University of San Diego

Digital USD

Dissertations

Theses and Dissertations

2005-05-01

To Be or Not to Be: Status of Guam's Middle Schools

Judith T. Won Pat EdD

University of San Diego

Follow this and additional works at: <https://digital.sandiego.edu/dissertations>

Part of the [Leadership Studies Commons](#)

Digital USD Citation

Won Pat, Judith T. EdD, "To Be or Not to Be: Status of Guam's Middle Schools" (2005). *Dissertations*. 753.
<https://digital.sandiego.edu/dissertations/753>

This Dissertation: Open Access is brought to you for free and open access by the Theses and Dissertations at Digital USD. It has been accepted for inclusion in Dissertations by an authorized administrator of Digital USD. For more information, please contact digital@sandiego.edu.

**TO BE OR NOT TO BE:
STATUS OF GUAM'S MIDDLE SCHOOLS**

by

JUDITH T. WON PAT

**A dissertation submitted in partial fulfillment
of the requirements for the degree of**

**Doctor of Education
University of San Diego**

May 2005

Dissertation Committee

**Dr. Fred J. Galloway, Ph. D.
Dr. Robert Donmoyer, Ph. D.
Dr. Daniel M. Miller, Ph. D.**

© Copyright by *Judith T. Won Pat* 2005
All Rights Reserved

ABSTRACT

In an effort to help middle school programs respond to the unique developmental needs of their students, in 1995 the National Middle School Association issued their influential list of twelve essential characteristics for a developmentally sound middle school. Although this paper spawned a significant amount of research regarding the importance of these essential characteristics, there has been little, if any, research in the last decade describing the extent to which these characteristics have been implemented in middle schools outside of the continental United States. To remedy this situation, this study surveyed all 471 middle school teachers on Guam as well as the 18 administrators charged with their oversight to determine the importance, degree of implementation, and existence of roadblocks for the twelve essential middle school characteristics in Guam's middle schools. After the perceptions of the teachers and administrators were coded, aggregated, ranked, and statistically compared, multiple regression analysis was then used to determine the extent to which teachers' perceptions regarding the importance and degree of implementation of these characteristics were related to their demographic profiles (e.g., age, gender, race/ethnicity, experience, certification and education level).

The findings from this study revealed that both teachers and administrators agreed on the importance of the twelve essential components, although there were significant differences regarding the extent of implementation for three of the characteristics, with administrators more likely to believe that they had been implemented than teachers. Significant difference also occurred between teachers and administrators when asked to identify roadblocks to implementation, although respondents agreed that three of the roadblocks--lack of funds, apathetic parents and problem students--were considered

serious. Ethnicity also played a role in explaining why some teachers considered certain characteristics as more important, or more implemented than others, with White teachers less likely to rate characteristics as important or implemented than Pacific Islanders. Credentialed teachers and teachers with greater experience were also more likely to consider certain school characteristics more important than others, and finally, older teachers and teachers with a master's degree were more likely to consider certain characteristics more implemented than other teachers.

DEDICATION

My mother and my father taught me that in all things patience is the key to victory, and that those who cannot endure cannot hope to win. My late husband inspired me to stay the course and reminded me that the ultimate triumph belonged to those who could forbear. My three beautiful and wonderful children are my constant source of strength and happiness. Their encouragement to not shy away from life's challenges, or to be defeated, is my courage. To endure, persevere and overcome all difficulties are my constant reminders that the power of faith gives us the strength to weather and survive any storm.

It is with deep gratitude and immense love that I dedicate this dissertation to my mother, Ana Salas Perez and my father, Antonio Borja Won Pat--I owe them a debt of gratitude for their love and their gift of strength and patience throughout their lives and in their spirit. I also dedicate this dissertation to my late husband, Melvin B. Borja, for giving me the strength and confidence to pursue my dream. And, to the loves of my life--my three children, Ahtoy, Melvin, and Ana Maria, for their love, support and unceasing encouragement, I also dedicate this dissertation.

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to Dr. Fred Galloway, my committee chairman and advisor for his encouragement that sustained my efforts throughout this journey. I am indebted to him for his professional expertise and willingness to devote time and energy to assist with his statistical expertise, his probing questions, his guidance and direction.

I extend a heartfelt appreciation to Dr. Robert Donmoyer, my committee member, for his grammatical genius and editing expertise constantly revealing the complexities of the English language in written form, and for his insightful suggestions and his knowledge of middle level education.

I also wish to acknowledge Dr. Daniel Miller, my committee member, for his encouragement, enthusiasm and assistance throughout this endeavor. His expertise on leadership in our schools was critical in guiding my thoughts and ideas on this dissertation, and revealing the importance of good leadership for the sake of our children.

I would also like to thank the Guam Department of Education, for allowing me to conduct the surveys, *Dangkulo na Si Yuos Ma'ase* to the teachers and administrators who participated in the survey questionnaire, this dissertation could not have been possible were it not for your willingness to take the time to answer the survey. More importantly, it is with great admiration that I thank you for the time you spend with our children preparing them to meet the challenges of tomorrow.

I would not be where I am today were it not for the love and support of my brothers and sisters, Aveline, Marilyn, Jacqueline, Ellen, Anthony, Rosalind and Mark. In my philosophy it is said that we choose the family we are born into, and from our

families there are lessons to be learned that shapes the person we are to become--I am honored and proud to have chosen to be a part of our family and to be the youngest daughter of Antonio Borja Won Pat and Ana Salas Perez, for the lessons learned throughout this journey have made me who I am today.

I wish to acknowledge and thank my *Soka Gakkai* family for the numerous *daimoku* they sent, and their constant encouragement. More importantly, I wish to thank them for being reminders of the importance of our faith in *Gohonzon* and the strength that is gained from, and by our heartfelt commitment and dedication to the purpose of our philosophy and our lives--promoting culture, education and world peace.

To my brothers in *myoho*, Dr. Joe DeTorres and Don (Gach) Ploke, for always being positive life forces in my life, for being examples of strength, determination and deep conviction in the face of life's challenges, and for teaching me to have faith in myself. Most of all, I wish to thank them for their goodness and humanity that carried me through the most challenging time in my life, and seeing me through this journey.

A special thank you to my friend Dr. Julie Ulloa-Heath for her guidance, her persistence, and for being an incredibly patient taskmaster. I would not have made it through were it not for her encouragement, her calls to check on my progress, and sharing her insight and experience of the process.

And finally, (but not least of all) a raucous standing ovation for my staff, Frank, Herbie, Danny, Robert and Alice--my heartfelt gratitude and sincerest thanks for their relentless encouragement and support, for keeping me on track, for the countless late nights keeping me company while I worked on the dissertation, and most of all, making sure I was fed.

TABLE OF CONTENTS

TITLE PAGE.....	
COPYRIGHT PAGE.....	
APPROVAL PAGE.....	
PROJECT ACTION SUMMARY.....	
ABSTRACT.....	
DEDICATION.....	
ACKNOWLEDGEMENTS.....	viii
TABLE OF CONTENTS.....	x
LIST OF TABLES.....	xiii
CHAPTER	
1. OVERVIEW OF THE STUDY	1
Introduction	1
Background of the Problem.....	2
Statement of the Problem	5
Purpose of the Study	6
Research Questions.....	7
Importance of Study.....	7
2. REVIEW OF LITERATURE.....	9
Introduction	9
The Junior High Movement	9
Economy of Time.....	10
Student Mortality--Retention and Dropouts.....	12
Variations of Learners	13
Unique Needs of Young Adolescents	14
Other Elements Influencing Change.....	15
Overcrowding	15
Momentum.....	16
Jumping on the Bandwagon	16
Functions of the Junior High School	17
Criticism of Junior High School.....	17

The Middle School Movement	19
Characteristics of Developmentally Appropriate Middle Schools	22
Association for Supervision and Curriculum Development (1975).....	23
National Middle School Association Report (1982).....	25
Developing Effective Middle Schools Through Faculty Participation (1988).....	25
Carnegie Council on Adolescent Development (1989).....	27
National Middle School Association (1995)	29
Middle School Characteristics and Research Support	30
Review of Related Studies	35
Reigle's 18 Middle School Characteristics (1971)	36
Munsell's Survey of Middle Level Characteristics (1985)	37
Neill's Middle School Questionnaire of Essential Elements (1994)	38
Other Related Studies.....	39
Constraints to Implementing the Middle School Characteristics	40
Summary	43
 3. RESEARCH AND METHODOLOGY	44
Purpose of the Study	44
Research Questions.....	44
Population Sample	45
Instrument Selection	45
Middle School Questionnaire of Essential Elements (MSQE ²).....	45
Perceived Roadblocks Survey	46
Demographic Questionnaire	47
Instrumentation	48
Scales for the MSQE ²	49
Scales for Roadblocks Survey	50
Demographic Questionnaire	51
Data Collection	51
Data Analysis.....	52
Research Question 1	52
Research Question 2.....	53
Research Question 3.....	54
Research Question 4.....	54
Limitations of the Study	57
 4. DATA ANALYSIS AND RESULTS.....	58
Introduction	58
Sampling Participants	60
Non-Response Bias.....	60
Sample Demographic Characteristics	61
Research Questions and Instrumentation	63
Discussion of Findings.....	65
Effects of Demographic Variables: Research Question 4.....	85
Effects of Teachers' Ethnicity on Importance	86

Effects of Teachers' Certification on Importance.....	87
Effects of Teachers' Experience on Importance.....	87
Effects of Teachers' Ethnicity on Implementation.....	89
Effects of Teachers' Age on Implementation.....	89
Effects of Teachers' Academic Degree on Implementation.....	89
Summary	91
5. SUMMARY, CONCLUSION AND RECOMMENDATIONS	94
Introduction	94
Discussion of Findings.....	96
All Respondents Perception on Important and Implemented Characteristics.....	96
Teachers' and Administrators' Perception of "Roadblocks"	97
Significant Differences among Respondents for Perceived Roadblocks	99
Effects of Demographic Variables on Perceptions	100
Effects of Ethnicity	100
Effects of Teacher Certification	102
Effects of Experience.....	102
Effects of Age.....	103
Effects of Academic Degree	103
Conclusions	103
Recommendations.....	104
Concluding Remarks.....	106
REFERENCES.....	107
APPENDIX	
A. MSQE ² Part I	114
B. Roadblocks Survey Part II	119
C. Demographic Questionnaire Part III	121
D. Permission Letter for MSQE ²	123
E. Permission Letter for Roadblocks Survey	125
F. Approval to Conduct Research from DOE	127
G. Cover Letter to Respondents.....	129

List of Tables

Table 1. Frequency distribution of the sample.....	58
Table 2. Demographic frequency of respondents--gender	60
Table 3. Demographic frequency of respondents--ethnicity	61
Table 4. Demographic frequency of respondents--certification	61
Table 5. Demographic frequency of respondents--degree.....	62
Table 6. Summary description of respondents by age and experience	62
Table 7. Teachers' and administrators' perception on degree of importance.....	66
Table 8. Comparison of composite means and standard deviations regarding importance	68
Table 9. Significance of teachers' and administrators' perceived degree of importance	69
Table 10. Teachers' and administrators' perception on level of implementation.....	72
Table 11. Comparison of composite means and standard deviations regarding implementation	74
Table 12. Significance of teachers' and administrators' perceived level of implementation.....	76
Table 13. Rank order of teachers' and administrators' perception of roadblocks	78
Table 14. Distribution of roadblock responses	80
Table 15. Comparison of teachers' and administrators' perception of roadblocks	82

Table 16. Teachers' perception of important characteristics as described by	
demographic responses.....	86
Table 17. Teachers' perception of implemented characteristics as described by	
demographic responses.....	89

CHAPTER 1: OVERVIEW OF THE STUDY

Introduction

In the early 1900s, Guam governance was under control of the United States Navy. The military operated the hospital, public safety, public works, and even public education. With the signing of the Organic Act of Guam in 1950, the U.S. Naval Forces turned over control of the government to a U.S. presidential appointed governor. Not surprisingly, Guam's educational system, under the appointed governor, mirrored the structure of the U.S. school system. The government provided public education for grades one through eight. Those wanting to further their education had to leave the island to complete high school (Shafer, 1989).

The junior high school was established to allow for a smooth transition from elementary to senior high school by providing a unique organizational and instructional program. Over the years, however, the junior high school concept lost its purpose. The organizational structure drifted closer to the high school model of organization. As Alexander explained, "The junior high school has generally become a school more like the high school, better geared to the teenager than the 'in-between-ager'" (Alexander, 1968, p. 10). It was not until the mid-1960 that educators agreed on a descriptive label for children in junior high school. Alternately, they were referred to as "pre- and early adolescents" "in-betweeners" and even "middle-aged children" (Compton, 1978).

Background to the Problem

Like many educators in the United States, educational leaders on Guam began exploring the middle school concept because they had become dissatisfied with the high school “feel” of their junior high schools (Shafer, 1989). They were also concerned that: (a) the new education board policy increased graduation credit requirements; (b) ninth grade credits were being applied to high school graduation; (c) enrollments across the elementary schools were unequal; (d) schools were becoming overcrowded; (e) the Department of Education faced budgetary cuts; and (f) junior high schools needed to be restructured to meet the unique needs of early adolescents.

In 1981, the Department of Education organized a Facilities Planning Committee of school principals to study existing school facility needs. They reported that southern and central residents were migrating to the northern part of the island for economic reasons like housing and employment. This migration created overcrowding in the two high schools and four junior high schools (Shafer, 1989).

In response to the committee’s report, then Director of Education, Dr. Katherine Aguon, convened the same committee to develop alternate plans to address overcrowding concerns. The committee recommended that the Territorial Board of Education create middle level schools covering grades six through eight, to alleviate overcrowding. The Board adopted the 5-3-4-grade plan (grades 1-5 for the elementary level, grades 6-8 for the middle level, and grades 9-12 for the high school level). This meant converting junior high schools to senior high schools, converting a few elementary schools to middle

schools, and reorganizing the remaining junior high schools to middle schools (Shafer, 1989).

Aside from overcrowding issues, the committee felt strongly that a reorganization of the school system should be on the basis of responding to the unique needs and nature of early adolescents (Shafer, 1989). The committee, therefore, envisioned that the Guam middle school faculty should focus on the characteristics and unique needs of the pre and early adolescents; that the guidance counselors would play a key role in designing programs to meet the individual needs of these students; and that the faculty be comprised of teachers with elementary training and secondary preparation (Shafer, Taton & Lind, 1982).

The planners also envisioned that a great deal of time would be devoted to mastering basic skills in the core subjects. Lastly, the planners envisioned a system of "community or neighborhood schools." The idea was to create school districts that would allow children to attend the school nearest their homes (Shafer et al., 1982).

The Department of Education adopted the middle school concept and, consequently, middle schools were created in 1982. At the opening of the school year, a group of educators from California school districts and the University of Southern California, under the leadership of Dr. John Stallings, conducted a two-day workshop for 250 teachers, new to the sixth, seventh and eighth grade level. The workshops were designed to give basic information about middle school philosophy, organization, and characteristics of children aged 10-14 (Shafer, 1989).

Four months after the middle schools were in operation, the newly elected governor took office and appointed a new Board and Director of Education. They formed

a task force to evaluate the middle schools and offer suggestions for improvement. The task force reported that the intent of the middle school concept was not implemented. They found that middle schools were middle schools only in name and grade configuration (Shafer, 1989). As Cawalti (1988) noted, simply placing grades six through eight in a single building did not ensure that the programmatic characteristics appropriate for early adolescents would be present. Furthermore, the intended effects for the shift from junior high to a middle grade structure were not adopted by the previous Board of Education. No official document, statement, or minutes were on file reflecting a district-wide policy. Only minimal changes in Board of Education policies were made to reflect the term "middle school" and the grade configuration to reflect grades six through eight (Shafer, 1989).

Because of the evaluation, one middle school, F. B. Leon Guerrero Middle School, was granted permission to pilot the "true" middle school concept for school year 1984-1985. Elliot Merenbloom (consultant, school principal, author, and advocate of faculty team organization) trained the administrators and teachers of F. B. Leon Guerrero Middle School to organize and implement an interdisciplinary model. The pilot program included several unique features that differentiated their school from the other Guam middle school programs (Shafer, 1989).

The program operated for four years before the department conducted a formal evaluation. In 1989, the Administrator of the Research, Planning and Evaluation Division of the Department of Education headed a task force to evaluate the programs in all six middle schools, including the pilot program. The study evaluated F.B. Leon Guerrero Middle School's implementation of an interdisciplinary teaching pilot program and

compared their success with the five other status quo middle schools. Additionally, the study identified current middle school practices and conditions in Guam middle schools that affected student outcomes, as well as teacher attitudes and morale. The study examined costs, absenteeism and suspension rates, teacher backgrounds, and other programmatic details. Questionnaires, record reviews, and cognitive and affective tests were utilized in the evaluation. Administrators, teachers, and students were surveyed relative to their perceptions of the middle schools and attitudes of students and teachers. A survey identified ideal middle school practices and the degree to which those practices had been implemented in the Guam middle schools. Items on the survey were extracted from a review of two pieces of literature, *Curriculum Update* (1988) and *Turning Points: Preparing American Youth for the 21st Century* (1989), both published by the Association for Supervision and Curriculum Development (Shafer, 1989).

According to Shafer, the model implemented at F. B. Leon Guerrero Middle School contained many of the “salient features of a true middle school” (1989, p. 68). In this study, he also found that the other middle schools had not implemented half of the characteristics identified in the literature.

Statement of the Problem

The Territorial Board of Education never formally endorsed Shafer’s recommendations. Shafer’s 1989 study was the last to consider the status of Guam’s middle schools.

In 1982, the Department of Education made the switch from junior high to middle schools with little or no training for teachers and administrators. Board policies on middle schools were virtually nonexistent. Shafer (1989) reviewed 108 Board of Education

policies and found that none of them had adopted middle school objectives. Similarly, no certification policies had been established to address middle school certification (elementary, secondary, special education, and vocational education were mentioned as separate levels).

In fact, middle schools were classified with high schools as secondary schools (Shafer, 1989). The University of Guam offers only one course on middle level education. The Department of Education granted elementary certificates for K-6, and secondary certificates for grades 7-12. The Department of Education now grants endorsements for middle level teachers. Currently, elementary and secondary certifications are accepted for teaching in middle schools.

Other than the previously discussed facts, the extent to which essential middle school characteristics are implemented is unknown. Also unknown are the answers to the following questions: Are Guam's public middle schools implementing the identified essential middle level characteristics? How important are the essential characteristics to those who teach in middle schools? What barriers or roadblocks prevent teachers and administrators from implementing those essential characteristics?

Purpose of this Study

The purpose of this study was to measure the importance that teachers and administrators gave to the various characteristics of middle schools, and the extent to which these characteristics have been implemented. This study also identified teachers' and administrators' perceptions of barriers preventing implementation in Guam's public middle schools. Finally, this study examined how demographic variables influenced the importance and implementation of essential middle school characteristics.

Research Questions

The specific questions addressed in the study were:

1. To what extent do teachers and administrators perceive essential middle school characteristics as important?
2. To what extent do teachers and administrators perceive essential middle school characteristics as currently being implemented in their school?
3. What factors do teachers and administrators believe are “roadblocks” in implementing essential middle school characteristics in their school?
4. Do teachers’ demographic profiles affect their perceptions regarding the degree of importance and the level of implementation of essential middle school characteristics?

Importance of the Study

Research was needed to gather information to gain a better understanding of the status and implications of the middle school concept in Guam’s educational system. The continuation of the middle school depends upon the willingness of its advocates to prepare the research necessary to warrant its survival. This study was important because it investigated the development and character of the middle school concept brought to and adapted by public middle schools on Guam. It explored the extent to which this concept has altered the professional growth of middle school level educators when confronted with the limitations of hemispheric isolation and the lack of resources and willingness to change. Research concerning what middle schools in Guam look like in relation to theory and practice is essential. It will help validate or refute the claims of the middle school supporters.

Based on the literature cited in this study, a primary goal of this investigation was to provide information that will allow policy leaders to determine which characteristics are important and which should be implemented in Guam's middle schools. Additionally, the information identified what constraints the leadership must overcome to effectively implement the essential elements of a developmentally responsive middle school.

Given the recommendations in the study conducted by Shafer (1989), and the lack of action by the Territorial Board of Education, it was important to assess the status of Guam's public middle schools. No study has been commissioned by the Department of Education to determine whether recommendations from the last study, in 1989-1990, were implemented; therefore, this study is the only current document addressing that issue. It also laid the groundwork for future studies related to the practice and effectiveness of the middle school philosophy.

