. G., & DeHart, G. B. (1992). *Child development: Its nature and course* (2nd ed.). New York: Knopf.
- Steinberg, L. D. (1985). *Adolescence* (1st ed.). New York: Knopf.

- Steinberg, L., & Brown, B. B. (1989). *Beyond the classroom: Parental and peer influences on high school achievement*. San Francisco: American Educational Research Association.
- Steinberg, L. D. (1985). *Adolescence* (1st ed.). New York: Knopf.
- Steinberg, L. D. (1989). *Adolescence* (2d ed.). New York: Knopf.
- Stevenson, C. (1992). *Teaching ten to fourteen year olds*. White Plains, NY: Longman Publishers.
- Stodolsky, S. (1985). Telling math: Origins of math aversion and anxiety. *Educational Psychologist*, 20, 125-133.
- Strahan, D., Smith, T., McElrath, M., & Toole, C. (2001). Connecting caring and action: Teachers who create learning communities in their classrooms. In T. Dickinson (Ed.), *Reinventing the middle school* (pp. 98-116). New York: RoutledgeFalmer.
- Superintendent's Middle Grades Task Force. (1987). *Caught in the middle: Educational reform for young adolescents in California public schools*. Sacramento: California Department of Education.
- Sweetland, S. R., & Hoy, W. K. (2000). School characteristics and educational outcomes: Toward an organizational model of student achievement in middle schools. *Educational Administration Quarterly*, 36(5), 703-729.
- Sykes, C. (1996). *Dumbing Down Our Kids*. New York: St. Martins Griffin.
- Takanishi, R. (1993). Changing views of adolescence in contemporary society. *Teachers College Record*, 94(3), 459-465.
- Taylor, R. D. (1994). Risk and Resilience: contextual influences on the development of African-American Adolescents (Chapter 8). In M. Wang and E. Gordon (Ed.), *Educational resilience in inner-city America: challenges and prospects*. (pp. 119-130). Hillsdale: Erlbaum.
- Thornburg, H. D. (1980). Early adolescents: Their developmental characteristics. *High School Journal*, 63(6), 215-221.
- Tomlinson, C. A. (1995). *How to differentiate instruction in mixed-ability classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Tucker, M. S., & Coddling, J. B. (1998). *Standards for our schools: how to set them, measure them, and reach them* (1 ed.). San Francisco: Jossey-Bass.

- Turner, J. C., Thorpe, P. K., & Meyer, D. K. (1998). Students' reports of motivation and negative affect: A theoretical and empirical analysis. *Journal of Educational Psychology, 90*(4), 758-771.
- Tyack, D., & Cuban, L. (1995). *Tinkering towards utopia: A century of public school reform*. Cambridge, MA: Harvard University Press.
- Tye, K. A. (1985). *The junior high: school in search of a mission*. Lanham: University Press of America.
- Van Til, W., Vars, G., & Lounsbury, J. H. (1961). *Modern education for the junior high school years*. New York: Bobbs-Merrill.
- Viadero, D. (1992, September 9). Uneven progress in improving middle schools found. *Education Week, 5*.
- Vygotsky, L. (Ed.). (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wang, M., Haertel, G. & Walbert, H. (1994). Educational resilience in inner cities. In M. Wang and E. Gordon (Eds). *Educational resilience in inner-city America: challenges and prospects*. (pp. 5-72). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Wavering, M. (1995). Cognitive development of young adolescents. In Michael Wavering (Ed.), *Educating young adolescents: Life in the middle*. New York: Garland Publishing.
- Waxman, H. C., Huang, L. S., Knight, S. L., & Owens, E. W. (1992). Investigating the effects of the classroom learning environment on the academic achievement of at-risk students. In H. C. Waxman & C. D. Ellett (Eds.), *The study of learning environments* (Vol. 5, pp. 92-100). Houston, TX: University of Houston.
- Waxman, H. C., Huang, L. S., & Pardon, Y. N. (1997). Motivation and learning environment differences between resilient and nonresilient Latino middle school students. *Hispanic Journal of Behavioral Science, 19*(2), 137-155.
- Wehlage, G. G., Rutter, R. A., Smith, G. A., Lesko, N., & Fernandez, R. R. (1989). *Reducing risk: Schools as communities of support*. Philadelphia: Falmer.
- Wells, A. S., & Oakes, J. (1996). Potential pitfalls of systemic reform: early lessons from research on detracking. *Sociology of Education, 135*-143.
- Wentzel, K. R. (1997). Student motivation in middle school: the role of perceived pedagogical caring. *Journal of Educational Psychology, 89*(3), 411-419.
- Wentzel, K. R. (1998). Social relationships and motivation in middle school: the role of parents, teachers, and peers. *Journal of Educational Psychology, 90*(2), 202-209.

- Werner, E. (1989). High risk children in young adulthood: A longitudinal study from birth to age 18. *American Journal of Orthopsychiatry*, 59, 71-81.
- Werner, E. E. (1990). Protective factors and individual resilience. In S. Miesel & J. Shonkoff (Eds.), *Handbook of early intervention* (pp. 97-116). Cambridge: Cambridge University Press.
- Werner, E. E., & Smith, R. S. (1992). *Overcoming the odds: High risk children from birth to adulthood*. NY: Cornell University Press.
- Wheelock, A. (1992). *Crossing the tracks: how 'untracking' can save America's schools*. New York: The New Press.
- Wheelock, A. (1994). *Alternatives to tracking and ability grouping*. Arlington, VA: American Association of School Administrators.
- Willert, M., & Kamii, C. (1985). Reading in kindergarten: Direct versus indirect teaching. *Young Children*, 3-9.
- Williams, C. K., Kamii, C. (1986). How children learn by handling objects? *Young Children*, 42(1), 23-46.
- Wolin, S. J., & Wolin, S. (1993). *The resilient self: How survivors of troubled families rise above adversity*. New York: Villard.
- Worell, J., & Danner, F. (1989). Adolescents in Contemporary Context. In J. Worell & F. Danner (Eds.), *The Adolescent as Decision-maker* (pp. 3-12): The Academic Press.
- Yackel, E., & Cobb, P. (1996). Sociomathematical norms, argumentation, and autonomy in mathematics. *Journal for Research in Mathematics Education*, 27(4), 459-477.
- Yair, G. (2000). Not just about time: Instructional practices and productive time in school. *Educational Administration Quarterly*, 36(4), 485-512.
- Zepeda, S. J., & Mayers, R. S. (2001). New kids on the block schedule: Beginning teachers face challenges. *High School Journal*, 84(4), 1-11.

MICHIGAN STATE UNIVERSITY LIBRARY



3 1293 02504 977