This investigation was a two stage study performed in two urban/rural communities in Washington State. Stage I was an effort to replicate a study performed in an eastern Virginia school district whereby results were obtained demonstrating that 9th graders and black students identified teacher warmth behaviors as being important teacher characteristics more frequently than did 12th graders and white students (Sizemore, 1979). As there has been little research conducted at the kindergarten through twelfth grade levels regarding student attitudes about teacher characteristics, Sizemore's findings prompted replication.

Stage II involved expanding Sizemore's original design by introducing three affective variables for analysis, namely, students' global self-esteem, students' in-school locus of control perceptions, and students' in-school self-esteem. The instruments used for measuring these affective variables were Rosenberg's Self-esteem Scale, a modified version of Clifford and Clearys' Academic Achievement Accountability (AAA) locus of control measure, and a version of Rosenberg's self-esteem
scale modified to measure in-school self-esteem. Self-esteem and locus of control variables were included because they offered some potential for explaining why students cited teacher warmth behaviors as important teacher characteristics.

Stage I -- replication results -- Half of Sizemore's findings were replicated. Analysis of variance demonstrated that black 9th and 12th graders in two Washington State rural/urban communities and a Virginia urban school district cited teacher warmth behaviors as the most important teacher characteristics significantly more frequently than white students. White students identified teacher organization significantly more frequently than black students. Twelfth graders identified teacher stimulation behaviors more frequently than 9th graders.

Stage II -- results -- A stepwise multiple regression analysis produced three statistically significant, but weak, predictors of students citing teacher warmth as the most important teacher characteristics: students' in-school locus of control externality (in-school externality correlated positively with students citing teacher warmth); ethnicity (black students cited teacher warmth significantly more frequently than white students); and students' low in-school self-esteem (students low in in-school self-esteem cited teacher warmth behaviors more frequently than those with high in-school self-esteem).
Students' Perceptions of Teacher Characteristics; How These Perceptions Relate to Student Self-Esteem and Locus of Control Perceptions

by

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I. INTRODUCTION

Need for and Purpose of the Study

Few, large scale, formal studies seeking student input about teaching practices, qualities, or characteristics have been conducted at the kindergarten through twelfth grade levels of education. Most educators and researchers have all but forgotten students as a potential, direct source of information regarding these concerns. This is a curious phenomenon. It seems logical that since students are the focus of the teaching/learning process, their input would be valuable regarding teacher practices, techniques, styles, and characteristics. However, the tendency for educators and researchers has been to seek information about teacher attributes from other educators or formal theoreticians. Whatever information seeking procedures researchers have employed to examine teacher qualities and characteristics, it seems more than a little short-sighted to have ignored students as a primary source of information about teachers and the learning process. Consequently, a need has existed to seek students' input about teacher characteristics and to build on the few studies which have been conducted in this area. The purpose of the present study has been to address this need by replicating one of these few such studies already performed and by expanding on its design.
Specifically, Stage I of the present investigation was an effort to replicate a study performed in an eastern Virginia urban school district (Sizemore, 1979). The investigator asked 9th and 12th grade black and white students to describe in their own words the most significant differences between those effective and ineffective teachers with whom they were enrolled in the two years prior to the study. Both the procedures and the findings of Sizemore's study prompted replication. The procedures were appealing because they satisfied the need discussed above: by design student input about teacher characteristics was obtained directly from the students. The statistically significant findings were intriguing because they revealed that specific student groups, organized on the basis of ethnicity and grade levels, perceived certain teacher characteristics to be more effective than others in helping the students to learn. A discussion of Sizemore's research design and findings is presented below.

Procedures of Eastern Virginia Study

As mentioned above, the students were asked to describe characteristics of effective and ineffective teachers with whom they had previously been enrolled. They were asked to do so on the assumption that impressions of others are formed in terms of qualities felt to be important by the perceiver (Sizemore, p. 2). It was hypothesized that different students would perceive teacher qualities differently because students possess different individual needs, and certain teacher qualities would be important to some students and unimportant to others. An equal number of black, white, 9th, and 12th graders was selected from
each secondary city school and administered a modified version of the Personnel Decision Analysis developed by Alan Brown (1964). This procedure required the students to select their three "best" and three "worst" teachers from each of the past two years and state what they felt was the most important difference between each good and bad teacher. Through this process each student identified in his own words 18 distinctive, important teacher behaviors or qualities. Though limited by the students' vocabulary and imagination, the investigator felt that the data generated through this procedure accurately reflected the students' perceptions of teachers. The students' responses were then organized into the three categories of teacher behaviors identified by Ryans (1960): teacher warmth (including such factors as being nice, friendly, caring, fair); organization (including clarity of explanation, preparation, class control and operation); stimulation behaviors (involving varying instructional techniques, conducting interesting lessons, being stimulating and enthusiastic). Analysis of variance was used to interpret the data.

**Findings of Eastern Virginia Study**

The study revealed that in this Virginia school district 9th graders and black students cited teacher warmth behaviors as the most important teacher characteristics ($p < .001$) more frequently than did 12th graders and white students who listed teacher organization ($p < .016$, $p < .001$) and stimulation behaviors ($p < .001$, $p < .001$) more frequently (ibid, p.3). These results raised two questions: 1) what was significant about these 9th graders that as a group they perceived teacher warmth as the most important teaching dimension? 2) what was
significant about these black students as a group that, regardless of grade level, they too, perceived teacher warmth behaviors as being the most important? If we accept Brown's assumption (1964) that characteristics perceived important in others are perceived so because of attitudes, needs, or problems felt by the perceiver, then what was significant about these 9th graders and black students as a group in relation to teacher warmth was of the nature of needs, attitudes and/or problems. In other words, since, according to this research, teacher warmth was generally the most important teacher quality to the 9th graders and blacks as groups, then these findings, by Brown's assumption, imply that these groups needed teachers to be caring, friendly, understanding, and fair before they needed them to be instructionally organized or intellectually stimulating, i.e., they needed positive emotional stimulation first.

The questions, then, should be more precisely stated to read: what was significant about these 9th graders and black students that they more strongly felt the need for teacher warmth behaviors before they felt the need for other teacher attention?

An examination of students' attitudes and characteristics was another purpose of this project because it was felt that such an examination might help to explain these student tendencies. In Stage II of this project Sizemore's study design was expanded to include three affective variables for consideration because they offered some potential for answering these questions.

Stage II - Introduction of New Variables:
Global Self-esteem, In-school Locus of Control, and In-School Self-esteem
Self-esteem (SE)

Psychological theory and research offer some information and constructs from which to formalize assumptions, to hypothesize, and formally organize procedures to pursue these questions. Self-esteem and self-esteem research offer some potential for explaining the tendencies students have in perceiving teacher warmth as the most important teacher characteristics. Rosenberg (1979) reports from self-esteem research that:

(Research) results show a general pattern of self-concept disturbance in early adolescence. Compared to younger children, the early adolescent has become distinctly more self-conscious; his picture of himself has become more shaky and unstable; his global self-esteem has declined slightly; his attitude toward a number of the specific characteristics which he highly values has become less positive; and he believes others view him less favorably. (p. 229)

This pattern of self-concept disturbance during adolescence, i.e., an increase in self-consciousness, a decrease in global self-esteem, a heightened concern that "others view (them) less favorably," suggests that adolescents are psychologically and emotionally vulnerable to persons of authority who are in a position to criticize. Rosenberg pinpoints the most disturbing period to be that of 12-14 years of age. Ninth graders are either still in that period or at least seeking stability having just been through it. In either case empirical evidence suggests that 9th graders are vulnerable to criticism, and teachers are in positions to be critically evaluating student behavior and performance on a daily basis. In light of this vulnerability, teacher warmth behaviors become the most important teacher characteristics to 9th graders as a group because, to the student, teacher warmth perceptually
means that the teacher is personally accepting of the student, and any evidence of personal acceptance makes it easier for the student to cope with daily criticism and evaluation. Regarding late adolescence, Rosenberg states:

Whereas the early adolescents show a heightened self-consciousness and a greater degree of instability of the self-picture, this self consciousness and instability levels off in later adolescence....In the case of global self-esteem (there is) an improvement in later adolescence marked enough for the youngsters from age 15 up to score more favorably than the 8-11 year olds. The older adolescents show more higher global self-esteem than both the young children and the early adolescents. (p. 227)

Rosenberg adds in a footnote that "earlier studies (Engel, 1958; Piers and Harris, 1964), have also shown an increase in self-esteem among senior high school students." (p. 240)

From this perspective it makes sense that 12th graders as a group would no longer feel that teacher warmth is the most important teaching dimension. In general, they have recovered from the most psychologically disturbing period (12-14), their global self-esteem is actually better than before this period, and they are more capable of coping with criticism. Hypothetically, they are more aware of teacher organization and are ready for increased intellectual stimulation.