Over recent years, numerous issues and concerns have developed in the minds of school policy makers and legislative policy makers. In order for school leaders to assess current changes and plan educational agendas for middle level schools, a knowledge base about the middle schools in Guam is essential. Using the results of this study, educators and legislators will be able to determine the future direction of the middle school movement in Guam. They will be better equipped to make appropriate decisions regarding: (a) middle school certification, (b) university course requirements for middle level teacher and administrator preparation, (c) staff development, (d) local funding to support implementation efforts, and (e) issues related to curriculum.

CHAPTER 2: REVIEW OF LITERATURE

Introduction

The review of the literature begins with a discussion of the historical perspective on the growth and development of the junior high school and the evolution of the middle school movement. As Lounsbury and Vars stated, "Educators cannot fully understand the current middle school movement without an understanding of the junior high school movement; for the two are inexorably bound together, and in fact, may really be one" (as cited in Lawton, 1989, p. 1). An examination of factors that led to the establishment of the junior high school and some of the criticisms of the junior high school system will be presented. An account of the literature on the evolution of middle schools, the current need for middle schools and the characteristics of middle schools were discussed. The review of studies related to the importance and implementation of essential elements of the middle and a brief discussion of factors serving as roadblocks.

The Junior High Movement

Researchers Van Til, Vars and Lounsbury (1967) believe that the first junior high schools in the United States were in Columbus, Ohio, in 1909, and in Berkeley, California, in 1910. The Ohio capital was the first city to call the new institution a "Junior High School." However, N. C. Heironomous' (1940) article titled "Is This the Earliest Known Junior High School?" indicated that in 1895, in Richmond, Indiana, a new school built to house seventh and eighth graders was an "Intermediate School." Regardless of

where and when the first junior high school was established, the concept picked up support rapidly (as cited in Van Til et al., 1967).

The first public high school was established in 1821. For nearly 100 years, the standard organizational pattern for public schooling in the United States was the eight-four plan: grades 1-8, eight years for the elementary school, and grades 9-12, four years of high school (Van Til et al., 1967).

A leading scholar of early junior high school, Leonard Koos (1927), in his examination of junior high schools, found that there were certain forces leading to the establishment and rapid growth of the junior high school. These forces included: (a) economy of time, (b) concern for high student mortality caused by dropout and retention, (c) wide variations in learners, and (d) needs of young adolescents.

Economy of Time

Above all issues, economy of time received the most attention in early attempts to reorganize America's educational system. President Charles W. Eliot of Harvard University became the leading spokesperson for colleges. He criticized the eight-four organizational patterns in the 19th century. In 1888, Dr. Eliot, speaking before the Department of Superintendence in Washington, D. C., evoked considerable discussion when he asked, "Can school programs be shortened and enriched?" Dr. Eliot said yes, and proposed that courses offered in the secondary level start as early as seventh or eighth grade to better prepare students for college (as cited in Briggs, 1920, p. 30). He also pleaded for reforms, such as shortening the period of academic and professional study to allow college graduates to enter the work force earlier (Davis, 1924).

Dr. Eliot's proposals triggered a chain of events that went beyond the establishment of junior high schools, resulting in the reform of the entire system of education in the United States. The famous Committee of Ten on Secondary School Studies in 1893, commented on the proposed program:

In preparing these programs, the committee were perfectly aware that it is impossible to make a satisfactory secondary-school program, limited to a period of four years, and founded on the present elementary-school subjects now reserved for high schools--such as algebra, geometry, natural science, and foreign languages--should be begun earlier than now, and therefore within the schools classified as elementary; or as an alternative, the secondary school period should be made to begin two years earlier than at present, leaving six years instead of eight for the elementary school period (Davis, 1924, p.18).

From 1892 to 1918, several major national committees and commissions studied the idea of reorganization. The most famous of the commission reports in the history of education was the 1918 report titled the "Cardinal Principles of Secondary Education," published by the Commission on the Reorganization of Secondary Education of the National Education Association. This influential report strongly recommended that (a) school systems should reorganize into a six-year elementary school with a six-year high school designed to serve students twelve to eighteen years of age; (b) secondary education should have two periods, designated as the junior and senior periods; and (c) the junior high school should introduce departmentalized instruction, allow for elective course work, and provide an environment in which young adolescents can explore their interests and abilities (Van Til et al., 1967).

In 1919, the North Central Association of Colleges and Secondary Schools, under the leadership of Calvin O. Davis, adopted the following definition for junior high schools:

It is a school in which the seventh, eighth, and ninth grades are segregated in a building (or portion of a building) by them, possess an organization of their own that is distinct from the grades above and the grades below, and are taught by a separate corps of teachers (Davis, 1924, p. 7).

By 1920, approximately 400 junior high schools were in existence and the number was growing. According to Wiles and Bondi (1981), by the mid-fifties there were approximately 6,500 junior high schools in the United States.

Student Mortality--Retention and Dropouts

The studies of three educational leaders and psychologists--Thorndike (1907), Ayres (1909), and Strayer (1911)--did much to drive the impetus for reorganization. Their findings showed a high percentage of dropouts beyond the fifth grade. Many educators felt that the great gap between elementary school and high school was the main cause of the high rate of dropouts during the junior high school years (Briggs, 1920).

Briggs (1920), in discussing the findings of Thorndike, Ayers and Strayer, reported that the number of dropouts between sixth and tenth grade is approximately seventy students out of every hundred. He attributed this high student mortality rate partly to the lack of compulsory attendance laws and partly to the lack of articulation between elementary and secondary schools.

Student mortality was also influenced by the high rate of student failure and the number of students repeating a grade level (Clark & Clark, 1994). About one third of the

school children in the early twentieth century were left back some time during the few years they spent in school. About one out of every six children in any grade was a repeater in that grade (Van Til, et al., 1961, p. 15).

“No one enjoys failure,” stated Van Til, Vars, and Lounsbury (1967). They argued that a revised and enriched curriculum should be endorsed to keep students in school longer and ensure steady progress through the grades. Lounsbury and his colleague, Vars, suggested that a new school unit could better provide the vocational training early school dropouts so desperately needed. The separate junior high school was proposed as an intermediate step between the elementary and high school, or to bridge the gap (Lounsbury & Vars, 1978).

Variations in Learners

Another contributing factor to the high rate of dropouts and retention of students in the same grade level was the failure of schools to recognize and provide for individual differences. Psychologists such as James M. Cattell and Edward L. Thorndike called attention to the importance of individual differences. For the most part schools in the twentieth century believed that all students were very much alike. Those who worked hard and practiced good study habits were generally successful. Similarly, schools assumed that unsuccessful students failed and dropped out of school because they lacked commitment, did not apply themselves, or were lazy. Failure to recognize individual differences led to misleading assumptions about student learning (Van Til et al., 1967).

Thorndike disagreed with this way of thinking. In his book, *Individuality*, he summarized some facts about individual differences--physical differences being the most obvious and striking (Briggs, 1920). There were other differences: variations in degrees

of social development, emotional maturity, intellectual interests and skills, to name a few (Van Til et al., 1967).

Koos (1927) believed that “there is abundant evidence of the fact of variation and of the need of making some recognition of it in the instruction and administration of our schools” (p. 36). He cited the wide variation in chronological age, differences in physique, sexual maturation, mental and intellectual capacity, differences in academic work, interest and the expanding range of differences. He suggested that the junior high school was well suited to recognize individual differences by providing for “differentiation of work through partially variable curricula, groups moving at differing rates, promotion by subject, permitting brighter pupils to carry more courses, and supervised study” (Koos, 1927, p. 50).

Glass (1923) advocated that the function of junior high school is the exploring, trying-out, and testing period of the public school system. It is a period where vital questions of educational and vocational choice are made therefore, education offerings must be provided according to individual needs rather than to conforming all students to one educational pattern (as cited in Koos, 1927, p. 52).

Unique Needs of Young Adolescents

New ideas about adolescence and individuality were advanced by the findings of psychologist G. Stanley Hall in 1905. He believed that the physiological phases of puberty were responsible changes in all phases of a youngster’s life--physical, mental, social, moral, and emotional. His writings gave importance to adolescence as a distinct and unique period in life, encouraged educators to examine current educational practice

that were not being given special consideration for this unique age group (Van Til et al., 1967).

These four forces (economy of time, student mortality, variation in learners and unique needs of young adolescents) as described by Koos, and reinforced by other early scholars and educators, provided a framework for the eventual establishment of the junior high school and its rapid growth (1927).

Other Elements Influencing Change

A combination of other elements helped popularize the new junior high school system: overcrowding, momentum and jumping on the bandwagon. Though some of these arguments varied among school districts, the important thing was that all of them influenced the growth of the junior high school (Moss, 1969).

Overcrowding

The element of overcrowding became a stepping-stone in the creation of middle schools to help solve the problem of overcrowded high schools. Koos states, “by removing pupils of the ninth grade from the high school building and housing them with those in the seventh and eighth grades in some older buildings, the problem is solved” (1927, p. 3). He considered this move a superficial reorganization.

Hansen and Hern (1971) confirmed the existence of this element by quoting D.

W. Lenz:

It is apparent that...it [the junior high school] was established not because of any strong and proved educational values, but as an expedient, usually to solve a housing problem; in many cases because it was the thing to do in educational circles... (Hansen & Hern, 1971, pp. 6-7).

Momentum

A second element was “momentum.” Koos believed that all the four forces discussed earlier (economy of time, student mortality, variation of learners, and unique needs of young adolescents) should be added to the influence of momentum.

Koos states: ...the momentum of the history of the movement just epitomized, are responsible for the vast array of phenomena of reorganization with which we are now surrounded (p. 8).

Pratt (1922) and Glass (1924) investigated the growth in numbers of junior high schools in cities with populations of 100,000 or more. They found that 75 percent of the 64 cities that replied had junior high schools in operation, under construction, or authorize. Other evidences of the movement were educational conventions, educational periodicals, articles and books, university course offerings and legislation that gave the junior high school much visibility and popularity (as cited in Koos, 1927, pp.8-9).

Jumping on the Bandwagon

A third element identified as being important to the development of junior high schools was “jumping on the bandwagon.” Koos (1927) felt that the movement toward reorganization was more extrinsic rather than based on educational needs. It was a desire by the school authorities to be “progressive.”

This factor is not unlike the force of a fad. It often operates without any clear understanding of the purposes of reorganization and it uncommonly results in change which, rather than being fundamental, restricts itself to such superficiality as the mere regrouping of grades (p. 3).

Functions of the Junior High School

Education in a changing society can never be static. As the times changed, so did the functions of the junior high school. W. T. Gruhn worked with H. R. Douglass between 1938 and 1940 to formulate a functional list of statements, which facilitated the learning environments in junior high schools. They included: (a) integration of a student's previous experiences with education; (b) exploration of the student's aptitudes and special talents; (c) guidance of a student's personal and social development; (d) differentiation of opportunities for learning; (e) socialization for participation in society; and (f) articulation between elementary and high school (Gruhn & Douglass, 1956, p. 31). This list is still the foundational framework for defining an effective middle level school (Wiles & Bondi, 1981).

Criticism of Junior High School

Throughout the history of the junior high school, educational researchers tried to determine whether it fulfilled, in practice, the goals that theorists and junior high school advocates claimed for it. Lounsbury and Marani (1964) in their examination of research studies reported that the junior high schools were failing to provide an education compatible to the interest of the students (Lounsbury & Marani, 1964).

Although the junior high school was created to bridge the gap between elementary school and high school by providing a unique organizational and instructional program, the junior high school started to shift closer to the high school (Alexander 1968). Alexander and several authorities pointed to the name "junior high school" as evidence of its subservience to the high school. Howard and Stoumbis (1970) suggested that the name was a handicap because it "carries the suggestion of 'senior high school,' and by

implication, related the junior institution to senior high school practices and activities” (Howard & Stoumbis, 1970, p. 212). Advocates believed that social activities like fraternities, sororities and evening dances offered in junior high schools were inappropriate for the age group. Alexander and Williams (1965) and Eichhorn (1966) agreed that the junior high school was a miniature senior high school (Clark & Clark, 1993).

A second criticism of the junior high school was the high school practice to impose the Carnegie unit on the junior high school’s 9th grade and the call for college preparation with specialized courses in technology and sciences. The junior high school, like the high school, emphasized a subject-oriented approach to education. (Wiles & Bondi, 1981).

A third criticism was the argument that junior high schools encouraged racial segregation by delaying the departure from neighborhood schools until the 7th grade (Moss, 1969). In the 1960s and 1970s, many school districts in the South started reorganization reform to desegregate schools. The movement of ninth grade up to high school and fifth and sixth grades into newly created middle schools created racial balance (Alexander, 1984). In the past, students from segregated schools were bussed to desegregated schools (Alexander, 1984; and also George, Stevenson, Thomason & Beane, 1992). The rationale for this move was to integrate the children earlier than junior high school so that positive attitudes towards racial harmony could be fostered early on in their development (Calhoun, 1983).

A fourth factor was the increase in enrollments of school-aged children. When the baby boom generation entered elementary schools, overpopulation was inevitable. The

shortage of buildings resulted in double and triple school sessions. At the same time, high schools were being threatened with closure for under-enrollment (George et al., 1992). It made sense to move the ninth grade into high schools to prevent closure, and move fifth and sixth grades into schools housing seventh and eighth grades (Calhoun, 1983).

Alexander conducted a national survey in 1968, citing the desire to “eliminate crowded conditions in other schools” as the number one reason to establish middle schools. The second most cited reason was to “provide a program specifically designed for children in this age group” (Alexander, 1984, p. 15).

Despite the problems with the junior high school concept, the number of junior high schools grew significantly. The growth of a separate junior high school went from zero in 1910 to 8,000 junior high schools in 1969 (Howard & Stoumbis, 1970). The figure in 1969 included approximately 2,000 middle schools. Statistics reported by the United States Office of Education showed that in 1964, 72% of the public secondary schools in the country were reorganized to include a separate junior high division (Howard and Stoumbis, 1970).

The Middle School Movement

After forty years of existence, the deficiencies of the junior high school remained. In the late 1950s and early 1960s the middle school emerged as an alternative to the junior high school. Many reasons have been advanced for the existence of the middle school. Bondi (1972) listed two basic reasons for the development of the middle school:

1. A special program is needed for the 10-14 year-old child going through the unique “transescent” period in his growth and development.... The widest range of differences in terms of physical, social, and intellectual growth is found in

middle school youngsters. Such a wide range of differences calls for an individualized program that is lacking in most junior high schools. The middle school provides for individual differences with the program tailored to fit each child.

2. The middle school, through a new program and organization, provides for much needed innovations in curriculum and instruction. Through the creation of the middle school, rather than remodeling the outmoded junior high school, educators have provided an atmosphere for implementing those practices long talked about but seldom affected (Bondi, 1972, p. 12).

A decade later, a document entitled *A Nation at Risk* (1983), released by the National Commission on Excellence in Education, called for an increase in graduation requirements and the strengthening of programs. To meet the requirements of new state legislation and to continue to receive federal funding, school districts moved ninth grade students into high schools. Thus, more middle schools were created, but often only in name and grade (George et al., 1992).

In a study entitled "The Middle School Movement, 1960-1970," Kealy (1971) identified a number of national studies conducted in the 1960s, to determine the growth of middle schools: Educational Research Service, 1964; Brod, 1966; Cuff, 1967; Alexander, 1968; Hunt, Berg, and Doyle, 1968; and Kealy, 1969-1970. The general conclusion from these studies was that middle schools were "burgeoning" at a "phenomenal" rate, and changes in grade levels and names of schools were "not necessarily indicators of instructional programs geared to the educational needs of the "betweenager" (Kealy, 1971, pp. 23-24). Kealy expressed concern that the majority of the

changes were in name only and those significant programmatic changes for early adolescents were not yet in place (Kealy, 1971). Gatewood also reviewed these same national studies and concurred that: "In truth, the only real difference between most junior highs and middle schools is in name and grade organization" (Gatewood, 1973, p. 221).

Alexander reported similar findings in his compilation of studies from California, Connecticut, Florida, Georgia, Illinois, Indiana, Maryland, New York, Pennsylvania, and Texas. The findings from the study indicated that although many states were aware of the needs of young adolescents, there was still a "wide gap between middle school philosophy and performance" (Alexander, 1971, p.73).

Bough, McLure, and Sinks (1972) conducted a similar survey in 1970-1971 in Minnesota, Wisconsin, Iowa, Illinois, and Indiana. They concluded that the middle school movement was growing at a "slower, more careful" rate, with the early adolescent in mind (Bough et al., 1972, p.166). Wiles and Thomason (1975), however, conducted a comprehensive review of studies from 1968-1974 and found the studies to be of "remarkably low quality," recommending that future research emphasize the specific characteristics of middle level education (Wiles & Thomason 1975, p. 421).

An attitudinal survey conducted by Allen and Splittgerber (1980) found that exemplary middle schools varied in implementing the "middle school concept." The study pointed out that there is a need for additional "empirical descriptions of what principals and teachers actually do in middle schools" (Allen & Splittgerber, 1980, p. 9).

In 1988, the Children's Defense Fund (CDF) conducted a national survey for evaluating state policies on middle level education. The statistics showed that students

with weak basic skills were more likely to drop out of school than those who had mastered the skills. To fix this problem, CDF recommended the teaching of basic skills during the young adolescent years. Programs were required to address the unique physical, social and emotional needs of young adolescents. To simply demand more of them academically were not the answer, according to the report. In fact, “tightening academic requirements before allowing sports participation, grade promotion, or high school graduation--without improving a school’s ability to identify and improve the skills of those who have fallen behind--do not improve substantially the quality of high school graduates” (1988, p. 21). These seemingly punitive actions, according to some, only served to frustrate students and decrease their motivation, adding to the risk of failure. The CDF urged each state to: (a) develop guidelines for middle level education; (b) form a task force to determine the status of middle level schools; and (c) make recommendations for appropriate programs and practices geared to the needs of young adolescents (1988).

Characteristics of Developmentally Appropriate Middle Schools

The emergence of the middle school has resulted in a renewed interest in the developmental characteristics of pupils between early childhood and adolescence. Efforts to identify organization and programmatic structures of middle level schools were undertaken by the National Middle School Association (NMSA), the National Association of Secondary School Principals (NASSP), the Association for Supervision and Curriculum Development (ASCD) and other individual scholars (Clark & Clark, 1994). For the purposes of this study, the following authorities and their contribution on organization and programmatic structures of middle level schools will be discussed.

They are: (a) the Association for Supervision and Curriculum Development (ASCD) publication, *The Middle School We Need* by Gatewood and Dilg (1975); (b) the National Middle School Association (NMSA) position paper, *This We Believe* (1982); (c) Elliot Merenbloom's publication, *Developing Effective Middle Schools Through Faculty Participation* (1988); (d) the Carnegie Council on Adolescent Development of the Carnegie Corporation of New York publication, *Turning Points: Preparing American Youth for the 21st Century* (1989); and (f) the National Middle School Association document, *This We Believe: Developmentally Responsive Middle Schools* (1995). The characteristics listed in each document are very similar, if not identical. In comparison to the National Middle School Association (1995) characteristics in the study, the Riegle's survey instrument lacked educators committed to young adolescents; the Association for Supervision and Curriculum Development (1975) document lacked a shared vision, family and community partnership and assessment and evaluation; the National Middle School Association (1982) document lacked a shared vision, high expectations for all and family and community partnership; Merenbloom's (1988) list of characteristics aligned with NMSA (1982) and the Carnegie Task Force (1989) report endorsed all of the updated 12 characteristics in the NMSA (1995) document.

Association for Supervision and Curriculum Development (1975)

In 1975, the Association for Supervision and Curriculum Development (ASCD) published *The Middle School We Need* by Gatewood and Dilg. They identified ten characteristics of effective middle schools:

1. A unique program adapted to the needs of the pre- and early adolescent learner.
2. The widest possible range of intellectual, social and physical experiences.

3. Opportunities for exploration and development of fundamental skills needed by all while making allowances for individual learning patterns. It should maintain an atmosphere of basic respect for individual differences.
4. A climate that enables students to develop abilities, find facts, weigh evidence, draw conclusions, determine values, and that keeps their minds open to the new facts.
5. Staff members who recognize and understand the student's needs, interests, backgrounds, motivations, goals, as well as stresses, strains, frustrations, and fears.
6. A smooth educational transition between the elementary school and the high school while allowing for the physical and emotional changes taking place due to transescence.
7. An environment where the child, not the program, is most important and where the opportunity to succeed is ensured for all students.
8. Guidance in the development of mental processes and development of lifelong competencies and appreciations needed for effective use of leisure.
9. Competent instructional personnel who will strive to understand the students whom they serve and develop professional competencies, which are both unique and applicable to the transescent student.
10. Facilities and time, which allow students and teachers an opportunity to achieve the goals of the program to their fullest capabilities (ASCD, 1975, pp. 2-3).