But what about black students as a group? What is significant about them that they should tend to retain the perception that teacher warmth is the most important teacher quality? Rosenberg's study was conducted in Baltimore schools and neighborhoods which present a multicultural sample. Black students were among the subjects of Rosenberg's findings and they experience the same period of disturbance in early adolescence and the period of late adolescent recovery. By our previous logic, why should they not also respond in later grades to teacher characteristics as do white students?
Black students present a more complex set of circumstances because of their minority status in our culture. On the one hand, contrary to popular and scholarly literature, empirical evidence indicates that minority group members on the whole do not hold themselves in low regard nor do they personalize stereo-types (Rosenberg, p. 70). On the other hand, in dissonant racial contexts (i.e., blacks operating in a dominant white environment) minority members have lower self-esteem. Rosenberg compared results of black adolescents attending segregated and desegregated schools in Baltimore. Those attending predominately black junior high schools demonstrated a higher self-esteem than those attending integrated junior highs. The results were even more extreme at the senior high level. Rosenberg recounts the confusion surrounding self-esteem among black students when he reports that, in spite of performing better academically, blacks in senior high school integrated schools suffer lower self-esteem than blacks in segregated schools:

Academic performance again illustrates the power of the context to affect self-assessment. In Baltimore, black secondary children attending predominantly white schools obtained somewhat better marks than those in predominantly black schools...Since academic success is generally associated with higher self-esteem, one would expect them to have higher self-esteem. But though their school marks were higher than the marks of black children in segregated schools, their self-esteem was lower. (p. 117-118)

With respect to the Virginia study one can surmise from the description of the study design that perhaps the schools in that district presented a dissonant racial context for those black students enrolled. If this is the case, these students by pattern operated with less self-confidence than the white students sampled, and a sensitivity to teacher warmth extending beyond the 9th grade is understandable in that
Student self-esteem, then, may be potentially an important variable when examining students' perceptions of teacher characteristics. One purpose of this project was to assess self-esteem levels among those sampled in the replication effort. Since the students sampled were enrolled in both racially dissonant and consonant settings, an assessment of global and contextual self-esteem was appropriate for purposes of comparison.

Locus of Control (LOC)

Another purpose of this research was to examine locus of control as a possible student characteristic which influences student feelings about the relative importance of different teacher qualities. Locus of control is defined as a person's perception of the factors controlling his circumstances in various situations. If a person has an internal locus of control orientation, he is said to perceive himself as being in control of his own circumstances. If he is externally oriented, he perceives that forces outside of himself control his situation (external locus of control). For this study locus of control was of interest because as a theoretical construct it presented a possible explanation as to why some students or student groups may perceive teacher warmth behaviors to be the most important teacher qualities. It seems reasonable to speculate that if a person feels competent and in control of his circumstances in a situation, he will also be more apt to feel good about himself in that same situation and be less dependent on others for personal acceptance and self affirmation. Phares (1976) speaks to this notion when he describes locus of control as a "situation-specific expectancy that is aroused by the nature of cues in the situation." (p. 37)
The basic notion to be emphasized here is that if people construe outcomes of their behavior in certain specific situations as chance-determined, outside their personal control, or otherwise unpredictable, the stage is set for several important consequences. Most fundamental is the fact that the regularities of the past cannot be relied upon in the future. The effects on learning are considerable. Equally serious are the debilitating affective responses that may ensue. Such reactions are the understandable outgrowth of a perceived lack of control -- an awareness that one's efforts to cope with the world are not effective. (p. 37)

If the teacher is perceived to be the major control figure in the classroom whereby the students' perceive their academic success or failure to rest with the intellectual, academic, and classroom authority of the teacher, it seems likely that the students' affective response would be to need their teacher to be caring, friendly, understanding, and fair first, for their personal affirmation and self-esteem, before they need their teacher to be anything else. In other words, if students don't feel in control of their classroom circumstances (academically or socially in control), being treated warmly, i.e., being "accepted" by the teacher (the control figure), could become very important to the student's personal affirmation and self-esteem.

Black students, white students, ninth graders and twelfth graders each face different circumstances in the classroom. For black students perception of control could depend a great deal upon the extent to which the classroom environment is dissonant: the more dissonant the context, i.e., the more conflicting the social and cultural values are in the setting, the less the person feels in control; hence, the greater the need for the teacher to be warm, caring, understanding, etc. Ninth grade students are typically enrolled in highly structured, highly controlled settings. Twelfth grade students generally enjoy considerably more freedom, independence, and responsibility in and out of school
(generally, they have more total academic and social options) than 9th graders. The extent of school/teacher control at different grade levels hypothetically should affect students' perceptions of locus of control and could influence their perceptions of the importance of different teacher qualities.

The purpose, then, of introducing locus of control as a variable was to examine the degree to which student locus of control perceptions were related to the students' respective grade levels and ultimately to their perceptions of teacher qualities.

**Summary of Purposes**

A need exists to seek students' perceptions of teacher qualities and characteristics. Educators have sought other educators for theory, advice, and practical suggestions, and they have conducted many experimental studies to determine which teacher behaviors are generally and specifically effective; however, educators have failed to seek in a systematic way students' input about which teacher characteristics are the most important and effective from the students' standpoint. Little research in this area has been conducted and more studies are needed. The main purpose of this proposed project was to replicate one of these few studies already performed and to expand on its design.

The purpose in extending the design was to introduce three independent variables not formerly examined. The original study performed in an urban school district in eastern Virginia yielded statistically significant evidence that 9th graders and black students in general perceived teacher "warmth" behaviors to be the most important teacher characteristics, and 12th graders and white students, while citing
teacher warmth more frequently than teacher organization or stimulation behaviors, felt teacher organization and stimulation behaviors to be more important than did 9th graders and black students. In addition to attempting to replicate these findings in eastern Washington State, the intention here was to examine the following variables in relation to the students' perceptions of teacher characteristics: 1) students' global self-esteem; 2) students' self-esteem in a school setting; 3) students' locus of control perceptions at school. It was felt that an examination of various independent variables such as these would provide a description of factors or circumstances which could possibly influence students' perceptions about teacher characteristics. These particular ones were chosen because of their potential (theoretical) relationship(s) to the hypothetical need(s) felt by 9th graders and black students that teachers should be understanding and caring first before they are instructionally organized or intellectually stimulating.

Summary of Variables Examined

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
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<td>Students' perceptions of teacher characteristics, specifically, teacher warmth, organization and stimulation behaviors</td>
<td>a. Demographic--b. Affective variables--</td>
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<td>1) Grade level</td>
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<td>2) Ethnicity</td>
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<td>3) Sex</td>
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Hypotheses Tested

$H_{01}$: Of the 9th grade, 12th grade, black and white students to be surveyed, the 9th graders will not identify teacher warmth behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than 12th graders.
$H_{a1}$: Of the 9th grade, 12th grade, black and white students to be surveyed, the 9th graders will identify teacher warmth behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than 12th graders.