National Middle School Association Report (1982)

In 1982, the National Middle School Association (NMSA) published a position paper entitled *This We Believe*. It defined the middle level school as “an educational response to the needs and characteristics of youngsters during transescence and, as such, deals with the full range of intellectual and developmental needs” (NMSA, 1982, p. 9). According to Fry & Jobe (1996), this became the first document outlining the “essential elements of a ‘true’ middle school.” The National Middle School Association suggested ten key ingredients to facilitate the improvement of middle level education:

- 1) Educators knowledgeable about and committed to young adolescents.
- 2) A balanced curriculum based on students needs.
- 3) A range of organizational arrangements.
- 4) Varied instructional strategies.
- 5) A full exploratory program.
- 6) Comprehensive advising and counseling.
- 7) Continuous progress for students.
- 8) Evaluation procedures compatible with the nature of young adolescents.
- 9) Cooperative planning.
- 10) Positive school climate (NMSA, 1982, pp. 10-15).

Developing Effective Middle Schools Through Faculty Participation (1988)

Elliot Merenbloom (1988) was selected among other leading advocates of middle level education because he was the consultant contracted by the Guam Department of Education in 1984 to train the faculty and staff of F. B. Leon Guerrero Middle School.

His book entitled “Developing Effective Middle Schools through Faculty Participation” listed eleven characteristics of an effective middle school:

1. Features a program that responds to the physical, intellectual, social-emotional, and moral needs of early adolescents.
2. Has a set of documents to guide all aspects of the program.
3. Possesses a definite curriculum plan that includes organized knowledge, skills, and personal development activities.
4. Has a clearly established program of studies based upon the concept of exploration and provides opportunities for student growth.
5. Builds on the strengths of elementary education and prepares students for success in high school.
6. Employs teachers who focus on the learning needs of pupils by using appropriate teaching strategies.
7. Creates teaching teams using blocks of time to best deliver the instructional program.
8. Emphasizes the guidance and counseling function of staff members by providing for a home-base program, stressing the importance of self-concept, and providing a positive climate.
9. Promotes flexibility in implementing the daily, weekly, and monthly schedule to meet the varying needs of students.
10. Actively involves parents in various aspects of the school experience.
11. Evaluates the program on a regular basis and makes changes that enhance the learning (Merenbloom, 1988, pp. 11-15).

Carnegie Council on Adolescent Development (1989)

In 1989, the Carnegie Council on Adolescent Development of the Carnegie Corporation of New York released *Turning Points: Preparing American Youth for the 21st Century*. Turning Points presented the following eight recommendations for improving the educational experiences of all middle level students, including those at risk of retention:

1. Create small communities for learning where stable, close, mutually respectful relationships with adults and peers are considered fundamental for intellectual development and personal growth. The key elements of these communities are schools-within-schools or houses, students, and teachers grouped together as teams, and small group advisories that ensure that every student is known well by at least one adult.
2. Teach a core academic program that results in students who are literate, including in the sciences, and who know how to think critically, lead a healthy life, behave ethically, and assume the responsibilities of citizenship in a pluralistic society. Youth service to promote values for citizenship is an essential part of the core academic program.
3. Ensure success for all students through elimination of tracking by achievement level and promotion of cooperative learning, flexibility in arranging instructional time, and adequate resources (time, space, equipment, and materials) for teachers.
4. Empower teachers and administrators to make decisions about the experiences of middle grade students through creative control by teachers over the instructional program linked to greater responsibilities for students' performance,

governance committees that assist the principal in designing and coordinating school-wide programs, and autonomy and leadership within sub-schools or houses to create environments tailored to enhance the intellectual and emotional development of all youth.

5. Staff middle grade schools with teachers who are experts at teaching young adolescents and who have been specially prepared for assignment to the middle grades.
 6. Improve academic performance through fostering the health and fitness of young adolescents, by providing a health coordinator in every middle grade school, access to health care and counseling services, and a health-promoting school environment.
 7. Re-engage families in the education of young adolescents by giving families meaningful roles in school governance, communicating with families about the school program and student's progress, and offering families opportunities to support the learning process at home and at the school.
 8. Connect schools with communities, which together share responsibility for each middle grade student's success, through identifying service opportunities in the community, establishing partnerships and collaborations to ensure students' access to health and social services, and using community resources to enrich the instructional program and opportunities for constructive after-school activities.
- (Carnegie Council, 1989, pp. 9-10)

National Middle School Association (1995)

In November 1995, the National Middle School Association updated the definition of key components or characteristics of a developmentally responsive middle level school in a document entitled *This We Believe: Developmentally Responsive Middle Level Schools*, developed by a committee of recognized leaders in the movement, analyzed by dozens of practitioners, and ultimately approved by the NMSA Board of Trustees. This paper reflected the cumulative experience of the thousands of committed educators in middle level education over the last decade.

Changes in conditions and the lessons learned since the 1982 *This We Believe* document prompted the development of the 1995 position paper. A shared vision, high expectations for all and family and community partnerships were the updates of the 1995 document. As stated in the opening statement, “Young people undergo more rapid and profound personal changes during the years 10 and 15 than any period of their lives” (1995, pp. 5-6). Because adolescents’ growth and development take place at different rates, youngsters of the same age look and act very different.

The *This We Believe* (1995) document maintained that changes in society have made the maturation process much more difficult for youth to transition from the security of childhood to late adolescence. As such, developmentally responsive middle schools must be both sensitive and knowledgeable about young adolescents and the cultural context in which they live.

The document itself described six conditions or characteristics that developmentally responsive middle level schools should have in place in order to make the appropriate program decisions. Along with these foundational principles or

conditions, the document identified six major programmatic areas that developmentally responsive middle schools provide. These characteristics and programmatic areas will be discussed with supporting researchers (1995).

Middle School Characteristics and Research Support

1. *Educators committed to young adolescents*: Middle level educators must be knowledgeable of the developmental uniqueness of young adolescents and about the subject matter they teach to make a positive difference in the lives of young adolescents. It is important that the teachers be specifically prepared before they enter middle level classrooms and that they continuously participate in professional development (p. 13).

Supporting research: Alexander & Williams, 1965; Moss, 1971; Gatewood & Dilg, 1975; Alexander & George, 1981; Brown, 1981; NMSA, 1982; Munsell, 1984; Merenbloom, 1988; Carnegie Council, 1989; George & Alexander, 1993; George & Shewey, 1994; NMSA, 1995; and Scales, 1996.

2. *A shared vision*: It is important that educators possess a vision that is “idealistic and uplifting,” and reflects “the very best we can imagine about all the elements of schooling, including students’ achievement, student-teacher relationships, and community participation” (p. 14).

Supporting Research: Moss, 1971; Wiles, 1976; Alexander & George, 1981; George & Oldaker, 1985; Merenbloom, 1988; Alexander & McEwing, 1989; Carnegie Council, 1989; George & Alexander, 1993; Wiles & Bondi 1993; Romano & Georgiady, 1994; George & Shewey, 1994; NMSA, 1995; and Scales, 1996.

3. *High expectations for all*: Teachers, parents, and students should be “empowering students to learn, to become intellectually engaged, and to behave in keeping with responsible citizenship” (p. 15).

Supporting Research: Alexander & Williams, 1965; Riegle, 1971; Gatewood & Dilg, 1975; Wiles, 1976; George & Oldaker, 1985; Merenbloom, 1988; Carnegie Council, 1989; Epstein & Mac Iver, 1990; George & Alexander, 1993; Wiles & Bondi, 1993; George & Shewey, 1994; Romano & Georgiady, 1994; NMSA, 1995; and Scales, 1996.

4. *An adult advocate for every student*: Advocates who care about, support, and understand the student’s academic and personal development (p. 16).

Supporting research: Riegle, 1971; Gatewood & Dilg, 1975; Wiles, 1976; Alexander & George, 1981; NMSA, 1982; Munsell, 1984; George & Oldaker, 1985; Merenbloom, 1988; Alexander & McEwin, 1989; Carnegie Council, 1989; Epstein & Mac Iver, 1990; George & Alexander, 1993; Wiles & Bondi, 1993; George & Shewey, 1994; Romano & Georgiady, 1994; NMSA, 1995; and Scales, 1996.

5. *Family and community partnerships*: Schools need to recognize and encourage increased family and community participation in the education of youth through government, parent and teacher organizations, foundations, and businesses (p. 17).

Supporting research: Riegle, 1971; Wiles, 1976; Alexander & George, 1981; Munsell, 1984; George & Oldaker, 1985; Merenbloom, 1988; Alexander & McEwin, 1989; Carnegie Council, 1989; Epstein & Mac Iver, 1990; Wiles & Bondi, 1993; Romano & Georgiady, 1994; George & Shewey, 1994; NMSA, 1995 and Scales, 1996.

6. *A positive school climate*: The school climate that is “safe, inviting and caring.” Interaction among staff members and between students and staff reflect democracy and

fairness. A healthy environment, both in physical facilities and human relationships, is an important educational condition and establishes the context in which learning takes place (pp. 18-19).

Supporting research: Gatewood & Dilg, 1975; Alexander & George, 1981; NMSA, 1982; George & Oldaker, 1985; Merenbloom, 1988; Carnegie Council, 1989; George & Shewey, 1994; Romano & Georgiady & Romano, 1994; NMSA, 1995; and Scales, 1996.

7. A curriculum that is challenging, integrative, and exploratory: Challenging curriculum “creates new interests,” and “opens doors to new knowledge and opportunities.” Students are empowered when the curriculum is integrated with real life experiences. Exploratory courses will enable students to discover their particular abilities, talents, interests, values, and preferences, preparing them to be well-rounded individuals in their adult life (pp. 20-24).

Supporting research: Alexander & Williams, 1965; Riegle, 1971; Gatewood & Dilg, 1975; Wiles, 1976; Alexander & George, 1981; NMSA, 1982; Munsell, 1984; George & Oldaker, 1985; Merenbloom, 1988; Alexander & McEwin, 1989; Carnegie Council, 1989; Epstein & Mac Iver, 1990; George & Shewey, 1993; Romano & Georgiady, 1994; NMSA, 1995; and Scales, 1996.

8. Varied teaching and learning approaches: Given the diversity, learning styles and maturation level of early adolescents, teaching techniques should vary to enhance and accommodate the students’ cultural experiences and personal backgrounds (pp. 24-26).

Supporting research: Alexander & Williams, 1965; Riegle, 1971; Gatewood & Dilg, 1975; Wiles, 1976; Alexander & George, 1981; Brown, 1981; NMSA, 1982; Munsell, 1984; George & Oldaker, 1985; Merenbloom, 1988; Alexander & McEwin, 1989; Carnegie Council, 1989; Epstein & Mac Iver, 1990; George & Alexander, 1993; Wiles & Bondi, 1993; George & Shewey, 1994; Romano & Georgiady, 1994; NMSA, 1995; and Scales, 1996.

9. *Assessment and evaluation that promote learning*: Assessment should be continuous and appropriately reflect the characteristics and uniqueness of young adolescents. Evaluation should emphasize individual progress rather than comparison with other students. The goal is to help students discover and understand their strengths, weaknesses, interests, values, and personalities (pp. 26-28).

Supporting research: Alexander & Williams, 1965; Moss, 1971; Riegle, 1971; Alexander & George, 1981; NMSA, 1982; Munsell, 1984; George & Oldaker, 1985; Merenbloom, 1988; Carnegie Council, 1989; George & Alexander, 1993; George & Shewey, 1994; Romano & Georgiady, 1994; NMSA, 1995; and Scales 1996.

10. *Flexible Organizational Structures*: Incorporate “flexible organizational structures” to accommodate students’ diversity, their need for identification with peers, and their need to break the rigidity of a typical uniform schedule. Large schools should create “school-within-a-school” or “houses” and further subdivide into interdisciplinary teams to build a sense of community and promote curriculum integration (pp. 28-30).

Supporting research: Alexander & Williams, 1965; Moss, 1971; Riegle, 1971; Gatewood & Dilg, 1975; Alexander & George, 1981; Brown, 1981; NMSA, 1982; Munsell, 1984; George & Oldaker, 1985; Merenbloom, 1988; Alexander & McEwin,

1989; Carnegie Council, 1989; Epstein & Mac Iver, 1990; George & Alexander, 1993; Wiles & Bondi, 1993; George & Shewey, 1994; Romano & Georgiady, 1994; NMSA, 1995; and Scales, 1996.

11. *Programs and policies that foster health, wellness, and safety*: Provide opportunities for students to achieve and maintain healthy minds and bodies, and to understand their own growth. Lifelong physical activities, intramurals, and extracurricular activities foster health, wellness, and safety should be offered (p.30-31).

Supporting research: Alexander & Williams, 1965; Moss, 1971; Riegle, 1971; Gatewood & Dilg, 1975; Brown, 1981; NMSA, 1982; Munsell, 1984; George & Oldaker, 1985; Merenbloom, 1988; Alexander & McEwin, 1989; Carnegie Council, 1989; Wiles & Bondi, 1993; George & Shewey, 1994; Romano & Georgiady, 1994; NMSA, 1995; and Scales, 1996.

12. *Comprehensive guidance and support services*: Teacher advocates and advisory programs provide ongoing assistance to help all students successfully deal with early adolescence. Homebase, advisory, block-time, and interdisciplinary team programs provide opportunities for peer discussion, personal attention by professionals, and referral services to specialists when needed (pp. 31-32).

Supporting research: Alexander & Williams, 1965; Moss, 1971; Riegle, 1971; Gatewood & Dilg, 1975; Wiles, 1976; Alexander & George, 1981; Brown, 1981; Munsell, 1985; George & Oldaker, 1985; Merenbloom, 1988; Alexander & McEwin, 1989; Carnegie Council, 1989; Epstein & Mac Iver, 1990; Romano & Georgiady, 1994; NMSA, 1995; and Scales, 1996.

When these six general characteristics and the six major areas or program components were consolidated, they delineated a vision of what developmentally responsive middle schools “could be” and “should be.” The paper concluded with this call for action: “The importance of achieving developmentally responsive middle level schools cannot be overemphasized. The nature of the educational programs young adolescents experience during this formative period of life will, in large measure, determine the future for all of us” (This We Believe, 1995, p. 33).

In summary, consensus appeared to have emerged among today’s middle level educators about what constitutes a good middle level school. Taken together, the purpose and functions of exemplary middle schools center on the intellectual, social, emotional, moral, and physical developmental needs of young adolescents (Clark & Clark, 1993 and also National Middle School Association, 1995). Within a few years, young adolescents undergo rapid physical growth, changes in moral reasoning, the onset of abstract thinking, and introduction to a range of social pressures, including sex, drugs, and violence. Simultaneously, they discover the lifelong developmental tasks of forming a personal identity or self-concept, acquiring social skills, gaining autonomy, and developing character and a set of values (Irvin, 1994).

Review of Related Studies

Major studies over three decades identified middle school characteristics from national middle school documents that were validated by nationally recognized experts. Riegle (1971) determined the implementation level of middle school practices. Munsell (1985) examined perceived present and desired implementation of middle level characteristics. Neill (1994) measured perceived implementation and importance of

middle school characteristics. These three research studies spurred the interest of others to utilize their survey instruments in their studies. The similarities of the studies will be discussed further in this section.

Riegle's 18 Middle School Characteristics (1971)

Riegle (1971) conducted one of the first studies to determine the implementation level of middle school practices as described in the literature. He extracted 18 characteristics from middle level resources. The list was validated by five national middle school authorities: Marie Elie of Montreal, Canada; Nicholas Georgiady of Miami University in Oxford, Ohio; Ann Grooms of Education Services Institute in Cincinnati, Ohio; Louis Romano of Michigan State University in East Lansing, Michigan; and Emmett Williams of University of Florida in Gainesville, Florida.

Riegle (1971) sent questionnaires to 136 middle school principals in Michigan and four exemplary schools nationwide. He concluded that: (a) middle level schools were rapidly increasing in number, but were not successfully implementing the basic principles; (b) the national sample of schools implemented the practices at a level approximately 18 percentage points higher than the Michigan schools; and (c) the grade configuration of a school was not a significant factor in applying middle school principles (Riegle, 1971).

In 1994, Romano and Georgiady refined the 18 characteristics of middle schools identified by Riegle, combining the closely related characteristics. The 18 characteristics by Riegle (1973) compared to the refined list of 14 characteristics by Romano and Georgiady (1994, p. 11) outlined similarities and differences:

**Original 18 Characteristics
Riegle (1973)**

1. Continuous progress
2. Multi-material approach
3. Flexible schedule
4. Social experiences
5. Physical experiences
6. Intramural activity
7. Team teaching
8. Guidance services
9. Planned gradualism
10. Exploratory and enrichment activities
11. Independent study
12. Basic skill and repair
13. Creative experiences
14. Security factor
15. Evaluation
16. Community relations
17. Student services
18. Auxiliary staffing

**Refined 14 Characteristics
Romano and Georgiady (1994)**

1. Continuous progress
2. Multi-media approach
3. Flexible schedule
4. Social experiences
5. Physical experiences and intramural activity
6. Team teaching
7. Guidance for a program of planned gradualism
8. Creative exploratory and enrichment activities
9. Independent study
10. Basic skill and repair
11. Evaluation
12. Community relations
13. Student services
14. Auxiliary staffing

Munsell's Survey of Middle Level Characteristics (1985)

In 1984, Munsell designed a study to examine perceived present and desired implementation of eighteen programmatic characteristics. He drew from previous listings proposed by Georgiady, Riegle and Romano (1973) and the National Middle School Association (1982). He, too, had nationally recognized experts validate the middle school characteristics in the survey. The panel membership included Paul S. George, John H. Swaim, Joseph Bondi, William S. Alexander, C. Kenneth McEwin, and John H. Lounsbury.

Munsell's list of characteristics was very similar to Riegle's list except for one characteristic. Munsell had a staff of educators knowledgeable about and committed to transescents whereas, Riegle, had security factors.

Findings from Munsell's (1984) study indicated that middle schools are not implementing the characteristics of middle level education to the extent recommended in the literature. Secondly, middle schools were more similar than different from junior high schools in their present and desired implementation of the eighteen characteristics. Finally, middle schools have failed to extensively implement a program distinct from junior high schools.

Neill's Middle School Questionnaire of Essential Elements (1994)

Neill (1994) developed a survey that includes a list of 12 essential elements identified in the National Middle School Association (1995) position paper and a list of statements that reflected characteristics suggested by Georgiady, Riegle, and Romano (1973). The study assessed teachers' and principals' perceptions of important identified essential middle school characteristics, and the current level of implementation of these characteristics in accredited Montana middle schools.

A comparison of the characteristics used by Riegle, Munsell and Neill showed similarities. Again, Riegle's instrument lacked educators committed to young adolescents whereas Munsell and Neill had that characteristic included in their survey instruments.

Neill found that none of the twelve essential elements was implemented to the level described in the professional literature. All of the essential elements were implemented at a moderate level and that eleven of the twelve elements were perceived as very important. Lastly, he found that there was little statistical difference in the perception of administrators and faculty relative to any of the data collected on the survey instrument.

Other Related Studies

Riegle's list, often referred to as the "18 middle school characteristics," has subsequently been used throughout the country by a large number of researchers, including Pook (1980), Wah (1980), Minster (1985), Prentice (1990), Mowen (1993), Appolloni (1993), Fry (1994), Raymer (1974), McGuire (1995), and Parker (1996). Researchers who used Munsell's survey were Pagano (1989), Ross (1989), Sheehan (1989), Calvert (1993), and Speer (1996). This research was the first to utilize Neill's survey instrument.

Overall, the studies that reported that the middle school characteristics were being implemented under these factors: (a) when teachers were satisfied with their jobs and the principal did not pressure them to perform (Pook, 1980); (b) when a school had been in operation longer (Wah, 1980); (c) when the principal was concerned about people (Pagano, 1989); (d) it depended on the desire of the principal to implement (Ross, 1989); and (e) when principals who had obtained middle school professional development had stronger belief in the 18 middle level characteristics and implemented those characteristics to a greater degree than their counterparts with little or no middle school professional development (Calvert, 1993).

Raymer (1974) found that Michigan has more grade 5-8 and 6-8 middle schools than any other state. Also significant was the conclusion that the grade 6-8 middle schools in Michigan employed the implementation of the eighteen basic middle school characteristics to a greater degree than did the remainder of grade 6-8 middle schools in the United States.

Studies on exemplary middle schools, Prentice (1990), Mowen (1993), McQuire (1995), and Sheehan (1989) showed that implementation level of middle schools characteristics were higher in exemplary middle schools.

Fry (1994) and Parker (1996) found that middle school principals considered the majority of middle school characteristics as important, but none had been fully implemented in East Texas schools and Tennessee schools, consecutively. Lord (1993) found that the majority of Massachusetts' middle schools perceived most of the middle school practices to be moderately important as implemented. Suhoza (1999) found that the majority of the teachers believed all of the components of the middle school concept were important and had been implemented.