$H_{o2}$: Of the 9th and 12th grade black and white students surveyed, the black students will not identify teacher warmth behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than the white students.

$H_{a2}$: Of the 9th and 12th grade black and white students surveyed, the black students will identify teacher warmth behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than the white students.

$H_{o3}$: Of the students to be surveyed, 12th graders will not identify teacher organization behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than the 9th graders.

$H_{a3}$: Of the students to be surveyed, 12th graders will identify teacher organization behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than the 9th graders.

$H_{o4}$: Of the students to be surveyed, white students will not identify teacher organization behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than black students.

$H_{a4}$: Of the students to be surveyed, white students will identify teacher organization behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than black students.

$H_{o5}$: Of the students to be surveyed, 12th graders will not identify teacher stimulation behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than 9th graders.

$H_{a5}$: Of the students to be surveyed, 12th graders will identify teacher stimulation behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than 9th graders.

$H_{o6}$: Of the students to be surveyed, white students will not identify teacher stimulation behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than black students.
Ha_6: Of the students to be surveyed, white students will identify teacher stimulation behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than black students.

Ho_7: No significant relationship exists between students' low global self-esteem scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

Ha_7: A direct, positive relationship significant to the .05 level of confidence exists between students' low global self-esteem scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

Ho_8: No significant relationship exists between students' low in-school self-esteem scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

Ha_8: A direct, positive relationship significant to the .05 level of confidence exists between students' low in-school self-esteem scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

Ho_9: No significant relationship exists between students' high in-school external locus of control scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

Ha_9: A direct, positive relationship significant to the .05 level exists between students' high in-school external locus of control scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

Ho_10: No significant relationship exists between 9th and 12th grade boys' and girls' perceptions of teacher characteristics and their relative importance.

Ha_10: A relationship significant to the .05 level exists between 9th and 12th grade boys' and girls' perceptions of teacher characteristics and their relative importance.

Ho_11: Of the students to be surveyed, 9th grade students will not, at the .05 level of significance, register higher in-school, external locus of control scores than 12th grade students.

Ha_11: Of the students to be surveyed, 9th grade students will, at the .05 level of significance, register higher in-school, external locus of control scores than 12th grade students.
Assumptions of the Study

The following assumptions were inherent in this research project:

1. It was assumed that the findings of the eastern Virginia study would be replicated in eastern Washington: 9th graders and black students would perceive teacher warmth behaviors to be the most important teacher characteristics more frequently than 12th graders and white students; 12th graders and white students would perceive teacher organization and stimulation behaviors to be the most important teacher characteristics more frequently than 9th graders and white students.

2. Brown (1964) has theorized that impressions of others are formed in terms of qualities felt to be important by the perceiver, i.e., that characteristics perceived important in others are perceived so because of attitudes, problems, or needs felt by the perceiver. It was assumed that students perceive various teacher qualities to be important because of specific needs the students feel, attitudes they hold, or problems they are experiencing in the school setting.

3. Students who have high global self-esteem may have low self-esteem in a situation-specific setting like school. It was assumed that students with low in-school self-esteem, regardless of global self-esteem, ethnicity, grade level, or sex, would be more likely to identify teacher warmth behaviors as being the most important teacher qualities.

4. Students at the ninth grade level are just beginning to rebound from the most emotionally disturbing period of a school-aged person's life (12-14 years of age). It was assumed that they are still emotionally vulnerable to criticism from persons in positions of
authority; consequently, they are apt to identify teacher warmth behaviors as being the most important teacher qualities more frequently than they identify other teacher characteristics.

5. Students at the 12th grade level typically have higher global self-esteem than they did even before the emotionally disturbing period of 12 to 14 years of age. Consequently, it was assumed they are less vulnerable emotionally to criticism from persons in positions of authority, generally less dependent on others for self-affirmation than early adolescents, and less apt to identify teacher warmth behaviors as the most important teacher characteristics.

6. Students experience highly structured, highly controlled circumstances at the 9th grade level. Teachers and school officials are 'in command,' and students are typically constrained by a myriad of school rules, regulations and discipline procedures. Their daily schedules are regimented from the beginning of the day to the end. On these bases, it was assumed that the ninth graders were likely to have external locus of control perceptions in school and they would be more in need of teachers to be caring, understanding and fair before they would need them to be instructionally organized, or intellectually stimulating.

7. Students at the 12th grade level generally experience greater freedom within the daily school schedule and more academic, social, and work options overall. It was assumed that 12th graders would be more locus of control internal than 9th graders and less apt to identify teacher warmth behaviors as the most important teacher characteristics.
8. Black students in racially and culturally dissonant school settings experience lower global self-esteem; consequently, it was assumed these students would be more dependent on teachers to be warm and accepting of them as persons and students. In spite of their respective grade levels, these students would be more apt to identify teacher warmth behaviors as the most important teacher qualities.

9. Black students enrolled in racially dissonant school contexts are more apt to have stronger external locus of control perceptions within the school setting. The assumption was that these students would need teachers, who represent the control in the situation, to be caring and fair before they would need other kinds of teacher attention in order for the students to feel like they could function on an equal basis.
II. REVIEW OF RELATED LITERATURE

Educators typically have not sought student input about teacher characteristics or teaching techniques. Professionally we have known little of how students feel about the effectiveness of different teaching practices, styles, or personalities. One purpose of this investigation was to replicate one of the few studies already performed which focused on student perceptions of teacher characteristics. Sizemore (1979) found that 9th graders and black students identified teacher warmth behaviors as important teacher characteristics significantly more often than did 12th graders and white students. A discussion of Sizemore's study including a description of the design and a summary of the results was presented in chapter one.

The other purpose of this investigation was to expand on Sizemore's study design by including an examination of the sampled students' global self-esteem perceptions, their in-school locus of control perceptions, and their in-school self-esteem perceptions in relation to their tendencies to cite teacher warmth behaviors as important teacher characteristics. It was hypothesized that these attitudinal variables could help to explain why some students cite teacher warmth behaviors more frequently than other students. A discussion of these new variables was also presented in chapter one including a rationale for their inclusion in this study based on specific research conducted by Rosenberg (1972, 1979) and theory as presented by Rotter (1966) and Phares (1976).

The purpose of this chapter, then, was to review the research related specifically to: (1) student evaluations of teachers and teacher characteristics; (2) generally confirmed relationships between locus of control (LOC) and self-esteem (SE) perceptions; and (3) confirmed rela-
tionships between SE and LOC perceptions as they pertain to black and white students in particular.

This chapter was organized to include reviews of appropriate research in as cohesive and expeditious a manner as possible.

Stage I --
Student Evaluations of Teachers, Teacher Characteristics, Teacher Practices

To review the research related to student evaluations of teachers and teacher characteristics, an Educational Resources Information Center (ERIC) computer search was conducted in April of 1982. The descriptors used for cross referencing were: student evaluation of teachers; teacher characteristics; teaching styles; student self-esteem; and student perceptions of teachers. Of the 4,769 total individual citations represented by these five descriptor phrases, 135 were listed by the computer when the descriptors were cross referenced and combined.

The bulk of the research related to student evaluation of teachers has been conducted at the post-secondary level. Ninety-seven of the 135 references listed by ERIC were studies designed for the college, junior college, or graduate levels of education. Only thirty-eight of the 135 references were studies conducted at either the elementary, junior high, or high school levels.

The research items chosen for this review were selected because they substantively dealt with student attitudes about and perceptions of teacher characteristics, teacher qualities, teacher personalities, or teacher styles. Only eleven were reviewed. Most of the studies were not appropriate to this investigation because they focused on unrelated concerns, either topics of too narrow a focus (e.g., "Student Evaluation
of Teacher Performance in a Multi-section Graphics Course") or topics too general for the purposes of the study (e.g., "How Student Ratings Contribute to the Decline in Quality of Higher Education").

The eleven research projects reviewed here are categorized and organized in the following fashion:

1. one junior high level study;
2. four cross-level studies (elementary, junior high, and/or high school levels all represented in the same investigation);
3. one high school study;
4. five college level research projects.

Student Evaluations of Teachers: Junior High Level

Wright and Saunders (1976) surveyed 1200 junior high students in a "typical rural/urban southwestern community" to determine if the students could agree on which teacher qualities characterize "good" or "competent" teaching. The investigators had the students respond to three categories of questions: academic characteristics, personality traits, and physical characteristics. Wright and Saunders concluded that junior high students do tend to agree on what makes teachers good instructors even though the students from their sample represented various ethnically and culturally different groups of people (Anglo Americans, Mexican Americans, and Black Americans):

What have these junior high school students said? They seemed to say most of all, "We want good teachers." Grade levels, achievement levels, and even ethnic extractions tend to disappear in the consistency of responses between such ordinary groupings. The agreements are major; the variations are minor. They rather consistently want a friendly person who tells them what they do wrong, is dependable, likes all students, and understands each individual. They want a person who is clean and neat, who participates in their activities, and who has the energy to do all these things...(From the data) they do not appear to be confused or biased. (p.64)
Their findings tend to be consistent with Sizemore's findings which indicate that 9th graders as a group (of junior high students) prefer teacher "warmth" behaviors over teacher organization or intellectual stimulation behaviors, i.e., they prefer their teachers to be "friendly" and "understanding" first before they want them to be organized or stimulating.

**Student Evaluations of Teachers: Multi-levels -- Elementary, Junior High, and High School**

Marjorie Johnson (1976) surveyed a cross section of 1800 students from the Philadelphia area regarding teacher effectiveness. The students represented all social, racial, economic, and age groups in that area. They ranged in age from 5 to 18 years of age and were asked to write as much or as little as they wanted (or talk or draw if they were younger or inhibited by writing) about two sets of questions:

Think of some good teachers that you have had. What made them good? How did they help you to learn? What kinds of things did they do or say?

What do teachers do that turn you off in the classroom? What is it that they do that makes it hard to learn from them? Is it what they say? Is it what they do? Be specific.

Johnson summarized her results by saying:

What students said about teachers confirms that they have strong feelings about what helps and what hinders them in the learning situation. There was a remarkable consistency shown from age level to age level, from low achieving groups to high achieving groups, from economically deprived areas to quite affluent ones.

It's apparent that students of all ages are keen observers of teachers. Often we assume that young children do not really notice or care how the teacher looks, dresses, speaks. Contrary to this notion, the pupils frequently mentioned physical attributes. Further, they showed clearly that they do observe and assess the myriad evidences of the teachers' attitudes.

Finally, it was clear that students want teachers to be good observers. They want their teachers to pay attention to their
needs, to understand their problems, to share their successes and to treat them openly, fairly, and with respect. In essence, the students said that the affective is more important than the cognitive; that personal, human qualities ultimately outweigh concerns with methods, materials and curriculum. (p. 36)

The results of the survey were reported in anecdotal fashion and nothing in the report indicated that any effort had been made to statistically analyze the students' responses, to categorize or quantify the data. The results, however weak in terms of formal analysis, support the notion that teacher "warmth" is of primary importance to students, students of all ages as this study suggests.

Goebel and Cashen (1979) examined the possibility that students' ratings of teachers are biased because of teacher sex, age, and personal attractiveness. They sampled 150 caucasian students in grades 2, 5, 8, 11, and 13 by having them rate photographs of adult caucasian males and female teachers of different age and attractiveness categories. No other information concerning the pictured teachers was given to the subjects.

Goebel and Cashen report that students' ratings of teachers are indeed biased on the basis of teacher sex, age, and attractiveness:

The results of this study show that students' ratings of teacher performance are biased on the basis of teacher appearance, age, and sex and that these biases are identifiable in student reactions to pictures of teachers with no information as to teacher characteristics and/or performance. It would be comforting to assume that there would be a diminution of these biases as the students' knowledge of teacher characteristics expanded, but there is no basis for such an assumption.

In fact, it appears that a primacy effect is demonstrated (e.g., Anderson, 1965; Asch 1946); that is, the first impression the teacher makes on students influences their future observations in a biased direction. Having formed a belief about the teacher at first sight, the student is less likely to attend the new and contradictory evidence and may even concentrate on information that supports the original impression. Although in the real world actual teacher performance may counteract biases associated with original impressions, the evidence in this study
indicates that older more unattractive teachers begin with a disadvantage.

Across age levels, the consensus obtained in sorting photographs suggests that as early as second grade, students have internalized cultural norms as to age, sex, and attractiveness standards. For teachers these attributes are what sociologists term ascribed characteristics, or characteristics that are based on society's expectations and cannot be changed. (p. 651, 652)

Cangemi (1979) selected a small group of culturally different, gifted, and creative students representing all geographical areas in the United States to complete a survey pertaining to teacher effectiveness. Cangemi was seeking a profile of teacher behaviors which positively and negatively affect this select group of students. The students ranged from 12 to 17 years of age and from 7th to 12th grade. They were also in the top 1 per cent in intellectual functioning in comparison to other students of their same age range in the United States.

Again, nothing in the report indicated that the results were statistically and formally analyzed, even though "standardized questions" were used; however, Cangemi reports that:

Culturally different and socially/economically disadvantaged gifted and creative youngsters appeared to prefer teachers that were happy, enthusiastic, sincere, genuine, complimentary, respectful, encouraging, broad, knowledgeable, understanding, interested, flexible, and warm. In short, they liked teachers with positive attitudes who were creative, who liked and respected students, especially respecting their differences and abilities. They disliked teachers who were poor teachers and who were inflexible, rigid, moody, insensitive, unreasonable, critical, selfish, threatening, fear-creating, petty, dogmatic, uncreative, domineering, and unimaginative. (p. 420)

Patrick (1978) took a different approach than most researchers. Initially, she had a heterogeneous and heterosexual group of 308 junior and senior high black (94), Asian (34), white (92), Indian (16), and Chicano (72) students from different Utah school districts identify their most effective teachers. She then administered the Edwards
Personal Preference Inventory (EPPS) to these effective educators to determine if a pattern of personality variables existed among them. The students merely identified which teachers were effective. Patrick then assessed the effective teachers with the EPPS to establish if personality variables were common to them regardless of the grade level to which they were assigned.

Fifteen personality variables were weighed in the assessment. The 5 variables receiving the highest number or responses from the effective teachers were intraception, change, dominance, nurturance, and affiliation. Patrick summarizes the results:

Clearly the indications are that exemplification of attributes from the first group of (5) clustered means made the teachers more effective in the perceptions of the ethnic sample. Intraception had the highest computed mean. This indicated that the ethnic sample felt that effective teachers exemplified the attributes of this variable more than those of the other variables. This scale evidences the ability to analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to judge people by why they do things rather than by what they do, to analyze the behavior of others, to analyze the motives of others and to predict how others will act (Edwards, 1959, p. 11). (p. 70)

The Change scale taps the subject's desire for new and different things while Dominance assesses his leadership tendencies. Nurtureance focuses on an individual's sense of caring about others. Affiliation delves into his relationship with friends. (p. 69)

By definition, three of the five significant personality variables Patrick isolated could be categorized as "warmth" characteristics (i.e., intraception, nurturance, and affiliation).

**Student Evaluations of Teachers: Senior High Level**

Sex bias in student evaluation of teachers was the focus of an extensive and detailed study performed at the high school level in
Australia (Bernard, Elsworth, Keefauver, Naylor, 1981). The subjects were 363 11th and 12th grade students (136 males, 227 females). The students were given printed statements described to have been made by male and female teachers and were asked to evaluate the statements on the basis of a 7 point scale of "effect," i.e., the students were asked to judge how "effective" the teachers' statements appeared to be to them. The investigators found strong sex bias in the students' evaluations of the teachers' statements.