Speer (1996) found that the rapid growth of Georgia middle schools had not been accompanied by a similar increase in the implementation of middle school practices. Osburn (1987) found that South Carolina middle schools had not yet reached full implementation of the functions and characteristics.

Constraints to Implementing the Middle School Characteristics

Curricular change at the middle school level was always filled with roadblocks. These roadblocks came from a variety of sources, in the form of mandates or regulations from the national, state, or local levels (Valentine, Clark, Irvin, Keefe & Melton 1993). Clark and Clark (1994) suggested that educational institutions recognize and consider these roadblocks during curriculum development. For instance, national constraints came from the National Commission on Excellence in Education in 1983 and from the Task Force on Education for Economic Growth in 1983. These national level commission reports, along with a document entitled *A Nation at Risk and Action for Excellence*,

consecutively emphasized the importance of “academics” in schools. This posed a major threat to the concept of developmentally responsive programs. When these requirements reached middle schools, exploratory, elective and student activity programs were consequently reduced or eliminated. As Clark and Clark (1986) put it, “What many national policy makers fail to understand is that school improvement recommendations which focus solely on academics and obtaining higher achievement scores deny the importance of educational programs that respond to the developmental needs of adolescent learners” (1986, p. 89).

State task forces reported that policy statements and networks involved in improving the school system encountered roadblocks. There were rigid state requirements for subject area competencies, policies requiring a specific number of instructional minutes per day, minimal requirements for length of school day, and standardized testing requirements, to name a few (as cited in Clark & Clark, 1994).

In 1993, the National Association of Secondary School Principals conducted and published *A National Survey of Middle Level Leaders and Schools*. The research team surveyed principals, assistant principals, and leadership team members on what factors they considered “roadblocks” that prevented them from doing the job they would like to do. The respondents were given a list of 26 factors that could be considered barriers. The research team compiled a list of 26 factors identified as “roadblocks”:

1. Collective bargaining agreements.
2. Deficient communication among administrative levels.
3. Inability to obtain funding.
4. Inability to provide teacher time for planning or professional development.

5. Insufficient space and physical facilities.
6. Lack of competent administrative assistance.
7. Lack of competent office help.
8. Lack of data about student skills and styles.
9. Lack of data on program successes or failures.
10. Lack of district-wide flexibility (all schools conform to the same policy).
11. Lack of knowledge among staff regarding program for middle level students.
12. Lack of time for myself.
13. Long-standing tradition in the school or district.
14. Parents apathetic or irresponsible about their children.
15. Pressure from community.
16. Problem students (apathetic, hostile, etc.).
17. Regulations or mandates from state/district governing boards.
18. Resistance to change.
19. Resistance of Superintendent or central office staff.
20. Teacher tenure.
21. Teacher turnover.
22. Time required to administering or supervising extracurricular activities.
23. Time taken by administrative detail at expense of more important matters.
24. Too large a student body.
25. Too small a student body.
26. Variations in the ability and dedication of staff.

Summary

A brief description of the historical perspective on the development of the junior high school and the emergence of the middle school was presented in this chapter. Writers of middle level education developed numerous lists of characteristics they believed were most important for effective schooling of middle level students. The characteristics of the “true” middle schools were highlighted from four key documents: *This We Believe*, from the 1982 publication of the National Middle School Association; *Turning Points: Preparing American Youth for the 21st Century*, a 1989 publication by the Carnegie Council on Adolescent Development of the Carnegie Corporation of New York, Association of Supervision and Curriculum; and a 1995 position paper titled *This We Believe: Developmentally Responsive Middle Level Schools*, by the National Middle School Association. The final portion of this chapter discussed related studies that provided support for each of the characteristics. The 12 essential characteristics identified in the 1995 NMSA position paper provided the framework for the study in Guam’s middle schools.

Finally, this chapter discussed factors that could be considered constraints to implementing developmentally appropriate middle school characteristics.

CHAPTER 3: RESEARCH AND METHODOLOGY

Purpose of the Study

The purpose of this study was to measure the extent to which teachers and administrators believed that select middle school characteristics were implemented in their schools and the degree of importance placed on those characteristics. This study also identified teachers' and administrators' perceptions of barriers preventing the implementation of those characteristics in Guam's public middle schools. Finally, this study examined how demographic variables influenced the implementation and importance of those middle school characteristics by teachers.

Research Questions

1. To what extent do teachers and administrators perceive essential middle school characteristics as important?
2. To what extent do teachers and administrators perceive essential middle school characteristics as currently being implemented in their school?
3. What factors do teachers and administrators believe are "roadblocks" in implementing essential middle school characteristics in their school?
4. Do teachers' demographic profiles affect their perceptions regarding the degree of importance and the level of implementation of essential middle school characteristics?

Population Sample

The Guam Department of Education has seven middle schools with approximately 471 middle school teachers and 18 middle school administrators who were surveyed in this study. Included in this total were principals and assistant principals, as well as faculty members who served as librarians, guidance counselors, Language Other than English (LOTE) and Gifted and Talented Education (GATE) teachers. The personnel office at the Department of Education provided an official number of middle school teachers and administrators.

Instrument Selection

To gather data for this study, the researcher used two existing survey instruments. One survey used in this study was developed by Mark Neill (1999) for perceived importance and implementation of middle school characteristics, and the other survey was developed and employed by NASSP for possible roadblocks. The last is a questionnaire developed by the researcher to gather demographic information.

Middle School Questionnaire of Essential Elements (MSQE²)

The first instrument used in this study is a replication of the 40-item questionnaire developed by Neill (see Appendix A). He developed the Middle School Questionnaire of Essential Elements (MSQE²) incorporating characteristics identified in the National Middle School Association's (NMSA) publication, *This We Believe: Developmentally Responsive Middle Level Schools* (1995). The questionnaire was designed to assess teachers' and principals' perceptions of important identified essential middle school characteristics, and the current level of implementation of those characteristics. The questionnaire has four scales for importance and implementation.

The 12 characteristics were expanded with individual sub-questions in the MSQE² questionnaire:

1. Educators Committee to Young Adolescents (survey items one through three).
2. A Shared Vision (survey items four and five).
3. High Expectations for All (survey items six through nine).
4. An Adult Advocate for Every Student (survey items 10-12).
5. Family and Community Partnership (survey items 13-16).
6. A Positive School Climate (survey items 17-19).
7. A Curriculum that is Challenging, Integrative, and Exploratory (survey items 20-25).
8. Varied Teaching and Learning Approaches (survey items 26-30).
9. Assessment and Evaluation that Promotes Learning (survey items 31 and 32).
10. Flexible Organizational Structures (survey items 33-36).
11. Programs and Policies that Foster Health, Wellness, and Safety (survey items 37 and 38).
12. Comprehensive Guidance and Support Services (survey items 39 and 40).

Perceived Roadblocks Survey

The second instrument, developed by Valentine, Clark Irvin, Keefe, and Melton, 1993 and employed by the National Association of Secondary School Principals (1993), was used to identify which of the twenty-six factors could be considered barriers in preventing teachers and administrators from implementing essential middle school characteristics (see Appendix B). They were asked to indicate whether the identified roadblock is serious, moderate, or not a factor. The list included collective bargaining

agreements, deficient communication, funding, lack of professional development, insufficient physical facilities, lack of administrative assistance, office help, data about student skills and styles, data on programs, district-wide flexibility, knowledge regarding middle level programs, time for self, status quo, apathy, community pressure, problem students, district regulations or mandates, resistance to change by school staff and central staff, teacher tenure and turnover, time management for extracurricular activities and administrative detail, size of student body, and staff ability and dedication (Valentine et al, 1993, pp. 82-83).

Demographic Questionnaire

The third part of the study asked for demographic information. Personal and work related data about the teachers' and administrators' current position, gender, age, ethnicity, type of teaching certificate, degree earned, years of middle level teaching, and professional training in middle level education were gathered (see Appendix C). In particular, ethnic identification was important in explaining attitudes. Backstrom states "What makes people of any ethnic group is their perception of themselves and others' perceptions of them" (Backstrom, 1981, p. 175). The researcher did not want to burden the respondents to make a distinction the researcher cannot make either. Therefore, the respondents were asked to write his/her ethnicity. After collecting the data, the researcher coded the responses to fit the analysis scheme used. Other open-ended questions included age, years of middle level teaching and professional training in middle level education. Multiple-choice questions included position, gender, type of teaching certificate and degree earned.

Instrumentation

The survey instrument Middle School Questionnaire of Essential Elements (MSQE²) developed by Neill as part of a doctoral dissertation at the University of Montana. Neill conducted a pilot test of the instrument to determine internal reliability. Inter-item consistency was performed on the original survey instrument to ensure the reliability for each of the elements that were incorporated into the questionnaire. A field test of the instrument was conducted to determine reliability and content validity (Neill, 1999).

The population of Neill's study consisted of principals and two principal-selected members of the middle school faculty from each of the 32 accredited Montana middle schools.

Neill found that: (a) none of the twelve essential elements was implemented in Montana middle schools to the level described in the professional literature, but all of the essential elements were implemented at a moderate level; (b) 11 of the 12 essential elements were perceived as very important to the success of Montana middle schools; (c) none of the 26 barriers listed on the survey instrument were perceived as barriers by the respondents; and (d) there was little statistical difference in the perceptions of administrators and faculty relative to any of the data collected on the survey instrument (Neill, 1999).

The researcher has secured permission from Neill to use the Middle School Questionnaire of Essential Elements (MSQE²) (see Appendix D). Additionally, permission was granted from the publisher of the National Association of Secondary School Principals to use the "roadblocks" survey (see Appendix E).

Scales for the MSQE²

For the MSQE², the respondents chose the statement in a list that most closely matched their perception. The scale for Importance of Characteristic to School Success assigned a numerical value to each of the choices per statement: (1) Not Important, (2) Somewhat Important, (3) Important, and (4) Very Important. The scale for Current Level of Implementation also had a numerical value assigned to each of the choices per statement: (1) Not Implemented, (2) Partially Implemented, (3) Moderately Implemented, and (4) Extensively Implemented.

The respondents were asked to use these guidelines for completing this section of the MSQE²:

1. Not Important: this characteristic is not considered to have any connection with the success of the respondent's middle school.
2. Not Very Important: this characteristic is considered to be of minor importance to the success of the respondent's middle school.
3. Important: this characteristic is considered to be important to the success of the respondent's middle school.
4. Very Important: this characteristic is considered to be essential to the success of the respondent's middle school.

For the same set of statements in the MSQE², the respondents indicated their perceptions of the current level of implementation of the essential elements by selecting one of the following responses as described:

1. Not Implemented: the characteristic is not implemented at all in the respondent's middle school.

2. Partially Implemented: the characteristic is implemented less than one-third the time in the respondent's middle school.

3. Moderately Implemented: the characteristic is implemented more than one-third of the time, but less than two-thirds of the time in the respondent's middle school.

4. Majorly Implemented: the characteristic is implemented more than two-thirds of the time.

Scales for Roadblocks Survey

The respondents were asked to check the item that best applies to each statement:

(1) Not a Factor, (2) Moderate Factor, and (3) Serious Factor.

The lowest number (1) is perceived as not a "roadblock" to successful implementation of essential middle school characteristics, whereas the highest number (3) is perceived as a serious factor to successful implementation. The numerical values are described as follows:

1. Not a factor: the respondent does not consider this factor to be a barrier to the successful implementation of the essential middle school characteristics in the respondent's middle school.

2. Moderate factor: the respondent considers this factor to be an obstacle to the successful implementation of the essential middle school characteristics in the respondent's middle school.

3. Serious factor: the respondent considers this factor to be a serious obstacle to the successful implementation of the essential middle school characteristics in the respondent's middle school.

Demographic Questionnaire

This questionnaire asked respondents to select among a list the most appropriate description of themselves for current position, gender, type of teaching certificate, and degree earned. Years of middle level teaching, and professional training in middle level education, ethnicity and age were open-ended questions.

Data Collection

Permission to conduct this study was granted by the Guam Department of Education administrator for Research, Planning and Evaluation Office (see Appendix F). Using the guidelines for letters of transmittal described by Borg and Gall (1979), and also Backstrom and Hursh (1963) and Babbie (1973), the cover letter contained the following information: the purpose of the study; reasons for completing the questionnaire; the importance of this particular research project; the availability of the results of the survey; and how long the questionnaire will take to complete.

A cover letter from the researcher (see Appendix G), a copy of the survey instrument with instructions and a self-addressed envelope were distributed. The following steps were implemented for data gathering:

Step 1. The Department of Education Personnel Office was used to obtain the number of teachers and teacher classifications in each middle school and the number of administrators (principals and assistant principals) per school.

Step 2. The survey instrument was copied on color paper. The color coded surveys were assigned green for SCH₁, blue for SCH₂, yellow for SCH₃, pink for SCH₄, ivory for SCH₅, golden rod for SCH₆, and purple for SCH₇.

Step 3. The researcher visited each school site to arrange a meeting time with the teachers and the school administrators in the seven middle schools to distribute the surveys. The researcher was available for clarifications or to answer any questions.

Step 4. Teachers and administrators anonymously filled out the surveys at their convenience. To ensure confidentiality, one person was asked to collect the completed surveys in sealed envelopes.

Step 5. Mail returns were inconvenient because of the limited locations and distances of post offices; therefore, the sealed surveys were picked up at each school site within three to five working days of distribution.

Step 6. By the second week, another follow-up with a phone call to the office to pick up any late completed surveys.

Step 7. One more attempt was made with a follow-up letter and a self-addressed, stamped envelope was provided.

Data Analysis

After data collection, the questionnaire responses were coded and the data was statistically analyzed employing the Statistical Package for the Social Sciences (SPSS). Analysis consisted of frequency distributions, percentages, cumulative distributions, and multiple regression analysis. Percentages were used to reduce different sets of numbers to a common base for comparison and descriptive statistics were used to analyze demographic data and quantitative responses to questionnaire items (Kerlinger, 1965).

Research Question 1: To what extent do teachers and administrators perceive the essential middle school characteristics as important?

Method of Analysis: The researcher tabulated frequency distributions to see how frequently each characteristic was given and to see patterns of similarities and differences in their responses. Because there were 12 characteristics, 12 separate average scores were calculated for all the items then computed an aggregate score. The researcher also applied the same procedure for each individual characteristic, with a given number of sub-questions. Mean values of 3.5 or greater were considered very important; mean values of 2.50 to 3.49 was considered important; a mean in the range of 1.50 to 2.49 was regarded as somewhat important; and mean values of less than 1.49 were considered not important. A two-sample t-test of separate independent groups was employed to compare teacher and administrator perceptions of the degree of importance of each characteristic at a selected probability level (Gay, 1992, p. 437). After the data was collected, average rankings for both teachers and administrators were presented in both graphical and tabular form for all 12 essential characteristics in terms of their importance.

Research Question 2: To what extent do teachers and administrators perceive the essential middle school characteristics as currently implemented in their school?

Method of Analysis: The researcher tabulated frequency distributions to see how frequently each characteristic was given and to see patterns of similarities and differences in their responses. Because there were 12 characteristics, 12 separate average scores were calculated for all the items then the computation of an aggregate score. The researcher also applied the same procedure for each individual characteristic, with a given number of sub-questions. Mean values of 3.5 or greater represented major implementation; values of 2.50 to 3.49 were examples of moderate implementation; mean values of 1.5 to 2.49 were considered partially implementation; while values of 1.49 or less were regarded as

no implementation. A two-sample t-test of separate independent groups was employed to compare teacher and administrative perceptions of importance of each characteristic at a selected probability level (Gay, 1992, p 437). After the data was collected, average rankings for both teachers and administrators were presented in both graphical and tabular form for all 12 essential characteristics in terms of the degree of implementation.

Research Question 3: What factors do teachers and administrators perceive as “roadblocks” in implementing essential characteristics in their school?

Method of Analysis: The researcher tabulated frequency distributions to see how frequently each characteristic was given and to see patterns of similarities and differences in their responses. Means, percentiles and percentile ranks were used to identify the most and the least common perceived barriers to the successful implementation of the essential elements in Guam’s public middle schools. The instrument on barriers had 26 stand-alone factors. Mean scores were calculated for each barrier to compare the rankings of potential roadblocks for teachers and administrators. A t-test for independent samples was used to determine whether there is a significant difference between the two means of two independent samples (Gay, 1992, p. 437). After the data was collected, average rankings for both teachers and administrators were presented in both graphical and tabular form for all the barriers.

Research Question 4: Do teachers’ demographic profiles have an affect on their perceptions of the degree of importance and level of implementation of essential middle school characteristics?

Method of Analysis: Multiple regression analysis was used to test the significance of teachers’ demographic profiles in explaining the variation in several dependent

variables. Specifically, this study worked with three dependent variables: level of implementation, degree of importance, and barriers for implementation; and seven independent variables: gender, age, ethnicity, level of certification, degree earned, years of middle level teaching and professional training in middle level education.

There were 12 essential middle school characteristics in the survey instrument for teachers to indicate their perception of the level of implementation of those characteristics and the degree of importance of those characteristics for the success of their school. Since there were 12 characteristics, 12 separate regressions were run for each dependent variable (level of implementation and degree of importance). Like questions one and two, the same procedure was applied to aggregate the data.

The first regression study regressed teachers' perceptions of the degree of importance (POR) of each essential middle school characteristic onto their demographic profiles. The following regression model was used:

$$\text{POR} = \beta_0 + \beta_1\text{GEN} + \beta_2\text{AGE} + \beta_3\text{ETH} + \beta_4\text{CER} + \beta_5\text{DEG} + \beta_6\text{EXP} + \beta_7\text{TRN}$$

GEN = Gender, represented by a dummy variable that took the value of one if the teacher was male, and zero otherwise.

AGE = Age, a continuous variable.

ETH = Ethnicity, represented by a series of dummy variables. Teachers were asked to state their ethnicity in an open-ended question. The researcher aggregated the listings based on the definitions of ethnicity developed by the U.S. Census Bureau. Depending on the representation of the sample, a series of dummy variables were created to reflect the majority of ethnicity reported.

CER = Level of Certification, represented by two dummy variables. The first variable took the value of one if the teacher was elementary-certified (CER_1) and zero if otherwise; and the second certification variable took the value of one if the teacher was secondary-certified (CER_2) and zero if otherwise.

DEG = Degree Earned, represented by a dummy variable that equaled one if the teacher had a master's degree and zero otherwise.

EXP = Years of Teaching Experience, a continuous variable.

TRN = Hours of Middle Level Training, a continuous variable.

The second regression study regressed teachers' perceptions of level of implementation (PLE) of each essential middle school characteristic and used the same demographic variables as the first model. This regression model was written as:

$$PLE = \beta_0 + \beta_1 GEN + \beta_2 AGE + \beta_3 ETH + \beta_4 CER + \beta_5 DEG + \beta_6 EXP + \beta_7 TRN$$

The third regression study regressed teachers' perceptions of barriers (BAR) preventing the successful implementation of each essential middle school characteristic onto the demographic profiles. The following regression model was used:

$$BAR = \beta_0 + \beta_1 GEN + \beta_2 AGE + \beta_3 ETH + \beta_4 CER + \beta_5 DEG + \beta_6 EXP + \beta_7 TRN$$

For each of the three models, the following evaluation criteria were used:

1. Goodness-of-fit measures such as R^2 and R^2_{adj} were used to describe the overall fit of the models.
2. T-statistics were used to determine which (if any) of the independent variables had a significant effect on the dependent variable. In addition, their estimated coefficients were used to estimate the size of the effect associated with each of the independent variables.

3. The F statistic was employed to test for the overall significance of the model's variables.

Demographic statistics for teachers, compiled by the Division of Research, Planning and Evaluation (RPE) of the Department of Education, were used for any surveys that were returned incomplete. The following imputation method was used to fill in the missing entries. For continuous variables, the missing entry was filled in with the average, but for dummy variables, the missing entry was filled in with the mode. For variables not available from RPE, no imputation technique was used and the missing observations were deleted from the regression analysis.

Limitations of the Study

The researcher was a former middle level administrator for one of the seven Guam middle schools. To avoid any form of bias, the researcher merely reported data and restricted all interpretation to clearly based collected data.

1. The study was applicable only to those public middle schools on Guam. No attempt was made to include the private schools or Department of Defense schools.

2. The study applied only to the perceptions of the respondents relative to the essential middle school characteristics and not to the actual practices of the school.

CHAPTER 4: DATA ANALYSIS AND RESULTS

Introduction

This study measured the extent to which teachers and administrators believed that select middle school characteristics were both important as well as implemented in their schools. This study also identified teachers' and administrators' perceptions of barriers preventing the implementation of those characteristics in Guam's public middle schools. According to Heiman (1992), the logic of scientific research is to understand the "laws of nature" (p. 17) by understanding factors that cause a behavior in a particular group. This study sought to understand one aspect of human behavior by examining the extent to which demographic variables influenced the implementation and importance of those middle school characteristics by teachers.