High school students' impressions and expectancies of teachers were strongly affected by teacher gender. Male teachers were rated as being more intelligent than female teachers. Male teachers were also expected to be more able to individualize instruction and motivate students than female teachers. Positive attitudes toward male teachers were revealed in students' greater willingness to take a course from male teachers and go to male teachers for advice.

(And) there seems to be little doubt that the sex-role behavior of teachers influences the manner in which students appraise teachers as well as their evaluations of teaching performance. As will be seen, sex-role was relatively more important in relation to the evaluation of the teacher's statement. Whereas in previous research (e.g., Harris, 1975) masculinity was viewed more favorably as a teaching style than feminity, the results of the present study suggest that both masculine and feminine sex-role behavior are important teacher characteristics. (p. 688)

Finally, male and female students responded differently in their ratings of teaching performance. Male students were extremely critical of the teaching performance of the teacher who was high in feminine and low in masculine characteristics. Evidently, male students value masculinity as a teaching style more highly than do female students, whereas female students appear to value feminity more highly. The extremely low rating that female students gave to the low masculine and low feminine teacher may indicate that they view masculinity and feminity as more important characteristics of teacher behavior than do male students. The finding that both male and female students rated the teacher with both high masculine and high feminine characteristics highest in overall teaching performance reinforces the view that both characteristics are valued by students.

It is...significant that in terms of the male students' overall appraisal of the (teacher's) statement, feminine sex-role behavior of the teacher prejudiced their ratings. In this particular study, high femininity was devalued more by male than female
students. As such, the findings of previous studies that found
negative relationships between femininity and judgments of
teaching performance are qualified. (p. 689)

The authors reported that previous studies have yielded conflicting
results, i.e., some investigators have established sex-bias in student
evaluations of teachers and some have not. It would seem reasonable to
speculate that sex-bias in any situation is the result of cultural
values and that, conceivably, sex-biased values are stronger in some
cultural settings than in others. In other words it would seem logical
that some researchers would find sex-bias in some settings and others
would be unable to find it in other situations.

**Student Evaluations of Teachers: Post-secondary Level**

Braskamp (1980) analyzed and classified junior, senior, and grad-
uate students' written responses to 4 open ended questions included in a
course evaluation instrument used at the University of Illinois. The
questions asked of the students were: What are the major strengths and
weaknesses of the instructor? What aspects of this course were most
beneficial to you? What do you suggest to improve this course? Comment
on the grading procedures and exams. Results indicate that at the col-
lege level pedagogical concerns are of greater significance to students
than other personal characteristics. Braskamp summarizes:

Students concentrate their comments on only a few dimensions
with two of three comments being about an instructor character-
istic. Based on the content analysis, students focus more fre-
quently on the instructor's pedagogical skills, the ability to
clearly communicate. The next most frequently mentioned dimen-
sion was instructor knowledge of the field followed by more
humanistic and personal qualities of the instructor. (p. 5)

However, even at this level of education, Braskamp's findings
indicate that teacher "warmth" is important. When the students eval-
uated the instructors, they referred to a list of 22 dimensions of instruction before they wrote their own evaluative statements. Only three dimensions of these 22 can be characterized as pertaining to teacher "warmth" and yet "humanistic and personal qualities of the instructor(s)" were repeatedly emphasized by the students when they responded to the open-ended evaluative questions.

At the University of Arizona, Mishra (1980) examined the results of a 23-item teacher evaluation instrument administered to 1650 undergraduate students. He used a multiple regression analysis to produce Pearson and partial correlation figures. The attributes that had the strongest influence on the overall rating of instructors in this setting were: "motivating students for maximum learning, making stimulating presentations, explaining clearly, and accomplishing course objectives." (p. 59)

Each of these attributes is more characteristic of teacher organization and stimulation behaviors. Sizemore, in effect, demonstrated in his eastern Virginia study the pattern that teacher organization and stimulation behaviors become more important to students as they get older: 12th graders cited teacher organization and teacher stimulation behaviors significantly more frequently than did 9th graders. Mishra's findings tend to support this pattern as do Braskamp's results.

The last three college level studies reviewed focus on factors which may bias student evaluations of teachers. Reynolds (1979) assessed 75 first year graduate students for locus of control orientation, social desirability, anxiety, and achievement motivation and correlated these variables with the students' evaluations of their instructors. He found that only one of these four affective variables correlated with
the students' teacher evaluations, namely locus of control (p. < .01): "...students who are more external tend to give negative evaluations of their instructors." (p. 968)

Rich and Bush (1978) found a more complex statistical connection to exist between students' locus of control orientations, their teachers' class control styles, and students' evaluations of their instructors. Fifty-seven upper division and master's degree students at Memphis State University were the sample. The results demonstrated that students of an internal LOC orientation gave more favorable teacher evaluations only if the instructors' teaching styles were characteristically low in control; similarly, students of an external LOC orientation also gave more favorable teacher evaluations only if their instructors' teaching styles were characteristically high in control.

One conclusion to be drawn from Rich and Bush's results is that student and teacher personalities when considered together can be variables which affect student evaluations of teachers.

Hart and Driver (1978) anticipated this problem and hypothesized that, even though certain characteristics are found in teachers who are generally considered effective, students might perceive teachers as being most effective when those teachers are more like them in personality. The authors administered the Myers-Briggs Type Indicator (MBTI) to classify students' and teachers' personalities on the basis of Jungian personality types (introversion-extroversion, sensing-intuiting, thinking-feeling, perceiving-judging). Hart and Driver found that no significant differences existed in the ways different student types rated their teachers.
Summary of Research Related to Student Evaluations of Teachers

The preponderance of research related to student evaluations of teacher effectiveness or characteristics has been conducted at the post-secondary level. Few such studies have been performed at the kindergarten through 12th grade levels. If a generalization can be legitimately drawn from these few existing studies, it would have to be that teacher "warmth" is indeed important to youngsters as they progress through the various grade levels, even up to and through college, and teacher organization and stimulation behaviors tend to become more important to students as they get older as evidenced by Sizemore's results and the few college level studies reviewed here. The fact is that not enough research has been performed in this area at the K-12 grade levels to warrant such a generalization. More work simply needs to be done to obtain students' evaluations of teacher characteristics in grades K-12.

Finally, as more studies are performed, sex-bias should be of concern to the researcher. Enough evidence exists now to focus on sex and sex-role differences as variables in student evaluations of teachers. In addition, other sources of bias should be anticipated like students' and teachers' specific personality characteristics as demonstrated by Reynolds, Rich and Bush.

Stage II --
Relationships Between Locus of Control and Self-esteem Perceptions Among Different Groups

To review the research related to the relationships between locus of control and self-esteem perceptions, two more computer searches were conducted in December, 1982. One was an ERIC search in which the
following descriptors were used: locus of control; self-esteem; self-confidence; and self-concept. The other was a computer search of Psychological and Dissertation Abstracts for which these descriptors were used: self-esteem; self-concept; internal-external locus of control; high school students; junior high students; and ethnic groups. The ERIC computer search produced 291 citations, and the Psychological Dissertation Abstract search produced 51. Of the 342 total citations listed by the two computer searches, 42 were chosen for this review because of their potential and respective relationships to the focus of this study.

The review of this research was organized in part to demonstrate the relationships between locus of control (LOC) and self-esteem (SE) perceptions which have been found to exist across different grade and age levels. The studies were reviewed by the following outline of age/grade levels:

-- elementary level studies (K-6)
-- junior high level studies (7-9)
-- cross level studies (K-12)
-- senior high level studies (9-12)
-- college level/adult studies (post-secondary and beyond)

This review was also organized to demonstrate the relationships between LOC and SE perceptions found to exist specifically among junior and senior high school ethnic minority populations.

Reviewing all of this research in this fashion established the information base and the assumptions on which this investigation was designed, e.g., that locus of control and self-esteem are psychological constructs of potential significance to social, cultural, psychological, or educational researchers and that LOC and SE are constructs of significant potential to researchers interested specifically in adolescent minority population research.
Locus of Control and Self-esteem Perceptions: Elementary Level Studies

Rohner, Rohner, and Chaille (1980) correlated age, perceived parental acceptance-rejection scores (as measured by Parental Acceptance Rejection Questionnaire), and locus of control scores registered on the Nowicki-Strickland LOC scale among 271 9-11 year old middle class boys and girls from Connecticut. Their multiple regression/correlation analysis established that internality (internal locus of control scores) increased significantly with the subjects' age and with their perceptions of increased parental acceptance. (p. 83) They state:

A POST HOC comparison of the differences between children who perceived themselves as accepted and those who perceived themselves as rejected indicates that scores of children who perceived themselves to be accepted (n = 245) increased in the direction of internality between the ages of 9 and 11. Scores of children who perceived themselves as rejected (n = 26), however, did not change between the ages of 9 and 11. (p. 85)

Moyal (1977) investigated various adult symptoms of depression in 5th and 6th grade children (e.g., self-esteem, locus of control, stimulus appraisal, and depressive symptoms). She found that depression in pre-adolescents correlates with an external LOC orientation and low self-esteem. Her data also supports a relationship between LOC internality and high self-esteem (low external LOC scores correlated with high self-esteem scores, r = -.577). Her overall observation was that depression in pre-adolescents is similar to that which adults experience.

As has been found in adults, the variables of self-esteem and depression were strongly negatively correlated. Further, these results are consistent with what Beck (1971) has observed in his patients: the depressed individual tends to distort situations and reach faulty, nonadaptive conclusions. Finally, the relations obtaining among locus of control and the other variables support the theory that an important element of depression is a feeling of helplessness to change the situation (Seligman, 1974). Perhaps this initial helpless feeling differentially
engenders self or externalized blaming responses, according to varying individual and situational factors. Viewed in this way, the relations of all three nonadaptive responses with depression and self-esteem are reconcilable. It appears then that in pre-adolescents, elements of depression are related in a manner similar to that found in adults. (p. 952)

Gordon (1977) examined the relationships between locus of control, self-esteem, and academic achievement among 113 ten year old male (60) and female (53) 4th grade students. He found a significant relationship to exist between an internal LOC orientation, high academic achievement, and high self-esteem.

The predicted relationships between an internal LOC and greater academic achievement obtained, as well as between high self-esteem and greater academic achievement. Academic achievement, as measured by grades or achievement test scores, could be predicted equally well by knowing a child's self-esteem score or LOC score. These personality variables were related to achievement independently of their relationship to each other. These results have recently been replicated with second grade children, and it was found that certain maternal behaviors associated with high self-esteem are also associated with internal LOC in children (Gordon and Wilbur, 1977). Mothers who praised, verbally attended to, and suggested, had children who were high in self-esteem and/or internal. It may be that the socialization of LOC and self-esteem follows similar courses, and that both characteristics are associated with academic competency. (p. 385)

Because research has not consistently produced results like Gordon's, Kanoy (1980) examined a group of academically bright 4th grade children to determine if positive relationships among academic achievement, locus of control, and self-esteem existed at this level and with this type of student. He found that:

Achievers had significantly higher self-concepts than underachievers on the intellectual and school status subscale. In addition, achievers had significantly higher internal locus of control scores than underachievers for the IAR total score and the IAR positive score. No sex differences were revealed for either self-concept or locus of control. (p. 395)
Further:

(The self-concept/achievement data) suggest that a positive relationship between academic achievement and self-concept is most likely to occur with academic self-concept, also found by Kleinfield (1971).

(The LOC/academic data) confirm the positive relationships between locus of control and achievement reported by Messer (1972) and by Duke and Nowicki (1974).

Hertz-Lazarowitz and Sharan (1979) administered self-esteem, locus of control, and classroom climate questionnaires to 1225 Israeli elementary children. These elements of affect served as the dependent variables while grade level, SES, and sex served as the independent variables.

Their data supported their hypothesis. The Israeli children sampled were high in self-esteem and their LOC orientation was significantly internal; however, in contrast to many research results in the United States, this socio-economic group of children perceived classroom climate to be negative. Children of low socio-economic status were low in self-esteem and, as hypothesized, were typically externally oriented, but they perceived classroom climate in a positive light.

Results of this study raised the question about whether these affective variables are situation specific, i.e., are they universal psychological variables or are these psychological constructs significant only in terms of specific cultural or social settings?

Galejs and Stockdale (1980) hypothesized that male and female internals from a sample of 876 midwestern 5th and 6th graders would be significantly "competitive" in relation to their external peers who it was felt would tend to want a more "cooperative" class atmosphere. Contrary to their hypothesis and to the results of other studies, they found that internals preferred a "cooperative" classroom atmosphere as
did the externals. The authors explain their results in this way:

Due to similarities between attributes associated with competitive behavior and internality, a positive correlation was expected between the two variables; however, the opposite relationship was found. Johnson, Johnson, and Bryant (1973) found that children who displayed external locus of control preferred cooperatively structured classrooms, but also concluded that internalizers could adapt to either a cooperative or competitive situation. It might be speculated that the significant relationship between internal locus of control and cooperative environment is preferred by internals but when actual performance or rewards are involved, they will compete. (p. 392)

They did discover that children tend to respond as internals as they get older.

Arlin (1975) examined the interactive effect of classroom structure and students' locus of control perceptions on student attitudes. He assumed that internal 4th, 6th, and 8th grade students would be more comfortable in an "open" classroom setting and feel restricted in a traditionally structured situation; and that externals would be anxious in an "open" situation and feel positive in a structured setting. The sample included 660 students from 30 classrooms in a North Carolina semi-rural county school system. Results indicated that internals were more satisfied with their teachers in general than externals, and they were particularly satisfied with their teachers in open classrooms, especially internal boys.

Of interest to this investigator was the finding that internals tended to be more satisfied with their teachers in general which may mean that students' locus of control orientations may bias their evaluations of teachers.

Kennelly and Kinly (1975) tested a hypothesis based on the assumption that a major determinant of poor academic performance is learned helplessness on the part of the students as prompted by teachers,
parents, and other authority figures who are perceived by the students to punish them regularly with or without cause. The sample was 49 predominantly white, middle class 6th grade boys. The results supported the hypothesis: internal LOC oriented boys perceived their teachers to punish them only with cause and they did achieve significantly better than the externals sampled; the external pupils perceived their teachers to punish students regularly as a matter of daily course. The significance of this study revolves around the students' LOC orientations in relation to how they perceive their teachers and how they ultimately perform academically. It is an intriguing notion to consider external LOC orientation as "learned helplessness." The authors elaborate on the idea.

The...results parallel those of Yates, Kennelly, and cox (1975) with regard to perceived parental reinforcements. Yates, et al., found that perceived contingency of parental punishments but not perceived contingency of parental rewards was related to locus of control. Thus, perceptions of the contingency of aversive events but not pleasant events are related to locus of control and academic competence. (p. 452)

Since perceived contingency of teacher administered (present study) or parent administered (Yates, et al., study) rewards is unrelated to a child's sense of helplessness or locus of control, perhaps rewards, contingent or noncontingent, are not what is needed; perhaps carefully administered punishments are (see also Dweck, 1975 for a similar interpretation). Control of aversive events by a boy may be more important to his sense of mastery and competence than control of pleasant events. (p. 453)

McNab (1974) examined the degrees to which 200 internally and externally oriented 3rd and 4th grade students responded to verbal praise in the classroom. In short, he found that both internals and externals responded favorably to praise about their work, i.e., both types of students improved in performance when praised by the teachers. This was contrary to the hypothesis which was based on formal LOC
theory. Theory characterizes externals as persons who have difficulty making the connection between their own behavior and its reinforcements; consequently, McNab assumed the externals sampled would not respond to praise as readily as internals. In effect, the internal subjects were different than the externals in only one respect: they maintained their level of performance. This effect would suggest that, contrary to theory, at least in a classroom setting, externals rely on praise to function, i.e., on the one hand their performance improves with positive reinforcement, on the other it drops with its removal. In his conclusion McNab maintained that locus of control was not significantly related to the increased performance following positive reinforcement supplied by the teachers:

Locus of control, as measured by the Intellectual Achievement Responsibility (IAR) questionnaire, was not significantly related to increased coding performance following reinforcement, as both ILC and ELC subjects significantly increased coding performance following reinforcement. (p. 787A)

Unfortunately McNab missed the significance of his study. What is important about his results is the fact that the externals dropped in performance in the absence of praise. LOC was significantly related to performance, but in a way McNab did not anticipate nor see. It is important for educators to know that internals and externals both respond to positive reinforcement. It is of even greater importance to establish that externals, in particular, need reinforcement to maintain their performance.