Sampling Participants

The researcher visited all seven middle school sites to distribute survey instruments and was available for clarifications or to answer any questions. After one week, follow-up phone calls were made to each school. A total of 181 completed surveys were collected in person. An additional 94 surveys were mailed to the researcher. The data presented in this chapter were collected from survey questionnaires returned by 260 (55%) out of 471 teachers and 15 (83%) out of 18 administrators from seven middle schools in the Guam Department of Education as shown in Table 1.

Table 1. Frequency distribution of the sample

Respondents	Sent	Returned	Percentage of Return
Teachers	471	260	55%
Administrators	18	15	83%
Total	489	275	56%

Returned surveys were categorized according to position held in the school as either teacher or administrator. To avoid statistical distortion, the researcher searched for missing data, outliers, and data entry errors. Adjustments were made where appropriate; specifically, age, gender and ethnicity information for the entire population of teachers, compiled by the Division of Research, Planning and Evaluation (RPE) of the Department of Education were used for the missing data. For example, since data from RPE revealed that for every two female teachers there was one male teacher, the few teachers that failed to provide gender information were classified as females. Similarly, since the department's average age for teachers was 40, this value was used for teachers that failed to provide their age. Finally, the department's statistics showed that for every three Pacific Islander teachers there was one White teacher, and for every two Pacific Islander teachers there was one teacher listed as Other. Since the majority of teachers were Pacific Islanders, the few surveys that were missing ethnicity information were classified as Pacific Islander teachers. Furthermore, since there was no information available from RPE for the remaining demographic variables, no imputation technique was used and the missing observations were deleted from the regression analysis.

The data collected in this study were analyzed by a variety of statistical methods using the Statistical Package for the Social Sciences (SPSS). These methods consisted of frequency distributions, means, percentiles, percentile ranks, cumulative distributions, and multiple regression analysis.

Non-Response Bias

The researcher used information compiled by the Division of Research, Planning and Evaluation (RPE) of the Department of Education to test for non-response bias in terms of age, gender and ethnicity. Fortunately, the percentages were comparable in age and gender between the sample population and the general population of teachers, which meant that inferences made from the sample, could be applied to the general population. The significance level of this study was set at $p < .05$, which established the probability of a Type I error. In other words, significance less than .05 meant that there was less than 5% chance that the relationship occurred by chance; there was a five in 100 probability that the result happened by chance and 95 in 100 probability that the finding was reliable (Huck & Cornier, 1996).

Sample Demographic Characteristics

Six demographic variables were included in this study: those variables were gender, age, ethnicity, type of certification, degree earned and years teaching.¹

Unfortunately, returned surveys from the 15 administrators revealed that demographic questions on age and ethnicity were left blank. The explanation for their non-response is that with a small population size their identity can easily be determined. Therefore, ethnicity and age variables were not used in the analysis for school administrators.

A total of 275 respondents participated in the study however; only 263 indicated their gender--253 teachers and 10 administrators. The breakdown by gender and position were--155 female teachers, 6 female administrators, 98 male teachers and four male administrators (see Table 2).

Table 2. Demographic frequency of respondents--gender

Gender	Teachers	Administrators	Total	Percent
Female	155	6	161	59%
Male	98	4	102	37%
Missing	7	5	12	4%
Total	260	15	275	100%

Ethnicity was broken down into three categories: White, Pacific Islander, and Other. Forty teachers indicated that they were White, while 109 teachers identified themselves as

¹ The demographic variable for hours of middle school training was not used due to the ambiguity of the question. Many of the respondents, both teachers and administrators, indicated university credit hours towards a degree or certification hours rather than hours of middle level courses taken.

Pacific Islanders, and the remaining 77 were classified as Other. Only one administrator was identified as Pacific Islander. A total of 48 were missing; 34 teachers and 14 administrators who left ethnicity blank (see Table 3).

Table 3. Demographic frequency of respondents--ethnicity

Ethnicity	Teachers	Administrators
White	40	-
Pacific Islander	109	1
Other	77	-
Missing	34	14

The choices for certification level included elementary and secondary. One hundred seventy-one teachers held secondary teaching certificates while 20 teachers had elementary certificates. All 15 administrators held secondary certificates. Two percent or six cases were missing (see Table 4).

Table 4. Demographic frequency of respondents--certification

Certification	Teachers	Administrators
Emergency	27	0
Elementary	56	0
Secondary	171	15
Missing	6	0

One hundred sixty-three teachers identified having a master's degree while 86 held a bachelor's degree. All fifteen administrators responded having a master's degree. There were 11 teachers who did not list a degree (See Table 5).

Table 5. Demographic frequency of respondents--degree

Degree	Teachers	Administrators
Bachelor	86	0
Master	163	15
Missing	11	0

A total of 231 responses identified teacher's age. Their minimum age was 22 years and the maximum age was 69 years. There were 44 teachers with missing age data. The standard deviation was 11.5 years and the mean age was 40 years (see Table 6).

All but 11 respondents reported total number of teaching experience. Total experience for all respondents ranged from .5 to 35 years. The mean years of teaching experience for all respondents was 9 years with a standard deviation of 7.2 years. A summary of teaching experience is shown in Table 6.

Table 6. Summary description of respondents by age and experience

Variable	Number	Mean	Standard Deviation
Age	231	40	11.5
Experience	264	9	7.2

Research Questions and Instrumentation

In this study, the researcher used three existing survey instruments to gather data from both teachers and administrators. One instrument assessed the extent to which teachers and administrators perceived the degree of importance and level of implementation of essential characteristics in Guam's middle schools. The second instrument identified teachers' and administrators' perception of barriers that prevented

the implementation of those characteristics. A third instrument identified personal and work related data. The data gathered from these instruments were used to address the following four research questions: 1) To what extent do teachers and administrators perceive essential middle school characteristics as important? 2) To what extent do teachers and administrators perceive essential middle school characteristics as currently implemented in their school? 3) What factors do teachers and administrators perceive as “roadblocks” in implementing essential middle school characteristics in their school? 4) Do teachers’ demographic profiles have an affect on their perceptions of the degree of importance and the level of implementation of essential middle school characteristics?

To address research questions one and two, the researcher used the Middle School Questionnaire of Essential Elements (MSQE2) developed by Neill. The questionnaire had 40 items describing the 12 essential components supported by current research and literature. Teachers and administrators were asked to respond to the 40 items by first indicating their perception of the importance of the characteristics in the first column, then responding in the second column with their perception of the extent to which the characteristics were being implemented in their school. The respondents chose statements from a list that most closely matched their perception and their responses in column one ranged from most important to least important while in column two their responses ranged from majorly implemented to the least implemented.

A second instrument was used to answer research question number three. Teachers and administrators were given a list of 26 “roadblocks” and were asked to indicate which factors were serious and which were not serious. Frequency distributions, means and percentiles and percentile ranks were used to identify the most and least

common perceived barriers to the successful implementation of the essential elements in Guam's public middle schools.

To address question four, a survey asked for demographic information. Personal data about the teachers' and administrators' gender, age, ethnicity, type of teaching certificate, degree earned and years of middle level teaching were gathered. Multiple regression analysis was used to determine if certain demographic profiles affected teachers' perceptions regarding the degree of importance and level of implementation of essential middle school characteristics.

Discussion of Findings

The first set of data answered Research Question 1--To what extent do teachers and administrators perceive essential middle school characteristics as important in their school? To answer this question, teachers and administrators were asked to rate the importance of the 40 middle school characteristics listed in part one of the survey.

Mean values were assigned to each of the characteristics indicating which were the most important and least important characteristics for school success. Mean values of 3.5 or greater were considered very important; mean values of 2.50 to 3.49 were considered important; a mean in the range of 1.50 to 2.49 were regarded as somewhat important; and mean values of less than 1.49 were considered not important.

Table 7 displayed both teachers' and administrators' perceptions of the importance of these characteristics. Overall, teachers believed that 35 of the 40 essential characteristics were very important. The three most important were schools providing a "safe environment" for their students (3.73), teachers serving as "role models," (3.72) and

educators involving all stakeholders (3.72). However, teachers did not feel that seeking partnership with business (3.32), adults knowing their students well (3.38) and heterogeneous groupings (3.39) were as important, although their scores were still categorized as important.

Administrators believed that all 40 characteristics were very important to the success of middle school. The number one ranking characteristic chosen by administrators was educators serving as “role models” for their students (3.80). Teachers also felt that educators should serve as “role models” (3.72) but ranked it as the second most important characteristic. Administrators agreed with teachers that schools seeking “business partnerships” (3.53 and 3.32, respectively) was not as important and ranked it as least important. Administrators also felt that “reflective self-evaluation” (3.53) and “learning partnerships” (3.60) as characteristics with the least importance.

Table 7. Teachers' and administrators' perception on degree of importance

Characteristics	Teachers' Mean Score		Administrators' Mean Score	
	Importance	Rank	Importance	Rank
Safe environment	3.73	(1)	3.73	(13)
Role models	3.72	(2)	3.80	(1)
Stakeholder involvement	3.72	(3)	3.73	(7)
Appropriate challenges	3.68	(4)	3.73	(10)
Families are participants	3.68	(5)	3.80	(4)
Intellectually engaged	3.65	(6)	3.60	(30)
Understand adolescents	3.66	(7)	3.80	(5)
Counselors coordination	3.65	(8)	3.60	(32)
Relevant curriculum	3.65	(9)	3.60	(36)
Variety educational methods	3.64	(10)	3.60	(29)
Common planning/space	3.65	(11)	3.73	(9)
Technological resources	3.64	(12)	3.67	(25)
Two-way communication	3.64	(13)	3.73	(14)
Comprehensive P.E. program	3.62	(14)	3.67	(21)
Exploratory experiences	3.62	(15)	3.60	(34)
Positive school environment	3.62	(16)	3.67	(27)
Assessment	3.61	(17)	3.67	(24)
Student discovery	3.61	(18)	3.60	(35)
Hands-on curriculum	3.61	(19)	3.73	(11)
Principal/instructional leader	3.60	(20)	3.60	(37)
Citizenship skills	3.60	(21)	3.67	(18)
Learning partnerships	3.60	(22)	3.60	(38)
Organizational arrangements	3.60	(23)	3.73	(15)
Inviting/caring environment	3.59	(24)	3.80	(3)
Teaching techniques	3.58	(25)	3.73	(12)
Variety teaching approaches	3.58	(26)	3.67	(26)
Regular meeting	3.57	(27)	3.67	(22)

Table 7. (con't)

Characteristics	Teachers' Mean Score		Administrators' Mean Score	
	Importance	Rank	Importance	Rank
Advisors link home & school	3.57	(28)	3.73	(17)
Lifelong activities	3.55	(29)	3.67	(20)
Assistance to students	3.54	(30)	3.67	(19)
Student scheduling	3.54	(31)	3.60	(33)
Articulated procedures	3.53	(32)	3.80	(2)
"Teams" "houses"	3.52	(33)	3.73	(8)
Evaluation	3.52	(43)	3.67	(23)
Appropriate practices	3.50	(35)	3.60	(31)
Reflective self-evaluation	3.48	(36)	3.53	(39)
School assists families	3.45	(37)	3.67	(28)
Heterogeneous groups	3.39	(38)	3.73	(6)
Adults know students	3.38	(39)	3.73	(16)
Business partnerships	3.32	(40)	3.53	(40)

Note. Number in parenthesis identifies the ranking order of each group.

The 40 characteristics (see Table 7) were combined into 12 subgroups (see Table 8). These subgroups were analyzed using the same criterion that was used with the 40 individual characteristics.

The researcher did a comparison of teachers' and administrators' ranking of the 12 components as shown in Table 8. Teachers and administrators rated all 12 components as very important. While teachers believed that "shared vision," was the most important component, administrators believed that "positive school climate" was most with mean values of 3.62 and 3.73 respectively. Components listed as the least important were "adult advocate" for teachers and "challenging curriculum" for administrators. Mean

score values of 3.73 and 3.56 were for teachers and administrators respectively. In the criterion cited above those components were actually considered very important; however, in the ranking 3.56 was at the lowest ranking value.

Table 8. Comparison of composite means and standard deviations regarding importance

Component Description	Teachers			Administrators		
	Mean	Rank	SD	Mean	Rank	SD
Shared vision	3.73	(1)	.57	3.73	(4)	.46
Guidance/Support services	3.70	(2)	.52	3.67	(10)	.49
Committed educators	3.69	(3)	.53	3.80	(2)	.41
Health/Wellness programs	3.69	(4)	.52	3.67	(8)	.49
High expectations	3.69	(5)	.58	3.67	(9)	.49
Challenging curriculum	3.67	(6)	.56	3.60	(12)	.63
Flexible organization	3.67	(7)	.58	3.73	(5)	.46
Assessment/Evaluation	3.64	(8)	.59	3.67	(11)	.49
Positive school climate	3.63	(9)	.60	3.80	(1)	.41
Varied teaching approaches	3.62	(10)	.61	3.73	(3)	.46
Family/Community partner	3.60	(11)	.56	3.73	(6)	.46
Adult advocate	3.56	(12)	.58	3.73	(7)	.46

Note. Number in parenthesis identifies the ranking order of each group.

In addition to listing the mean scores for each component, Table 9 also presents the standard deviations for teachers and administrators. Examination of this table revealed that the standard deviations associated with teachers' scores were consistently higher than those for the administrators, suggesting that teachers held more varied opinions than the administrators who responded to the survey.

An Independent Sample t-test was used to determine if there were statistically significant differences between the means of teachers' and administrators' perceived degree of importance of essential middle school characteristics (see Table 9). The results of this analysis revealed that none of the t-values for degree of importance of the twelve essential middle school components were significant at the $p < .05$ level. As such, there were no statistically significant differences between administrators' and teachers' perception on the degree of importance for the twelve essential middle school components.

Table 9. Significance of teachers' and administrators' perceived degree of importance

Characteristic Description	Teachers' Mean	Admins' Mean	t-values	2-tailed
Shared vision	3.73	3.73	.10	.99
Guidance/Support services	3.73	3.67	.24	.81
Committed educators	3.69	3.80	-.81	.42
Health/Wellness programs	3.69	3.67	.10	.92
High expectations	3.69	3.67	.09	.93
Challenging curriculum	3.67	3.67	.46	.65
Flexible organization	3.67	3.73	-.47	.64
Assessment/Evaluation	2.64	3.67	-.17	.87
Positive school climate	3.63	3.80	-1.05	.30
Varied teaching approaches	3.62	3.73	-.69	.49
Family/Community partner	3.60	3.73	-.92	.36
Adult advocate	3.56	3.73	1.15	.25

Note. $p < .05$.

The second set of data answered Research Question 2--To what extent do teachers and administrators perceive essential middle school characteristics as currently

implemented in their school? To answer this question the respondents were asked to rate the extent to which each one of the 40 middle school characteristics listed in part two of the survey were or were not implemented in their school. To determine the level of implementation of the essential middle school characteristics, the 40 means were ranked on a scale from major implementation to no implementation.

The mean values assigned to each of the characteristics indicated the extent to which they had been implemented. Mean values of 3.5 or greater were considered major implementation; mean values of 2.50 to 3.49 were considered moderate implementation; a mean in the range of 1.50 to 2.49 was regarded as partial implementation; and mean values of less than 1.49 were considered no implementation.

The researcher observed that teachers perceived all but two characteristics as moderately implemented. On the top of the list of characteristics were “comprehensive physical education program,” “common planning/space” for teachers, and school “organizational arrangements.” These were regarded as moderately implemented and had mean values of 3.20, 3.17 and 3.16, respectively. However, two remaining characteristics were rated as only partially implemented. Those characteristics were: the middle schools “assisting families” to create and sustain positive learning environments at home, and providing “technological resources” that enhance and advance instruction for students. They had mean values of 2.36 and 2.20 respectively.

Table 10 also listed the mean scores for each characteristic for administrators. Administrators believed that only 33 of the characteristics were moderately implemented and seven were partially implemented. “Articulated curriculum and procedures” was ranked the highest, yet by the criterion it was considered moderate. The second and third

high-ranking characteristics were “business partnerships” and school “organizational arrangements” with a mean score of 3.00 for both characteristics. Administrators listed seven as partially implemented, but the three least implemented characteristics were “reflective self-evaluation,” (2.33) “school assisting families” (2.40) and “student discovery” (2.40).

Table 10. Teachers' and administrators' perception on level of implementation

Characteristics	Teachers' Mean Score		Administrators' Mean Score	
	Implementation	Rank	Implementation	Rank
Comprehensive P.E. program	3.20	(1)	2.80	(12)
Organizational arrangements	3.17	(2)	3.00	(3)
Common planning/space	3.16	(3)	2.93	(6)
Role models	3.12	(4)	2.93	(8)
Lifelong activities	3.07	(5)	2.73	(15)
Understand adolescents	3.00	(6)	2.67	(25)
Regular meeting	2.98	(7)	2.40	(37)
Citizenship skills	2.97	(8)	2.67	(20)
Safe environment	2.95	(9)	2.60	(28)
Articulated procedures	2.95	(10)	3.06	(1)
Appropriate challenges	2.94	(11)	2.67	(23)
Adults know students	2.94	(12)	2.47	(36)
Two-way communication	2.93	(13)	2.86	(10)
Intellectually engaged	2.93	(14)	2.67	(22)
Student discovery	2.90	(15)	2.40	(38)
Relevant curriculum	2.90	(16)	2.53	(31)
Learning partnerships	2.89	(17)	2.47	(35)
Families are participants	2.89	(18)	2.93	(9)
Stakeholder involvement	2.88	(19)	2.93	(5)
"Teams" "houses"	2.88	(20)	2.80	(13)
Variety teaching approaches	2.88	(21)	2.80	(14)
Variety educational methods	2.86	(22)	2.67	(21)
Appropriate practices	2.84	(23)	2.53	(29)
Teaching techniques	2.83	(24)	2.73	(18)
Inviting/caring environment	2.81	(25)	2.53	(32)
Exploratory experiences	2.80	(26)	2.47	(34)
Assistance to students	2.79	(27)	2.60	(26)

Table 10 (con't)

Characteristics	Teachers' Mean Score		Administrators' Mean Score	
	Implementation	Rank	Implementation	Rank
Counselors coordination	2.79	(28)	2.80	(11)
Counselors coordination	2.79	(28)	2.80	(11)
Positive school environment	2.79	(29)	2.73	(19)
Advisors link home & school	2.77	(30)	2.53	(33)
Assessment	2.74	(31)	2.93	(7)
Hands-on curriculum	2.72	(32)	2.60	(27)
Evaluation	2.72	(33)	2.73	(16)
Principal/instructional leader	2.68	(34)	2.67	(24)
Student scheduling	2.63	(35)	2.53	(30)
Reflective self-evaluation	2.60	(36)	2.33	(40)
Heterogeneous groups	2.57	(37)	2.93	(4)
Business partnerships	2.50	(38)	3.00	(2)
School assists families	2.36	(39)	2.40	(39)
Technological resources	2.20	(40)	2.73	(17)

Note. Number in parenthesis identifies the ranking order of each group.

Table 11, displayed a comparison of components ranked in order by teachers and administrators. Both teachers and administrators believed that all 12 components were being moderately implemented in middle schools. Both teachers and administrators concurred and ranked "shared vision" and "flexible organizational structures" as second and third in implementation. Another close match as the least implemented component was "positive school climate" in tenth place. However, the least implemented components were different for teachers and administrators. Teachers viewed "family/community partner" as the least implemented component, whereas, administrators ranked educators as "adult advocate" as the least implemented component.

“family/community partner” as the least implemented component, whereas, administrators ranked educators as “adult advocate” as the least implemented component.

In addition to listing the mean scores for each component, Table 11 also presented the standard deviations for teachers and administrators. Examination of this table revealed that the standard deviations associated with teachers’ scores were consistently higher than those for the administrators with the exception of one characteristic. The family and community partner score for administrators was point two standard deviation away from the corresponding standard deviation for teachers. For the most part, teachers who responded to the survey held more varied opinions on what components were being implemented than did the administrators.

Table 11. Comparison of composite means and standard deviations regarding implementation

Component Description	Teachers			Administrators		
	Mean	Rank	SD	Mean	Rank	SD
Health/Wellness programs	3.27	(1)	.72	2.80	(4)	.56
Shared vision	3.07	(2)	.82	2.87	(2)	.52
Flexible organization	3.05	(3)	.73	2.87	(3)	.52
Committed educators	3.02	(4)	.72	2.60	(11)	.51
High expectations	3.01	(5)	.75	2.80	(5)	.56
Guidance/Support services	2.98	(6)	.80	2.80	(6)	.56
Adult advocate	2.98	(7)	.75	2.60	(12)	.51
Challenging curriculum	2.89	(8)	.70	2.73	(8)	.59
Assessment/Evaluation	2.88	(9)	.73	2.93	(1)	.59
Positive school climate	2.86	(10)	.81	2.60	(10)	.74
Varied teaching approaches	2.77	(11)	.72	2.67	(9)	.62
Family/Community partner	2.75	(12)	.66	2.80	(7)	.68

Note. Number in parenthesis identifies the ranking order of each group.