McNab's findings were significant to this investigation in that his externals responded to teacher praise ("warmth") as it is assumed the subjects of this investigation have and will (see discussion of LOC in chapter one). It was speculated here that externally oriented students
need and respond to personal warmth from the controlling figure (the teacher) in an externally controlled classroom (as perceived by the student) in order to function successfully.

Locus of Control and Self-esteem Perceptions: Junior High Level Studies

Shavit and Rabinowitz (1978) conducted a study similar to McNab's at the junior high level. They arranged for specific lessons to be presented to 117 middle-low class Israeli children and by design gave or withheld specific performance feedback at different stages of the process. In addition, they administered Miller's CLOEC instrument (Children's Locus of Evaluation and Control scale) to identify the internals and externals in the sample. Shavit and Rabinowitz achieved results similar to McNab's.

The findings indicate, as hypothesized, that both internals and externals experienced similar pleasant feelings after receiving positive results and similar unpleasant feelings after failure feedback, which implies that the value of positive results remained equal for internals and externals. For both internals and externals, there was a clear difference in the change of self-estimation between those receiving failure feedback, success feedback, and no feedback. Thus, the effects of feedback on the subjects' feelings and standards of judgment were similar for internals and externals.

However, the results suggest that after failure feedback, internals increased their efforts during subsequent task performance, relatively more than in the other conditions, and their perceived competence did not decrease. On the other hand, externals, after a failure feedback in comparison to the other conditions, gave no indication of increased effort to improve during second performance, and their perceived competence decreased. It appears that internals perceived failure outcomes as resulting partly from insufficient effort or from an unstable-controllable factor and that it was possible to improve results in second performance by increasing effort, whereas externals believed that failure outcomes reflected a lack of ability or was determined by a fixed uncontrollable factor and thus it was beyond their power to improve subsequent performance. (p. 270)
Their evidence suggests that junior high externals, along with elementary externals, also need teacher acceptance or recognition from the teacher to feel positive about the classroom setting and to perform successfully.

Cole (1981) researched depressive symptomatology among 32 ten to sixteen year old delinquents in Toronto, Ontario. Rationale for his study was based on research conducted by Dweck and Rappucci (1973) and theory by Seligman (1975):

The work of Seligman suggested that learned helplessness or depression can be induced either empirically or environmentally. Further, this learned helplessness produces changes in emotional, cognitive, and behavioral characteristics of individuals. Dweck and Rappucci found that children placed in a failure-induced situation failed to problem-solve later when given solvable puzzles. (p. 880)

Cole administered a battery of instruments to his subjects including the Children's Depression Inventory, the Piers-Harris Self-Concept Scale, and the Nowicki-Strickland Locus of Control Scale. His results showed significant relationships between depressive symptoms, low self-esteem and external LOC orientation for this group of asocial adolescents.

Prawat (1976) administered four widely used instruments of affect to 885 middle class, middle school students to determine if sex differences in attitudes and performance existed among them, if developmental trends could be identified across grade levels, and if relationships existed among the instruments. Coopersmith's Self-Esteem Inventory, the Bialer locus of control instrument, Herman's Presatie Motivatie Test of Achievement Motivation, and the Defining Issues Test (a moral development instrument) were used for this investigation.
Female subjects in this study evidenced greater affective stability than males which is contrary to research conducted at higher grade levels. Females in this study tended to be more academically motivated, their self-concept scores were more positive, and they were more LOC external than the male students. Prawat explains this result by saying that "this (effect) supports the earlier conclusion that females of this age range are not yet subject to the social pressures relating to motivation and success which have such an impact on senior high-aged and college-aged females." (p.570)

Prawat's study also produced positive relationships between locus of control and self-esteem scores for both males and females. If the students were LOC internals, they tended to have high self-esteem. If they were externals, they had lower self-esteem.

Byun (1976) reports that locus of control and self-esteem are constructs with universal application. He assessed 600 ninth grade Korean male and female students for LOC orientation, self-esteem, reinforcement history, and academic achievement to see if significant relationships existed among the affective variables and the student's achievement levels. He used two sets of instruments for each of the attitudinal variables to ensure that the instruments used were reliable. He generalizes that:

The variables under investigation were primarily American in concept and history. They were adapted operationally for use in a cultural, educational, and social system with somewhat different values and priorities. The results of the study demonstrated the universality of meaning of the psychological constructs of Locus of control, self-esteem, and history of reinforcement. Relationships among these motivational variables and with IQ and achievement were similar to those obtained in research in the United States. Some important cultural differences were found, however. Particularly noteworthy were significantly higher self concept scores for boys than girls and a tendency for girls to be more external in locus of control.
This was attributed to traditional sex typing in oriental societies. (p. 2733-A)

Locus of Control and Self-esteem Perceptions: Cross-level Studies (Grades K-12)

Prawat, Jones, and Hampton (1978) conducted a longitudinal study of 392 pre-, early, and late adolescent students regarding changes in these students' self-esteem, locus of control, and academic achievement attitudes. They administered a battery of locus of control, self-esteem, and academic achievement instruments in pre- and post-test fashion one year apart: Nowicki-Strickland LOC Scale; Coopersmith's SE Inventory; Herman's Presatie Motivatie Test. Their results did not support their hypothesis that early adolescence is a time of dramatic attitudinal and perceptual change.

Contrary to our expectations, subjects in the early adolescent group did not evidence greater longitudinal change in self-esteem, locus of control, or achievement motivation when compared with subjects in the younger and older groups; nor was our hypothesis regarding the importance of early adolescence supported by the pattern of group differences. Thus, the expected discontinuity in response across groups was not nearly as conspicuous as thought. (p. 368)

They continue:

Changes in internal-external locus of control were more marked for the younger group; changes in achievement motivation were more marked for the older group. Although sex differences were not of major interest in this study, it is obvious that they play an important role in the development of attitudes and perceptions. (p. 368)

Finally, they caution researchers about making generalizations related to developmental trends in adolescents:

On the basis of our results, it does appear that important changes in attitudes toward achievement occur during adolescence. Girls were more achievement motivated than boys, early adolescents were less achievement motivated than preadolescents, and there was an age-related increase in the amount of intra-individual variation associated with the achievement motivation construct.
It also appears that other attitudes or perceptions have their own timetable for development as well. For instance, changes in attitudes concerning one's ability to manipulate the environment undergo greatest change during preadolescence, all of which suggests that great caution must be exercised in making general statements about the developmental "stages" examined here. (p. 369)

In 1979 Prawat, again, in collaboration with Grissom and Parish examined affective development of 499 children grades 3 through 12. This effort was an attempt to cross validate the findings of Prawat, Jones, and Hampton (1978) reviewed above. They followed the same procedures as employed in the 1978 study. Results of this study closely parallel the findings of the 1978 investigation, e.g., "...girls and boys differ in affective behavior, with girls evidencing less externality, higher scores in achievement motivation, and more academic predictability than males." (p. 47) They also found with this sample of students as with the 1978 sample that, contrary to hypothesis, early adolescence is not the most eventful time for affective changes to occur.