An independent sample t-test was used to determine if there were statistically significant differences between the means of teachers' and administrators' perceptions on the extent of implementation of essential middle school characteristics. As shown in Table 12, there were statistically significant differences for three of the 12 essential characteristics, more importantly; these differences were significant at the $p < .01$ level. These characteristics were: "an adult advocate for every student," "committed educators" and "programs and policies that foster health, wellness, and safety." Unfortunately, the p-values for the remaining nine components were greater than .05, therefore indicating that there were no significant differences between the two groups.

Table 12. Significance of teachers' and administrators' perceived level of implementation

Characteristic Description	Teachers' Mean	Admins' Mean	t-values	2-tailed
Health/Wellness programs	3.27	2.80	2.49	.01*
Shared vision	3.07	2.86	1.45	.17
Flexible organization	3.05	2.86	.96	.34
Committed educators	3.01	2.60	3.00	.01*
High expectations	3.01	2.80	1.32	.21
Guidance/Support services	2.98	2.80	1.18	.25
Adult advocate	2.98	2.60	2.74	.01*
Challenging curriculum	2.88	2.58	.97	.34
Assessment/Evaluation	2.87	2.93	-.35	.73
Positive school climate	2.86	2.60	1.33	.20
Varied teaching approaches	2.77	2.66	.64	.53
Family/Community partner	2.75	2.80	-.28	.78

Note. * $p < .01$.

The third set of data answered Research Question 3--What factors do teachers and administrators perceive as "roadblocks" in implementing essential characteristics in their school? In answering this question, mean values of 2.50 or greater were considered to be serious barriers to the successful implementation of the essential middle characteristics in the respondent's middle school. Mean values of 1.5 to 2.49 were categorized as moderate barriers and mean values of 1.49 or less were considered not a barrier.

As shown in Table 13, teachers ranked two roadblocks, "inability to obtain funding" and "apathetic parents," as the most serious barriers in implementing the essential characteristics. Their mean values were 2.74 and 2.57. Twenty-three of the remaining 24 barriers had mean values ranging from 1.8 to 2.39, which were considered

moderate. However, the remaining roadblock, “small student body” garnered a mean score of 1.31 suggesting that teachers felt that this was not a barrier.

As also shown in the Table 13, school administrators rated eight roadblocks as serious and one not as serious. “Lack of district-wide flexibility” was the most serious roadblock to implementing essential middle school characteristics with a mean value was 2.73. Teachers and administrators agreed on the number two serious barrier “apathetic parents.” Another concurrence between administrators and teachers was a “small student body” as a barrier. It had a mean value of 1.07 and was not considered a barrier.

Overall, teachers and administrators had the same ranking order for five barriers. They agreed on the following: “apathetic parents,” “state mandates,” “superintendent resistant to change,” “teacher turnover,” and “too small a student body.”

Table 13. Rank order of teachers' and administrators' perception of roadblocks

Barrier Descriptions	Teachers'		Administrators'	
	Mean	Rank	Mean	Rank
Lack of funding	2.74	(1)	2.07	(16)
Apathetic parents	2.57	(2)	2.67	(2)
Problem students	2.39	(3)	2.53	(6)
Poor administration communication	2.30	(4)	2.00	(20)
District inflexibility	2.22	(5)	2.73	(1)
Lack of space	2.22	(6)	2.00	(19)
Ability/dedication of staff	2.18	(7)	2.47	(9)
Lack of middle school knowledge	2.16	(8)	2.53	(7)
District tradition	2.15	(9)	2.67	(3)
State mandates	2.15	(10)	2.47	(10)
Resistance by Superintendent	2.13	(11)	2.40	(11)
Time for administrative duties	2.11	(12)	2.00	(17)
Resistance to change by staff	2.11	(13)	2.53	(5)
Lack of data about student skills	2.09	(14)	2.40	(12)
Teacher turnover	2.07	(15)	2.07	(15)
Student body too large	2.04	(16)	1.53	(24)
Poor administrative help	1.99	(17)	1.60	(22)
Collective bargaining	1.98	(18)	2.67	(4)
Extracurricular time demands	1.97	(19)	2.00	(18)
Lack of professional development	1.95	(20)	1.60	(23)
Lack of time for self	1.95	(21)	2.20	(14)
Community pressure	1.88	(22)	1.93	(21)
Poor office help	1.85	(23)	1.47	(25)
Teacher tenure	1.81	(24)	2.20	(13)
No program data	1.81	(25)	2.53	(8)
Student body too small	1.31	(26)	1.67	(26)

Table 14 presented the distribution of responses of perceived roadblocks for all survey respondents. Approximately 74% of the respondents concurred that “lack of funding” was a serious roadblock, while 24% said it was moderate and three percent felt it was not a barrier. Another serious roadblock was “apathetic parents,” as identified by 62% of the respondents, while half believed it was moderate and only four percent believed it was not. Slightly over 76% of the respondents felt that schools with a “small student body” was not a barrier, while 19% believed it was moderately serious and a small six percent felt it was not serious.

Table 14. Distribution of roadblock responses

Description	Percent			Rank
	Not	Moderate	Serious	
Lack of funding	2.9	23.6	73.5	1
Apathetic parents	4.4	33.5	62.2	2
Problem students	9.5	41.5	49.1	3
Poor administrative communication	17.1	37.5	45.5	4
Lack of space	22.2	35.3	42.5	5
District inflexibility	17.1	40.7	42.2	6
Student body too large	35.6	27.3	37.1	7
District tradition	18.9	44.4	36.7	8
Resistance by Superintendent	21.5	42.2	36.4	9
Ability/dedication of staff	16.7	48.0	35.3	10
Lack of middle school knowledge	16.0	49.8	34.2	11
Resistance to change by staff	20.0	46.9	33.1	12
Teacher turnover	26.5	40.4	33.1	13
State mandates	15.6	52.0	32.4	14
Lack of data about student skills	20.7	48.0	31.3	15
Time for administrative duties	21.1	47.6	31.3	16
Lack of professional development	34.9	36.7	28.4	17
Lack of time for self	32.0	40.0	28.0	18
Poor administrative help	30.2	43.6	26.2	19
Collective bargaining	23.3	52.0	24.7	20
Poor office help	37.1	42.5	20.4	21
Extracurricular time demands	26.9	49.1	24.0	22
Teacher tenure	39.6	37.5	22.9	23
Community pressure	31.3	49.1	19.6	24
No program data	30.9	53.5	15.6	25
Student body too small	76.4	18.8	5.8	26

An independent sample t-test was also used to determine if there were statistically significant differences between teachers' and administrators' perception of barriers in implementing essential middle school characteristics. As shown in Table 15, the t-values on 14 out of 26 roadblocks were significant at the $p < .05$ level. The values indicated with 95 percent certainty that there were significant differences between administrators' and teachers' perception of barriers preventing the implementation of essential middle school characteristics. The remaining 12 roadblocks had p-values greater than .05, indicating that there were no significant differences between teachers' and administrators' perceptions of barriers preventing the implementation of essential middle school characteristics.

Interestingly, "lack of funding" and "no program data" had values less than .001. The values indicated with 99.9 percent certainty that there were significant differences between administrators' and teachers' perception. Six roadblocks had p-values less than .01 and six roadblocks had values less than .05.

Table 15. Comparison of teachers' and administrators' perception of roadblocks

Barrier Descriptions	Teachers' Mean	Administrators' Mean	2-tailed Score
Collective bargaining	1.98	2.67	.01**
Poor administration communication	2.30	2.00	.01**
Lack of funding	2.74	2.07	.001***
Lack of professional development	1.95	1.60	.05*
Lack of space	2.22	2.00	.24
Poor administrative help	1.98	1.60	.04*
Poor office help	1.85	1.47	.04*
Lack of data about student skills	2.10	2.40	.13
No program data	1.81	2.53	.001***
District inflexibility	2.22	2.73	.01**
Lack of middle school knowledge	2.16	2.53	.05*
Lack of time for self	1.95	2.20	.24
District tradition	2.15	2.67	.01**
Apathetic parents	2.57	2.67	.49
Community pressure	1.88	1.93	.81
Problem students	2.39	2.53	.47
State mandates	2.15	2.47	.04*
Resistance to change by staff	2.11	2.53	.02*
Resistance by Superintendent	2.13	2.40	.19
Teacher tenure	1.81	2.20	.14
Teacher turnover	2.07	2.07	.10
Extracurricular time demands	1.97	2.00	.86
Time for administrative duties	2.11	2.00	.55
Student body too large	2.04	1.53	.01**
Student body too small	1.31	1.67	.01**
Ability/dedication of staff	2.17	2.47	.24

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Effects of Demographic Variables: Research Question 4

The last set of data answered Research Question 4--Do teachers' demographic profiles have an effect on their perceptions of the degree of importance and level of implementation of essential middle school characteristics?

Multiple regression analysis was used to test the significance of teachers' demographic profiles in explaining variation in their perceived degree of importance and level of implementation. The independent variables used in the analysis were: gender, age, and ethnicity, level of certification, degree earned and years of experience. Although originally selected as an independent variable, "hours of professional training in middle level education" was not used because many respondents misunderstood the question, inappropriately providing information regarding the number of university credits towards a degreed program or teaching certificate.

The first series of regression models measured the amount of influence that select demographic measures had on teachers' perceptions of the degree of importance (POR) of each essential middle school characteristics. This analysis was conducted using stepwise regression, so that the most significant set of independent variables could be identified for each dependent variable. As a result, each model was originally specified as shown below,

$$\text{POR} = \beta_0 + \beta_1\text{GEN} + \beta_2\text{AGE} + \beta_3\text{ETH} + \beta_4\text{CER} + \beta_5\text{DEG} + \beta_6\text{EXP}$$

The final set of models contained only variables significant at the $p = .05$ level or better.

As shown in Table 16, the R-square indicated that the independent variables listed as predictors explained almost 11% of the variation in the importance of a "positive

school climate.” Specifically, the independent variables ethnicity, certification and experience were significant determinants of “positive school climate.” However when all 12 models were estimated, the amount of explained variation ranged from 3% to 11%, suggesting that taken together, the demographics variables used in this study explained only a modest amount of the overall variation in teachers’ responses.

Effects of Teachers’ Ethnicity on Importance

Although there were a number of different ethnicities represented in the sample, for ease of analysis three groups were used--Pacific Islander, White and Other. Under this formulation, teacher ethnicity played a major role in helping to explain why certain teachers considered some characteristics less important than others. Specifically, White teachers were more likely to rate seven of the characteristics lower in importance than teachers whose ethnicity was categorized as “Other.”

When examined closely, White teachers were found to be less likely to rate the following seven characteristics as important--“shared vision,” “adult advocate,” “family/community partner,” “varied teaching approaches,” “flexible structures,” “health/wellness programs” and “guidance/support services.” Pacific Islander teachers were also less likely to rate--“shared vision,” “high expectations for all” and “varied teaching approaches” as important. However, the differences were relatively modest, ranging from -.20 to -.41 for White teachers and from -.21 to -.24 for Pacific Islander teachers. This suggests that both White and Pacific Islander teachers placed less importance on many of the components than did teachers classified as “Other.” Furthermore, differences in the magnitude of the scores between White and Pacific Islander teachers on two of the components (shared vision and varied teaching

approaches) suggested that White teachers placed less importance on those components than Pacific Islander teachers. However, ethnicity had no significant effects on two of the twelve components: “challenging curriculum” and “assessment/evaluation” by either ethnic group.

Effects of Teachers’ Certification on Importance

As shown in Table 16, teacher certification played a modest role in helping to explain why some teachers considered some school characteristics more important than others. Specifically, teachers with elementary and secondary credentials were more likely to rate four of the characteristics--“committed educator,” “high expectations for all,” “positive school climate” and health/wellness programs--higher than teachers without either one of the credentials. The differences were relatively modest, ranging from .21 to .40 for elementary school credential teachers and from .31 to .52 for the secondary credential teachers. The fact that all of the effects were positive, suggests that credentialed teachers placed more importance than non-credentialed teachers on a number of school characteristics.

Effects of Teachers’ Experience on Importance

As noted in Table 16, teacher experience had a significant effect on only one dependent variable, “positive school climate.” The fact that the effect was negative, suggests that experience was not a factor in considering the importance of some characteristics.

Table 16. Teachers' perception of important characteristics as described by demographic responses

Characteristic Description	Unstandardized Coefficients					R ²
	White	Pac.Isl	Elem	Sec	Exp	
Committed educators	---	---	.27*	.31**	---	.06
Shared vision	-.41***	-.24**	---	---	---	.10
High expectations for all	---	-.21**	.21*	.31**	---	.07
Adult advocate	-.27**	---	---	---	---	.03
Family/Community Partner	-.23*	---	---	---	---	.03
Positive school climate	---	---	.40**	.52***	-.02**	.11
Challenging curriculum	---	---	---	---	---	---
Varied teaching approaches	-.38***	-.22**	---	---	---	.06
Assessment/Evaluation	---	---	---	---	---	---
Flexible structures	-.27**	---	---	---	---	.03
Health/Wellness programs	-.20*	---	.40**	.29**	---	.07
Guidance/Support services	-.30***	---	---	---	---	.05

Note. *p < .05. **p < .01. ***p < .001.

The second series of regression analysis models measured the amount of influence that select demographic measures had on teachers' perceptions on the level of implementation (PLE) of each essential middle school characteristic. This analysis was also conducted using stepwise regression, so that the most significant set of independent variables could be identified for each dependent variable. As a result, each model was originally specified as shown below:

$$PLE = \beta_0 + \beta_1 GEN + \beta_2 AGE + \beta_3 ETH + \beta_4 CER + \beta_5 DEG + \beta_6 EXP.$$

The final set of models contained only variables significant at the p < .05 level or better.

As shown in Table 17, the R-square indicates that the independent variables listed as predictors explained almost 13% of the variation in the importance of “challenging curriculum.” Specifically, the independent variables age, White, and Master’s Degree were significant determinants of “challenging curriculum.” However, when all 12 models were estimated, the amount explained variation range from 2% to 13%, again suggesting that taken together, the demographic variables used in this study explained only a modest amount of the overall variation in teachers’ responses.

Effects of Teachers’ Ethnicity on Implementation

The analysis in Table 17, suggests that ethnicity once again played a major role in helping to explain why certain teachers considered some characteristics less implemented than others. Specifically, the negative coefficients associated with White teachers showed that they were more likely to rate all 12 characteristics lower than other teachers.

Effects of Teachers’ Age on Implementation

As noted in Table 17, age had a significant effect on “committed educators.” In other words, as teachers aged, they were more likely to think that “educators committed” to young adolescents was being implemented. This increased by two tenth of a point per year. The R-square value indicated that approximately eight percent of the variance in “committed educators” was accounted for by age. “Challenging curriculum” also was affected by age with an increase of one tenth of a point for every additional year of age.

Effects of Teachers’ Academic Degree on Implementation

As depicted in Table 17, having a Master’s Degree had a significant and positive affect on teachers’ perception of implemented components. In other words, a Master’s

degree made a difference in teachers' perception regarding the perceived level of implementation. For example, teachers with a Master's Degree were more likely to rate "committed educators," "challenging curriculum," and "guidance/support services" higher than non-degreed teachers. Additionally, the direction was positive, indicating that teachers with a Master's Degree felt that certain characteristics were more likely to be implemented than non-degreed teachers thought.

Table 17. Teachers' perception of implemented characteristics as described by demographic responses

Characteristic Description	Unstandardized Coefficients			R ²
	Age	White	MA	
Committed educators	.02***	-.37**	.25*	.08
Shared vision	---	-.45***	---	.05
High expectations for all	---	-.35**	---	.03
An adult advocate for students	---	-.31*	---	.03
Family/Community Partner	---	-.28*	---	.03
Positive school climate	---	-.58***	---	.07
Challenging curriculum	.01**	-.42***	.32**	.13
Varied teaching approaches	---	-.50***	---	.06
Assessment/Evaluation	---	-.30*	---	.02
Flexible structures	---	-.34**	---	.03
Health/Wellness programs	---	-.37**	---	.04
Guidance/Support services	---	-.47***	.30**	.09

Note. *p < .05. ** p < .01. *** p < .001.

From these analyses, answers to research question four may now be summarized.

Specific demographic profiles did affect teachers' perceptions of the degree of importance and level of implementation of essential middle school characteristics.

Overall, ethnicity, level of certification, degree earned and experience were cited as having some influence.

Summary

In this chapter the researcher analyzed and presented data collected from teachers and administrators on their perception of the degree of importance and level of implementation of essential middle school characteristics. All middle school teachers and

administrators were asked to participate in this study, however; only 260 or 55% out of 471 teachers and 15 or 83% out of 18 administrators from seven middle schools in the Guam Department of Education participated.

To recapitulate the data in the study, research question one addressed the importance of essential characteristics. Overall, teachers believed that 35 of the 40 characteristics were very important while administrators believed that all 40 characteristics were very important to the success of middle schools.

Question two addressed the implementation of essential characteristics. Teachers felt that all were moderately implemented and two were partially implemented. Administrators, on the other hand, felt that 33 of the characteristics were moderately implemented and seven partially implemented.

Question three addressed a list of barriers preventing the implementation of the essential elements. Teachers and administrators concurred that there were three serious roadblocks to successful implementation. Only one barrier was not perceived as an obstruction. Both respondents ranked it at the bottom of their list.

A series of regression analyses were conducted to answer question four regarding the effect of demographic profiles on teachers' perceptions of the degree of importance and level of implementation of essential middle school characteristics. The first series of regression analysis showed that the independent variable ethnicity had a significant, but negative influence. Both White and Pacific Islander teachers placed less importance on many of the components than did teachers classified as "Other." Another variable, teaching certificate, had a significant and positive effect on teachers' perception. Credentialed teachers placed more importance than non-credentialed teachers on four

characteristics. Experience had a significant effect on only one dependent variable, and the direction of that influence was negative.

The second regression analysis indicated that, once again, the independent variable ethnicity had a statistically significant influence on implementation. Specifically, White teachers rated all 12 characteristics as more implemented than did non-white teachers. Age had a significant effect on two out of 12 essential components.

CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

In the preceding chapters, an overview of the study and a literature review were presented, followed by a discussion of the methodology and description of the findings. In this chapter, conclusions from the findings and implications for further research were presented.

This study examined how teachers and administrators perceived the degree of importance and level of implementation of essential middle school characteristics and it also explored perceptions of what barriers prevented the implementation of those characteristics. The research questions that guided this study were: 1) to what extent do teachers and administrators perceive essential middle school characteristics as important? 2) To what extent do teachers and administrators perceive essential middle school characteristics as currently implemented in their school? 3) What factors do teachers and administrators perceive as “roadblocks” in implementing essential middle school characteristics in their school? 4) Do teachers’ demographic profiles have an affect on their perceptions of the degree of importance and level of implementation of essential middle school characteristics?

The Middle School Questionnaire of Essential Elements (MSQE²), developed by Neill, was used to gather data for the first two research questions. Mean scores for each of the characteristics and components were computed and independent sample t-tests

were used to test for differences between teachers and administrators. To gather data for the third research question, a survey designed by the National Association of Secondary School Principals (NASSP) was used. Frequency distributions, means, and percentile rankings were conducted for each "roadblock." Independent sample t-tests were again used to determine if the perceptual differences between teachers and administrators were significant. For the fourth and last question, the researcher designed a personal background information survey. Separate multiple regression analyses were undertaken to determine whether the following variables--teachers' gender, age, ethnicity, certification, experience and degree earned--affected teachers' perception.

Two hundred sixty teachers and 15 administrators participated in this study, representing respectively 55% and 83% of the study population. The average teacher had nine years of teaching experience, was 40 years old, and had a master's degree and secondary certification. Although they were asked, administrators did not indicate their age and ethnicity, perhaps due to their small number and related fears regarding possible identification concerns. Therefore, age and ethnicity variables were not used in the analysis for school administrators. Ethnicity was broken down into three categories: White, Pacific Islander, and Other.

To test for non-response bias, the sample population was compared to the school district population in terms of gender, age and ethnicity. The percentages were comparable in age and gender between the sample population and the general population of teachers, which meant that inferences made from the sample, could be applied to the general population. However, there was no information available from RPE regarding the

ethnicity of school administrators, so no imputation technique was used and the missing observations were deleted from the analysis.

Discussion of Findings

All Respondents' Perceptions on Important and Implemented Characteristics

Research question one and two investigated the extent to which teachers and administrators perceived the degree of importance and level of implementation of essential elements in Guam's middle schools. The researcher found that teachers believed that 35 of the 40 characteristics were very important and felt that thirty-eight of 40 characteristics had been moderately implemented. As discussed in the literature review, Lord (1993) and Suhoza (1999) also found that majority of their teachers believed all of the components of the middle school concept were important and had been implemented. In contrast, administrators perceived that all 40 characteristics were very important, however, 33 had been moderately implemented and seven were partially implemented. This was supported in the studies conducted by Fry (1994) and Parker (1996) who found that administrators considered the majority of middle school characteristics as important, but that none had been fully implemented.

In the analysis of the 12 essential components, teachers and administrators viewed all 12 components as very important and moderately implemented; however, the order of the rankings was different. For example, teachers and administrators ranked "shared vision" as very important and gave it the same mean score, yet their ranking was different. As discussed in the literature review, Neill (1994) and Suhoza (1999) found that teachers believed all components were important and implemented.

There were no significant differences between the perceptions of teachers and administrators regarding the degree of importance of the essential middle school characteristics. However, there were significant differences between teachers' and administrators' perceptions regarding the extent of implementation for three of the essential middle school characteristics. These characteristics were: "an adult advocate for every student," "committed educators" and "programs and policies that foster health, wellness, and safety." Clearly administrators expected teachers to be the adult advocates and committed to young adolescents based on the premise that those closest to students were teachers. Administrators also actively promoted the implementation of health, wellness and safety policies but expected teachers to implement them.

Teachers' and Administrators' Perception of "Roadblocks"

In research question three, teachers and administrators were asked to indicate which of the 26 factors were considered serious "roadblocks" and which of those were not considered serious. Overall, teachers and administrators agreed with respect to which factors had the most serious impact on their ability to successfully implement the essential elements. Approximately 74% of the respondents reported that the department's inability to obtain funding was a serious roadblock, 62% said apathetic parents or those irresponsible about their children's education presented a serious constraint, and 49% felt problem students were an impediment. These findings were consistent with two national studies conducted by the National Association of Secondary School Principals (1981 and 1992). The barriers listed were also the same barriers cited in Neill's (1994) study involving accredited Montana middle schools.

To provide some context for these findings, it is important to note that in the years immediately preceding this study, Guam's economy plummeted due to the Asian economic crisis, which led to a severe decrease in tourism. Concurrently, the United States military presence on the island also decreased significantly because of federal budgetary cuts resulting in base closures. Since tourism and military activity have typically brought in millions of dollars to Guam's coffers, funding the government departments and agencies--specifically, the Department of Education--became a difficult task for the legislature. The department's budget could barely pay for critical positions or contractual obligations, much less purchase supplies and materials. School buildings over 20 years old were becoming dangerous, there was little to no funding for textbooks, and government retirement obligations were not being met, compounding the Department of Education's inability to adequately fund education.

Another serious impediment to the implementation of essential middle school characteristics was apathetic or irresponsible parents. Apathetic parents had been a perennial problem throughout the schools and the community. Attempts to get parents involved in their children's education had improved but not at the level educators would have liked. Educators became overwhelmed when parents did not make the effort to partner in their children's education. It is important to note that the perception of parents being apathetic may actually have been parents' acquiescence to the authority of teachers. Parents believed that the school community acting as "*loco parentis*" was in charge of their children during school hours. Parents looked to educators as the experts and basically trusted them to educate their children. As a result, the responsibilities of

educators increased because of “*loco parentis*” and by legislative mandates, board policies and federal programs.

A third serious impediment also identified by teachers and administrators was problematic students. Generally speaking, while the local culture places high expectations on such family values, as respect and children, there was a recognizable difference however, in student behavior based on the geographical location of the middle schools. For example, students from the more homogenous populated rural areas tended to be more deeply rooted in the custom and culture of respect for authority, and had less disciplinary problems. Conversely, students in the more densely populated urban areas with diverse cultures and ethnicities had more disciplinary problems.

Having discussed the three serious barriers, this study found that approximately 76% of the teachers did not consider schools with a small student body an impediment to implementing essential middle school characteristics. Teachers and administrators actually considered a small student body population ideal in terms of providing a safe environment and offering individualized instruction. Overall, the inability to obtain funding was clearly the consensus roadblock in NASSP’s (1993) and Neill’s (1994) studies, as well as in this study.

Significant Differences among Respondents for Perceived Roadblocks

Teachers and administrators showed significant differences for 14 of the 26 perceived roadblocks. These 14 roadblocks were categorized as factors school administrators have authority over; factors that central administrative office and other related entities have authority over; and lastly, factors that teachers have control over. Perceived roadblocks cited by teachers and administrators regarding the factors that

administrators had authority over include: poor administration communication; poor administrative help; poor office help; and no program data for middle schools.

This study also revealed roadblocks viewed by teachers and administrators as constraints at the central administrative level including: lack of funding; district inflexibility; district tradition; state mandates; lack of professional development; collective bargaining and schools with too large a student body or too small a student body. The last group of roadblocks categorized as teacher constraints include: resistance to change by staff and lack of middle school knowledge.

Effects of Demographic Variables on Perceptions

To address the last research question, the following demographic variables--teachers' age, ethnicity, certification, degree earned and experience--were used to determine the extent to which they explained variation in the teachers' perceptions of important and implemented components in middle schools.

Effects of Ethnicity

The regression analysis revealed that teacher ethnicity played a major role in helping to explain why some teachers considered certain characteristics less important than others. Specifically, White teachers placed less importance on seven of the 12 components than Pacific Islander teachers. Pacific Islander teachers were also less likely to rate three of the components as important. However, the differences were relatively modest. This may be based on the White teachers' degree of teaching experience in American schools. For instance, many practices of American public schools and universities, such as competition, challenging authority, independence and praise for individual ability are directly opposed to the cultural beliefs of many local Pacific

Islanders. While Pacific Islander teachers may not have fully embraced the western culture, they may have understood the American system of education and identified with White teachers; thus placing less importance on certain components. For some Pacific Islander teachers, their main understanding, exposure and experience with western societies came through American media products, traveling to the continental U.S., and or attending off-island universities.

Once again, teacher ethnicity had a significant effect on the importance of three essential components. The study revealed Pacific Island teachers tended to rate these essential components marginally higher in importance than White teachers. Results were possibly influenced by Pacific Islander cultural perceptions “of high expectations for all.” For example, Pacific Islanders often endeavor to reconcile cultural beliefs with that of the western ideal of individual success. As an unspoken rule and as a ‘given’ in the Pacific Island community and culture, Pacific Islanders will sacrifice everything for their children and generally have high expectations for them. Another component given less importance by Pacific Island teachers was “varied teaching approaches.” Many Pacific Island teachers held the enculturated belief that children need to listen and be respectful to their elders, which meant varied teaching methodology took second to teacher authority. The third component rated as less important by Pacific Island teachers was “shared vision.” It was not clear why this component was not as important since Pacific Islanders, as a collective society, are rooted in the cultural belief of reciprocity (regardless of the cost), and the extension of oneself and family. It was not clear whether teaching in, or exposure to an American school system influenced Pacific Islander perception.

While ethnicity played a modest role in explaining the degree of importance placed on essential components, it played a major role in helping to explain why certain teachers considered certain components less implemented than others. Specifically, White teachers believed that all 12 characteristics were less frequently implemented than the other teachers. Perhaps this is due in part to the Department of Education's recruitment of teachers in the continental U. S., which explains the number of white teachers in the public school system and their differences in perceptions.

Effects of Teacher Certification

The regression analysis revealed that teachers with higher credentials played a modest role in helping to explain why certain teachers considered certain school characteristics more important than others. Specifically, teachers with elementary and secondary credentials were more likely to rate four of the 12 characteristics higher than teachers without either one of the credentials. This can be explained because the majority of the teachers surveyed were secondary credentialed educators. Overall secondary credentialed teachers placed modest importance on the components as compared to elementary credentialed teachers.

Effects of Experience

The regression analysis revealed that teachers' experience had a significant effect on "positive school climate." More specifically, experienced teachers felt that "positive school climate" was not as important as less experienced teachers. Perhaps, experienced teachers have less of a problem with classroom management, and as a result, may have felt that school climate was a reflection of the school culture. Of course, this has important implications for administrators who are the hiring authority for their schools.

Administrators were also more likely to want new teachers mentored by master teachers with the knowledge, skills and years of service gained through their experiences with classroom management.

Effects of Age

The regression analysis revealed that teachers' age had a significant effect on the following two components--committed educators and challenging curriculum.

Specifically, older teachers were more likely to think that these components were moderately implemented, perhaps due to the fact that the older the teacher, the more recognition is given to the intrinsic value in teaching. Seasoned teachers also had vast knowledge and a range of information that supported a challenging curriculum. These teachers were more likely to take learning beyond what was in the text in the effort to engage students in becoming active participants in their learning.

Effects of Academic Degree

The regression analysis also revealed that the highest degree attained by the teachers had an effect on their perceptions. Specifically, teachers with a master's degree tended to rate some of the components more important than those with a bachelor's degree. For example, teachers with a master's degree felt that "guidance and support services" were moderately implemented. These postgraduate degree teachers clearly view training and specialized study important in providing guidance and specialized services.

Conclusions

Based upon the responses and subsequent analyses of participating teachers and administrators, the following conclusions can be drawn: First, teachers and principals were in agreement that all 12 components were very important and were being

implemented. Second, there were no significant differences between teachers' and administrators' perception on the degree of importance of essential middle school characteristics. While both respondents believed middle school elements were important, they differed in the order of importance, and showed significant differences in their perception on the extent of implementation for three of the essential middle school characteristics.

The study also concluded that teachers and administrators agreed with respect to which roadblocks had the most serious impact on their ability to successfully implement the essential elements of a middle school program. In addition, teachers' ethnicity (White and Pacific Island teachers) played a major role in explaining why certain teachers considered certain characteristics less important than others. And, lastly, teachers' academic degree and age played a modest role in explaining why some teachers considered some school characteristics implemented, while teachers certification (elementary and secondary), also played a modest role in helping to explain why some teachers considered some school characteristics more important than others.

Recommendations

Based on the data from this study and a review of the literature, the following recommendations for the Guam Department of Education are provided: First, the Guam Department of Education should mandate that all middle schools implement the middle school concept, and require middle level certification for educators assigned to the middle schools. The Guam Department of Education must support this effort by providing the resources that are necessary to ensure the success of the implementation of the middle school concept and programs. The Guam Department of Education should

also collaborate with the University of Guam to develop a middle level certification program to support middle level educators and commit to monthly professional training days for growth and development. The Guam Department of Education should examine the roadblocks impeding the implementation of the essential middle school characteristics. In addition, it is critical that the Guam Department of Education financially support middle level charter membership with the National Middle School Association and, lastly, provide extensive orientations or briefings to sensitize newly hired off-island teachers to local customs and culture.

This study was conducted prior to the mandatory implementation of a district wide reading program called Direct Instruction (DI). Upon subsequent conversations with middle level educators, it was revealed that the implementation of DI has delayed, if not altogether halted the continuation of implementing essential middle school characteristics. It is therefore recommended that this particular study be repeated after the Department of Education has in place a middle level certification policy, in order to determine whether specific middle level courses will make a difference in educators' perception of the importance and degree of implementation of essential middle level characteristics. A comparative study should be conducted between the Guam Department of Education and the Department of Defense schools. Lastly, it is recommended that a study be conducted to include a deeper investigation into the ethnicity differences associated with the importance and implementation of the middle school concept.

Concluding Remarks

While this study clearly indicates room for improvement in Guam's middle schools, it also acknowledges a strong relationship between what the current literature says about the early adolescent learner and the perceptions that teachers and administrators have on the importance of essential middle school characteristics. Overall, it appears teachers and administrators agree that essential middle school characteristics are important and that they are being moderately implemented.

The findings of this study also have important implications for middle level teachers and practicing administrators. It is of critical importance that stakeholders support developmentally responsive middle schools, and effectively communicate the importance of the mission and the purpose of middle level education. Because middle level schools were developed to bridge the gap between elementary and secondary schools, they face the formidable task of responding to an ever-changing student population, as well as meeting the needs of students during the most formative years of their lives, adolescence. Stakeholder actions or inactions will, in large part, determine the success of middle level education.

It is important to note that educators cannot do this alone. The challenge to stakeholders then is to form collaborative partnerships to strengthen middle level program. It is also equally vital to provide the necessary support to middle level educators who are dedicated to the task of developing and nurturing the adolescent--a task of immeasurable value with the effects that will have greater impact in our community.

REFERENCES

- Alexander, W. M. (1971). Middle school status in ten states. *National Elementary Principal*, 51, 72-78.
- Alexander, W. M. (1968). *The emergent middle school*. New York: Holt, Rinehart & Winston.
- Alexander, W. M. (1984). The middle school emerges and flourishes. In J. H. Lounsbury, (D), *Perspective: Middle school education* (pp.14-29). Columbus, OH.
- Alexander, W. M., & George, P. S. (1981). *The exemplary middle school*. New York; Holt, Rinehart, & Winston.
- Alexander, W. M., & McEwin, C. K. (1989). *Earmarks of school in the middle: A research report*. Boone, NC: Appalachian State University. (ERIC Document Reproduction Service No. ED 312)
- Alexander, W. M., & Williams, E. L. (1965). Schools for the middle years. *Educational Leadership*, 23, 217-223.
- Allen, H. A., & Splittgerber, F. (1980, March). *Teachers' and principals' attitudes about the characteristics and functions of middle schools*. Paper presented at the Annual meeting of the Eastern Educational Research Association, Chapel Hill, NC. (ERIC Document Reproduction Service No. ED 206 086)
- Appolloni, S. L. (1993). *The level of implementation of 18 basic middle school characteristics as perceived by middle level principals in Nevada*. Unpublished doctoral dissertation, University of Nevada.
- Babbie, E. R. (1973). *Survey research methods*. Belmont, CA: Wadsworth Publishing Company.
- Backstrom, C. H., & Hursh, G. D. (1963). *Survey research*. Evanston, Illinois: Northwestern University Press.
- Borg, W. R., & Gall, M. D. (1979). *Educational research: An introduction*. New York: Longman, Inc.
- Bough, M., McLure, J., & Sinks, T. A. (1972). Middle school: A five state survey: Upper Midwest states. *Clearing House*, 47 (November 1972), 162-166.
- Briggs, T. H. (1920). *The Junior High School*. Cambridge, MA: The Riverside Press.
- Brimm, R. P. (March 1969). Middle school or junior high? Background and rationale. *NASSP Bulletin*, 53 (335), 1-7.

- Brown, W. T. (1981, January). The making of the middle school: 21 key ingredients, *The Principal*, 60, 18-19.
- Calhoun, F. S. (1983). *Organization of the middle grades: A summary of research*. Arlington, VA: Educational Research Service.
- Calvert, N. J. (1993). *A study of the relationships between the middle level principals' professional development in middle level education, beliefs in middle level characteristics, and perceived implementation of these characteristics*. Unpublished doctoral dissertation, Southern Illinois University at Edwardsville, Illinois.
- Cawalti, G. (November, 1988). Middle schools; a better match with early adolescent needs, ASCD survey finds. *ASCD Curriculum Update*.
- Children's Defense Fund. (1988). *Making the middle grades work*. Washington, DC.
- Clark, S. N. & Clark, D. C. (1986, September). Middle level programs: More than academics. *Schools in the middle: A report on trends and practices*. Reston, VA: National Association of Secondary School Principals.
- Clark, S. N., & Clark, D. C. (1993). Middle level school reform: The rhetoric and the reality. *Elementary School Journal*, 93, 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.
- Cuff, W. A. (1967). Middle schools on the march. *NASSP Bulletin*, 51, 82-86.
- Davis, C. O. (1924). *Junior high school education*. Yonkers-on-Hudson, New York: World Book Company.
- Educational Research Service (1983). *Organization of the middle grades: A summary of research*. Arlington, VA: Educational Research Service, Inc.
- Eichhorn, D. H. (1966). *The middle school*. New York: Center for Applied Research in Education, Inc.
- Epstein, J. L., & MacIver, D. J. (1990). *Education in the middle grades: Overview of national practices and trends*. Columbus, OH: National Middle School Association.
- Fry, D. D. (1994). *An analysis of the implementation of the middle school concept*. Unpublished doctoral dissertation, East Texas State University, Texas.

- Fry, D. D., & Jobe, M. E. (1996). Importance and implementation of middle school Concept. *ERS Spectrum*, 14, 31-36.
- Gatewood, T. E. (1973). What research says about the middle school. *Educational Leadership*, 31, 221-223.
- Gatewood, T. E., & Dilg, C. A. (1975). *The middle school we need*. Washington, DC: Association for Supervision and Curriculum Development.
- Gay, L. R. (1992). *Educational research: Competencies for analysis and application*. New York: Merrill.
- George, P. S., & Alexander W. M. 1993. *The exemplary middle school*. Orlando, FL: Harcourt Brace College Publishers.
- George, P. S., & Oldaker, L. (1985). A national survey of middle school effectiveness. *Educational Leadership*, 43, 79-85.
- George, P. S. & Shewey, K. (1994). *New evidence for the middle school*. Fort Worth, TX: Harcourt Brace Jovanovich College Publishers.
- George, P. S., Stevenson, C., Thomason, J., & Beane, J. (1992). *The middle school and beyond*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Georgiady, N. P., Riegle, J. D. & Romano, L. G. (1974). What are the characteristics of the middle school? *NASSP Bulletin*, 58, 381.
- Georgiady, N. P., & Romano, L.G. (1973). Do you have a middle school? *Educational Leadership*, 31, 238-241.
- Gruhn, W. T., & Douglass, H. R. (1956). *The modern junior high school*. New York: The Ronald Press Company.
- Hansen, J. H., & Hern, A. C. (1971). *The middle school program*. Chicago: Rand McNally.
- Heiman, G. W. (1992). *Basic statistics for the behavioral sciences*. Boston, MA: Houghton Mifflin.
- Howard, A. W., & Stoumbis, G. C. (1970). *The junior high and middle school: Issues and practices*. Scranton, PA: Intext Educational Publishers.
- Huck, S. W. & Cormier, W. H. (1996). *Reading Statistical research*. New York: Harper Collins.

- Irvin, J. L. (September, 1995). Essential Elements of a true middle school: What should be vs. what is. *Middle School Journal*, 26, 54-58.
- Kealy, R. P. (1971). The middle school movement, 1960-1970. *National Elementary Principal*, 51(3), 20-25.
- Kerlinger, F. N. (1965). *Foundations of behavior research*. New York: Holt, Rinehart and Winston.
- Koos, L. V. (1927). *The junior high school idea*. New York: Henry Holt and Company.
- Lawton, E. J. (1989). *A journey through time: A chronology of middle level Education resources*. Columbus, OH: National Middle School Association and Reston, VA: National Association of Secondary School Principals.
- Lord, W. J. (1993). *Perceptions of Massachusetts' middle school principals on the practice of specific middle school principles*. Unpublished doctoral dissertation, Boston College.
- Lounsbury, J. H. (1984). *Perspectives: Middle school education*. Columbus, OH: National Middle School Association.
- Lounsbury, J. H., & Marani, J. (1964). *The junior high school we saw: One day in the eighth grade*. Washington, DC: Association for Supervision and Curriculum Development.
- Lounsbury, J. H., & Vars, G. E. (1978). *A curriculum for the middle school years*. New York: Harper and Row.
- McGuire, J. C. (1995). *An examination of middle-level exemplary schools in Michigan to determine the current rate of implementation of 18 characteristics of middle schools*. Unpublished doctoral dissertation, Michigan State University, Michigan.
- Merenbloom, E. Y. (1988). *Developing effective middle school through faculty participation*. Columbus, OH: National Middle School Association.
- Minster, H. E. (1985). *A study to determine the current level of implementation of 18 basic middle school characteristics as reported by teachers, principals and superintendents in selected Illinois middle schools*. Unpublished doctoral dissertation, Michigan State University, Michigan.
- Moss, T. C. (1969). *Middle school*. Boston, MA: Houghton Mifflin Company.
- Moss, T. C. (1971). Characteristics of a good middle school. *NASSP Bulletin*, 55(357), 71-74.

- Mowen, G. G. (1993). *Comparison study of the implementation rate of 18 middle school characteristics in Michigan and national blue ribbon schools*. Unpublished doctoral dissertation, Western Michigan University, Michigan.
- Munsell, W. R. (1984). *The extent to which identified programmatic characteristics of middle level education is implemented in the middle level schools of Colorado*. Unpublished doctoral dissertation, University of Colorado at Boulder, Colorado.
- Neill, M. W. (1999). *An analysis of the implementation of the essential elements in accredited Montana Middle Schools*. Unpublished doctoral dissertation, University of Montana, Montana.
- Osburn, F. S. (1987). *Principals' perceptions of the functions and characteristics of middle schools in South Carolina*. Unpublished doctoral dissertation, University of South Carolina, South Carolina.
- Pagano, R. J. (1989). *Middle school principals: The relationship between perceived leadership style and the implementation of selected middle school characteristics*. Unpublished doctoral dissertation, The University of Akron, Ohio.
- Parker, C. M. (1996). *A survey of the perceptions of Tennessee middle school principals toward their role in implementing the middle school concept*. Unpublished doctoral Dissertation, University of Memphis, Tennessee.
- Pook, M. P. (1980). *A study of the relationship of teacher job satisfaction and the Level of implementation of middle school practices*. Unpublished doctoral dissertation, University of Colorado, Colorado.
- Popper, S. (1967). *The American middle school: An organizational analysis*. Waltham, MA: Blaisdell Publishing Company.
- Prentice, D. (1990). *A study of the nationally recognized exemplary middle schools in Michigan and the extent of their implementation of the 18 characteristics of middle school education*. Unpublished doctoral dissertation, Michigan State University, Michigan.
- Raymer, J. T. (1974). *A study to identify middle schools and to determine the current level of implementation of eighteen basic middle school characteristics in selected United States and Michigan schools*. Unpublished doctoral dissertation, Michigan State University, Michigan.
- Riegle, J. D. (1971). *A study of middle school programs to determine the current level of implementation of 18 basic middle school principles*. Unpublished doctoral dissertation, Michigan State University, Michigan.

- Romano, L. G., & Georgiady, N. P. (1994). *Building an effective middle school*. Madison, WI: McGraw Hill Book Co.
- Ross, M. A. (1989). *A comparative study of middle level characteristics suggested in the literature and the extent of their implementation in selected middle level schools in Illinois*. Unpublished doctoral dissertation, Loyola University of Chicago, Illinois.
- Scales, P. C. (1996). *Boxed in and bored: How middle schools continue to fail young adolescents—and what good middle schools do right*. Minneapolis, MN: Search Institute.
- Shafer, J. E. (1989). *Evaluation of an interdisciplinary model of middle school organization: Its impact on student self esteem and basic skill achievement*. Agana, Guam: Department of Education.
- Shafer, J. E., Taton, K., & Lind, E. (February 1982). *Guam Public School Reorganization Plan*. Agana, Guam: Department of Education.
- Sheehan, K. C. (1989). *A study of middle school characteristics in Rhode Island and national exemplary schools as perceived by administrators, guidance and media professionals, and teachers*. Unpublished doctoral dissertation, Boston College, Massachusetts.
- Speer, R. J. (1996). *Implementation of 18 recommended middle-school practices in Georgia and their relationship to school climate*. Unpublished doctoral dissertation, Georgia State University, Georgia.
- Suhoza, J. Y. (1999). *Analysis of teacher training, teacher perceptions and implementation of the middle school concept*. Unpublished doctoral dissertation, University of Memphis, Tennessee.
- National Middle School Association (NMSA). (1982). *This we believe*. Columbus, OH: Author.
- National Middle School Association (NMSA). (1995). *This we believe: Developmentally responsive middle level schools*. Columbus, OH: Author.
- Carnegie Council on Adolescent Development. (1989). *Turning Points: Preparing American youth for the 21st Century*. New York: The Carnegie Corporation of New York.
- Tye, K. A. (1985). *The junior high school in search of a mission*. Lanham, MD: University Press of America.

- Valentine, J.W., Clark, D.C., Irvin, J.L., Keefe, J.W., & Melton, G. (1993). *Leadership in middle level education: A national survey of middle level leaders and schools*. (Vol. 1). Reston, VA: National Association of Secondary School Principals.
- Van Til, W., Vars, G. F., & Lounsbury, J. H. (1967). *Modern education for the junior high school year*. (2nd ed.). Indianapolis, IN: The Bobbs-Merrill Company, Inc.
- Wah, W. (1980). *A study of teacher perceptions of selected middle school programs in Michigan*. Unpublished doctoral dissertation, Michigan State University, Michigan.
- Wiles, J. (1976). *Planning guidelines for middle school education*. Dubuque, IA: Kendall/Hunt Publishing Co.
- Wiles, J., & Bondi, J. (1981). *The essential middle school*. Columbus, OH: Charles E. Merrill Publishing Company.
- Wiles, J., & Thomason, J. (1975). Middle school research 1968-1974: A review of substantial studies. *Educational Leadership*, 32, 421-423.

Appendix A

Middle School Questionnaire of Essential Elements (MSQE²)

Importance of Characteristic to School Success Scale:
(1) Not Important
(2) Somewhat Important
(3) Important
(4) Very Important

Current Level of Implementation Scale:		
(1) Not	(0%)	Implemented
(2) Partially	(less than 33%)	Implemented
(3) Moderately	(33% - 67%)	Implemented
(4) Majorly	(more than 67%)	Implemented

Importance of Characteristic To Success at My School
--

MSQE[®] Part I:

Characteristic/Practice:

Current Level of Implementation At My School
--

1	2	3	4	(1) Middle school educators generally understand the developmental uniqueness of the young adolescent.	1	2	3	4
1	2	3	4	(2) Middle school educators form learning partnerships with students based on the needs, interests, and abilities of the student.	1	2	3	4
1	2	3	4	(3) Educators in the middle school serve as role models for the middle level student.	1	2	3	4
1	2	3	4	(4) The middle school involves all stakeholders - students, faculty, administrators, families, board of education members, & community members - in the development of a shared mission statement.	1	2	3	4
1	2	3	4	(5) The middle school mission is operationalized to allow educators to pursue appropriate practices which provide a challenging academic program.	1	2	3	4
1	2	3	4	(6) The middle school provides appropriate learning opportunities which permit students to become intellectually engaged.	1	2	3	4
1	2	3	4	(7) The middle school utilizes a variety of educational methods and approaches to address individual learning styles of the learner.	1	2	3	4
1	2	3	4	(8) The middle school organizes students into small, heterogeneous groups designed to empower them to become actively engaged in their own learning.	1	2	3	4
1	2	3	4	(9) The middle school provides students with the opportunity to develop responsible citizenship skills.	1	2	3	4
1	2	3	4	(10) Adult advisors in the middle school serve as a link between the school and home.	1	2	3	4
1	2	3	4	(11) Middle schools provide every student with the opportunity to be well known by least one adult in the school.	1	2	3	4

Importance of Characteristic to School Success Scale:			
(1)	Not Important		
(2)	Somewhat Important		
(3)	Important		
(4)	Very Important		

Current Level of Implementation Scale:		
(1)	Not Implemented	(0%)
(2)	Partially Implemented	(less than 33%)
(3)	Moderately Implemented	(33% - 67%)
(4)	Majorly Implemented	(more than 67%)

Importance of Characteristic To Success at My School
--

Current Level of Implementation At My School
--

Characteristic/Practice:

1	2	3	4	(12) The middle school uses organizational arrangements (e.g., advising groups, homebase groups, team-based mentorships) to augment guidance and support services.	1	2	3	4
1	2	3	4	(13) The middle school recognizes families as active participants in the school program.	1	2	3	4
1	2	3	4	(14) The middle school assists families in creating and sustaining positive learning environments at home.	1	2	3	4
1	2	3	4	(15) The middle school supports family involvement by providing for two-way communication.	1	2	3	4
1	2	3	4	(16) The middle school seeks appropriate partnerships with business, social service agencies, and other organizations.	1	2	3	4
1	2	3	4	(17) The middle school environment is positive and promotes a sense of community in which individual differences are recognized and accepted with respect and dignity.	1	2	3	4
1	2	3	4	(18) The middle school environment is inviting and caring, and encourages learning, initiative, and student risk-taking.	1	2	3	4
1	2	3	4	(19) The middle school provides a safe environment, free of violence, substance abuse, and threatening behaviors.	1	2	3	4
1	2	3	4	(20) The middle school principal is recognized as the instructional leader in the building.	1	2	3	4
1	2	3	4	(21) The middle school curriculum and procedures are articulated with those of the elementary and high school; including orientation and transition programs.	1	2	3	4
1	2	3	4	(22) The curriculum addresses issues and skills that are relevant to the middle-level learner.	1	2	3	4
1	2	3	4	(23) The curriculum provides opportunity for students to reflect on experiences as a part of self-evaluation.	1	2	3	4

Importance of Characteristic to School Success Scale:			
(1)	Not Important		
(2)	Somewhat Important		
(3)	Important		
(4)	Very Important		

Current Level of Implementation Scale:		
(1)	Not Implemented	(0%)
(2)	Partially Implemented	(less than 33%)
(3)	Moderately Implemented	(33% - 67%)
(4)	Majorly Implemented	(more than 67%)

Importance of Characteristic To Success at My School
--

Current Level of Implementation At My School
--

Characteristic/Practice:

1	2	3	4	(24) The curriculum provides students with the opportunity to discover abilities, talents, values, and preferences.	1	2	3	4
1	2	3	4	(25) The curriculum provides students with exploratory experiences, which are enriching and healthy and which contribute to adolescent development.	1	2	3	4
1	2	3	4	(26) The middle school utilizes a variety of teaching and learning approaches designed around the developmental and learning characteristics of young adolescents.	1	2	3	4
1	2	3	4	(27) Middle school teaching techniques enhance and accommodate the diverse skills, abilities, knowledge, intelligences, and learning styles of young adolescents.	1	2	3	4
1	2	3	4	(28) The middle school curriculum actively engages students in a variety of hands-on learning experiences.	1	2	3	4
1	2	3	4	(29) The middle school teacher designs learning activities that provide appropriate challenges for all types of students.	1	2	3	4
1	2	3	4	(30) Middle school technological resources enhance and advance instruction for students.	1	2	3	4
1	2	3	4	(31) The middle education program utilizes continuous, authentic, and appropriate forms of assessment of student progress.	1	2	3	4
1	2	3	4	(32) Middle level education assessment and evaluation methods emphasize individual progress, minimize student comparisons, and reward reasonable efforts.	1	2	3	4
1	2	3	4	(33) The middle school incorporates a flexible program of student scheduling which provides for enrichment programs, cooperative learning groups, and independent study.	1	2	3	4
1	2	3	4	(34) The middle school program provides teachers with a common planning time, space, core of students, and responsibility for the design and operation of the educational program.	1	2	3	4

Importance of Characteristic to School Success Scale:			
(1)	Not Important		
(2)	Somewhat Important		
(3)	Important		
(4)	Very Important		

Current Level of Implementation Scale:		
(1) Not	(0%)	Implemented
(2) Partially	(less than 33%)	Implemented
(3) Moderately	(33% - 67%)	Implemented
(4) Majorly	(more than 67%)	Implemented

Importance of
Characteristic
To Success at
My School

Current Level of
Implementation
At My School

Characteristic/Practice:

1	2	3	4	(35) The middle school program creates smaller learning environments (e.g., "schools-within-a-school," teams, houses.)	1	2	3	4
1	2	3	4	(36) The program provides opportunities for staff to meet regularly with their students.	1	2	3	4
1	2	3	4	(37) The program advocates a comprehensive program of physical education designed to improve cardiovascular fitness, coordination, agility, and strength.	1	2	3	4
1	2	3	4	(38) The middle school physical education program emphasizes lifelong physical activities such as dance, movement, and leisure-time activities.	1	2	3	4
1	2	3	4	(39) The program provides teachers and specialized professionals who are readily available to offer assistance to middle school students.	1	2	3	4
1	2	3	4	(40) Counselors coordinate support services and serve as a resource to teams, teachers, and for classroom activities.	1	2	3	4

Please continue on to Part II on the next page.

Appendix B

Perceived Roadblocks Survey

Perceived Roadblocks
Part II

Listed below are several factors which could be considered "roadblocks" to successful implementation of "essential elements" of developmentally responsive middle schools. Please indicate the degree to which each factor has or not been a roadblock to the implementation of these elements in your school.

FACTOR:	Not a Factor	Moderate Factor	Serious Factor
(41) Collective bargaining agreement	1	2	3
(42) Deficient communication among administrative levels	1	2	3
(43) Inability to obtain funding	1	2	3
(44) Inability to provide teacher time for planning of professional development	1	2	3
(45) Insufficient space and physical facilities	1	2	3
(46) Lack of competent administrative assistance	1	2	3
(47) Lack of competent office help	1	2	3
(48) Lack of data about student skills and styles	1	2	3
(49) Lack of data on program successes or failures	1	2	3
(50) Lack of district-wide flexibility (all schools conform to same policy)	1	2	3
(51) Lack of knowledge among staff regarding programs for middle level students	1	2	3
(52) Lack of time for myself	1	2	3
(53) Long-standing tradition in the school/district	1	2	3
(54) Parents apathetic or irresponsible about their children	1	2	3
(55) Pressure from the community	1	2	3
(56) Problem students (apathetic, hostile, etc.)	1	2	3
(57) Regulations or mandates from state or district governing boards	1	2	3
(58) Resistance to change by staff	1	2	3
(59) Resistance of Superintendent or central office staff	1	2	3
(60) Teacher tenure	1	2	3
(61) Teacher turnover	1	2	3
(62) Time required to administer/supervise extracurricular activities	1	2	3
(63) Time taken by administrative detail at the expense of more important matters	1	2	3
(64) Too large a student body	1	2	3
(65) Too small a student body	1	2	3
(66) Variations in the ability and dedication of staff	1	2	3
(67) Other:			

Please continue to Part C on next page

Appendix C
Demographic Questionnaire

**Demographic Questionnaire
Part III**

Please provide the following information as it relates to you in your present position by circling or providing the appropriate response.

- (68) I am a(n) (1) Teacher (2) Administrator
- (69) My sex is: (1) Female (2) Male
- (70) My age is: _____
- (71) What is your ethnicity? _____
- (71) My current teaching certificate is: (1) Emergency
(2) Elementary
(3) Secondary
- (72) Degree earned: (1) Baccalaureate Degree
(2) Master's Degree
(3) Doctorate Degree
- (73) Please identify the number of years of middle school teaching/administrative experience you have, including this year. _____
- (74) Please state the number of hours of professional training you have in middle level education. _____

Thank you for your participation in this study.

Appendix D

Permission to use

Middle School Questionnaire of Essential Elements (MSQE²)

604 Sweeney Creek Loop
Florence MT 59833
(406) 273-0587

August 13, 2000

Ms. Judith T. WonPat
c/o USD Missions Crossroads
5998 Alcala Park
San Diego CA 92110

Dear Ms. WonPat,

In the clamor and confusion of my recent relocation, I inadvertently misplaced your earlier correspondence and accompanying address; hence the delay in getting a formal, written response to your request for permission to incorporate the Middle School Questionnaire of Essential Elements in your proposed study of administrative and faculty perceptions of middle level practices in Guam middle schools. I trust that, despite my tardiness, you have proceeded with your research and this correspondence satisfactorily addresses the need for formal written permission to use the MSQE².

I wish you well with your research and this scholarly pursuit. If I can be of any further assistance, please contact me at the enclosed address. I look forward to reviewing your findings.

Best wishes,

Mark W. Neill, Ed.D.

Appendix E

Permission to use Perceived Roadblocks Survey

Hotmail Folder: Inbox

Page 1 of 3

MSN Home Hotmail Web Search Shopping Money People & Chat Passport

Keep up on the news that interests you...

Hotmail® mykids1st@hotmail.com

Inbox Compose Address Book Folders Options

Messenger Calendar Help

Folder: Inbox

From: "Konikow, Phyllis" <konikowp@principals.org> [Save Address](#) - [Block Sender](#)To: 'Judith WonPat' <mykids1st@hotmail.com> [Save Address](#)

Subject: RE: Need Permission

Date: Wed, 27 Jun 2001 14:53:22 -0400

Reply Reply All Forward Delete Previous Next Close

Dear Ms. WonPat:

Bob Farrace, Associate Director for Publications, has told me that we do not have any additional copies of the survey in which you are interested, nor do we have instructions or an evaluation. However, if you have a copy of the survey, we are able to grant permission to make copies of it and to use the it as follows:

Permission is granted for your use of NASSP materials as specified below. This is a one-time only permission. Future requests must be repeated. Please credit material appropriately. Please add to credit line: "For more information concerning NASSP services and/or programs, please call (703) 860-0200."

Michelle Lampher, Publisher, NASSP

-----Original Message-----

From: Judith WonPat (mailto:mykids1st@hotmail.com)

Sent: Wednesday, June 27, 2001 10:22 AM

To: konikowp@principals.org

Subject: RE: Need Permission

Hello Ms. Konikow,

I finally found the information. It is a book titled Leadership in Middle Level Education, Vol. I. A National Survey of Middle Level Leaders and Schools, NASSP, Valentine, Clark, Irvin, Keefe & Melton. I believe the year was 1993.

I hope this helps.

Judi

>From: "Konikow, Phyllis" <konikowp@principals.org>
 >To: 'Judith WonPat' <mykids1st@hotmail.com>
 >CC: "Franklin, Josephine" <franklinj@principals.org>
 >Subject: RE: Need Permission
 >Date: Tue, 26 Jun 2001 09:35:04 -0400

>

>Dear Ms. WonPat:

>I am sorry I cannot be of more help to you, however, we cannot distribute

.../getmsg?curmbox=F000000001&a=829457b35befb3a21e3b7b961f13d4ac&msg=MSG9936676/28/01

Appendix F

Permission to conduct survey from Guam Department of Education

Rosie R. Tuimatonga
Superintendent of Education

DEPARTMENT OF EDUCATION

P.O. Box DE
Agaña, Guam 96932
Tel: (671) 475-0457
Fax: (671) 472-5003

Nerissa Bretania-Shafer, Ph.D.
Administrator
Research, Planning & Evaluation

August 27, 2001

Senator Judith T. Won Pat
POB 2246, Hagatna, Guam 96910

RE: Approval to Conduct Research

Dear Senator Won Pat:

Hafa Adai! I am happy to inform you that Guam Department of Education has granted approval of your request to conduct research on the status of Guam's middle schools. This is a project that is not only a matter of interest to our island educators, but one that will provide information which will help improve the delivery of instructional services to our students. Please ensure that your completed paper contains the following statements:

"The research activity, which is the subject of this report, has been authorized by the Guam Department of Education. However, the opinions expressed herein do not necessarily reflect the position of the Department, and no official endorsement by the Guam Department of Education or the Government of Guam should be inferred. The author accepts full responsibility for the contents of this document."

Also note that nowhere in the final report should reference be made to specific schools or divisions in which the participants work. Finally, the Department of Education requires at least 1 copy of the completed report. Please submit the copy to the Administrator of Research, Planning and Evaluation.

We look forward to the successful completion of your research. Please contact me at 475-0514 if I could be of assistance to you. Thank you for making Guam's middle schools the focus of your dissertation.

Sensepamente,

NERISSA BRÉTANIA-SHAFFER, Ph.D.

I agree to the aforementioned conditions for conducting this study.

JUDITH T. WON PAT

8/29/01
DATE

COMMONWEALTH NOW!

Appendix G

Letter to participants

November 15, 2001

Dear Colleague:

I am Judith T. Won Pat, a doctoral candidate with the University of San Diego under the direction of Dr. Fred Galloway. As part of the doctoral program requirement, I am conducting a study on Guam's middle schools. The purpose of this study is to measure the importance that teachers and administrators give to the essential characteristics of middle schools, and the extent to which these characteristics have been implemented. This study will also identify teachers' and administrators' perceptions of barriers preventing the implementation of those characteristics in Guam's public middle schools. Finally, this study will ask for demographic information.

The survey instrument was developed from an analysis of the National Middle School Association's Developmentally Responsible Middle Level Schools (1995) and from other middle level scholars. This survey includes a list of statements that reflect essential middle school characteristics.

I need your help, knowledge and expertise in completing the survey. There are no potential risks. Anonymity and confidentiality will be assured. Participation is voluntary and will take approximately 15-20 minutes of your time to fill out the survey. Please know that refusal to participate will not jeopardize your job or status in the school or the department. A copy of the study will be provided to the Department of Education, and upon request, results will be made available.

There is no agreement, written or verbal, beyond what is expressed in this letter. Participation in this research waives or releases the University of San Diego or its representative, including the researcher, from liability in connection with the research.

You indicate your voluntary agreement to participate by completing and returning the survey. Your candid answers and time in providing information will be greatly appreciated. If you have any questions regarding the study, call me at 472-3586/7 or leave a message with Toni or Jennifer. Please complete survey, insert in envelop and turn in to your team leader who will turn it in to the office for pickup.

I would like to thank you in advance for your participation, cooperation and dedication in enhancing middle school education.

Senseramente,

Judith T. Won Pat