Finally, one of their results is of particular significance to this investigation in that it tends to support the assumption and hypothesis that 12th graders will have a significantly higher internal LOC orientation than 9th graders:

Although the middle school group showed a sharp decrease in externality, the older group evidenced an equally impressive decline in external control. Thus, while early adolescence appears to represent a significant period in development, it is not the only one marked by important change in affect. (p. 46)

Piers (1977) examined 297 male and female students from the 6th and 10th grade levels to determine if relationships existed between children's self-esteem levels, their certainty of self-esteem appraisal, and their willingness to accept or reject intellectual achievement responsi-
bility (locus of control). The sample was taken from an eastern city suburban school district. Basically, she found that acceptance of responsibility for success and acceptance for responsibility of failure relate to self-esteem in different ways:

Apparently the more strongly convinced a child is of his lack of self-worth, the less he is able to attribute success to internal factors. By the same token, the more strongly convinced he is of his self-worth, the more he takes responsibility for success. (p. 302)

In assuming responsibility for failure, on the other hand, a high degree of certainty, particularly in the sixth grade, was related to the tendency to externalize regardless of the level of self-esteem. It is possible that defensiveness was the common element here, being involved both in the tendency of the younger children to reject responsibility for failure, and their insistence on certainty in their self-attitudes. (p. 303)

Piers' conclusion is that attribution theory (locus of control theory) needs to be modified to account for discrepancies in the findings of various studies and the theory:

Results of this study lend considerable support to those of Weiner (1972) that acceptance of responsibility for failure involve very different motivations and attributions. All the locus of control data might well be re-examined in the light of these differences. The findings also suggest that supporters of attribution theory itself might profit from the examination of self-esteem as a motivating variable of some power, whose effects cannot be fully accounted for under their present theory. (p. 303)

Willey (1978) assessed 121 elementary and junior high students for locus of control, self-esteem and other student characteristics before and after the students had been tutored daily for a six week period in language arts. Relationships between LOC and SE were established on a pre- and post-test basis, the relationships growing stronger with the tutoring. Self-esteem scores actually increased more than LOC scores by the end of the six week period. Specifically, internality was related to higher self-esteem as supported by numbers of other studies.
A sample of 541 Catholic high school students were administered Rotter's I-E scale, the Academic Interest Measures--Educational Testing Service Survey (AIMS--ETS), and a demographic questionnaire as part of a study designed to examine LOC internality and externality in relation to students' life goals (Zerega, 1972). Zerega found that the internals and externals were differentiated on their life goals. He stated that "the internal group rated health, security, peace of mind, having friends, building a better world, and being recognized as competent as significantly more important than externals." (p.8) He also found that older students were more internal than the younger ones which adds support to the hypothesis of this study that 12th graders are significantly more internal than 9th graders.

Ingram (1972) tested 105 high school level Upward Bound participants and 155 non-participants to determine if differences in LOC and SE perceptions existed between the two groups after the participants had been enrolled in the program for a summer. He found that the Upward Bound treatment did help to improve the participants' self-esteem and LOC orientations in relation to the non-participants; but more importantly, he too discovered that the older students in general were more internally oriented than the younger ones and, consistent with LOC theory, accepted more responsibility for their own failures.

In his efforts to explore the effects of students' locus of control orientations, self-esteem levels, and their perceptions of school morale on student achievement, Salazar (1977) discovered residually that internals and externals differed in their perceptions of school morale. Internals had significantly more positive perceptions of school morale
than did externals. This finding implies that researchers should consider including LOC as an affective variable when conducting research related to student evaluations of school programs, operations, and school personnel.

In a paper presented to the Southeastern Psychological Association, Conger and Constanzo (1976) outlined the basic results obtained from the National Longitudinal Study of the High School Class of 1972 (NLS). In scope of sample and procedure, the NLS was fashioned somewhat after the classic EEOP research conducted by Coleman, et al (1966). The NLS investigators used a shortened, 4-item form of Rosenberg's SE scale, the 4-item LOC instrument developed for the Coleman report, a demographic questionnaire, a questionnaire related to post-secondary work and educational plans, and other survey items. In 1972 they assessed a randomly selected, ethnically and sexually mixed group of 23,000 high school seniors from across the nation. They conducted 4 follow-up studies by 1976 regarding the ex-students' LOC, SE, and their work and post-secondary educational plans and activities. The data was subjected to multiple regression analysis for correlations and variance analyses among variables.

The findings from this study, pertinent to the present investigation, are outlined below. In short, significant relationships between LOC and ethnic background were established for this large sample as well as a significant point that LOC and SE are subject to change due to life experiences. They report:

Just focusing on locus of control the results may be summarized as follows:

There is a small difference among males and females with males tending to be more external. This difference tended to diminish
over time. This fits with previously documented differences (cf. Crandall, Katkovsky and Crandall, 1965).

Whites were substantially more internal than either blacks or Hispanics—a difference well established by prior research (Battle and Rotter, 1963; Franklin, 1963; Graves, 1961).

Low socio-economic status persons were more external than middle or high SES persons with the latter two being slightly different (high SES most internal). Franklin and Battle and Rotter cited this result in the early 60's (Battle and Rotter, 1963; Franklin, 1963). (p. 7)

Commenting on longitudinal effects they state:

In all of the above—nothing was said about differences over time. This was not an oversight. There simply were no major changes among subgroups—the trend was for Base-Year differences to be slightly attenuated 1 1/2 years later—but the differences were still there. One would believe that locus of control (and the same was observed for self-esteem) is a relatively stable variable over time—but as we shall see momentarily such a conclusion is not only premature it is invalid.

Turning to groups classified on the basis of activity states during 1973, we can see a slightly different picture: study only, study and work, military, homemaker, looking for work, and undefined or other activities (e.g., travel). (p. 8)

Most of these groupings showed normative changes, i.e., became slightly more internal over the 1 1/2 year interim; however, two significant deviations are worth noting. Those who entered the military became substantially more internal. They also manifested a large increase in self-esteem. The looking-for-work group by contrast became more external—the only group to do so—they likewise showed a relative loss in self-esteem. (p. 9)

On the basis of this observation, Conger and Constanzo caution researchers:

Apparently, life experiences can significantly moderate perceived locus of control—but an additional point can be made. The observation that locus of control (and also self-esteem) is significantly and meaningfully modified by life experiences—indicates that these variables are not stable if groups are formed on the basis of dynamic variables (e.g., life activities). This relates back to the illusion of stability manifested by the grouping of persons on the basis of static variables (e.g., sex, ethnicity, parental SES, and ability). The implication of these results in clear: the investigation of score or construct stability should certainly involve those variables which theoretically or hypothetically are related to changes in the construct under investigation: simply using
static classifiers or not using any other variables can produce the illusion of constancy. (p. 9)

For the purposes of the present study, the National Longitudinal Study results and the authors' observation substantiated the procedure to include SE and LOC as variables in examining students' perceptions of teacher characteristics. Sizemore originally included only ethnicity, sex, and grade level in his examination which are static demographic variables. It was assumed that the inclusion of LOC and SE could help to explain why Sizemore's black students and 9th graders cited teacher warmth behaviors as important teacher characteristics more frequently than did white students and 12th graders, etc.

Locus of Control and Self-esteem Perceptions:

Post-secondary Level Studies

Behuniak and Gable (1981) used the NLS study as a model to perform a longitudinal study of college students. Specifically, they used the short LOC and SE instruments originally developed for the massive NLS study to examine the differences in LOC and SE observed over time among "changers" and "persistors" in six college majors. They hypothesized that students' SE would become more positive and their LOC orientation would become increasingly more internal as they approached graduation. Their results supported their hypothesis.

The data from the current study suggest that even the expectation of advancing status and earnings, and the perception of increased competencies associated with approaching graduation, can significantly affect students' self-concept and locus of control. The consistently large jump in scores just prior to graduation (1976 data) attests to the impact of these expectations. (p. 9)

They also concluded that LOC and SE scales should be designed specifically to the academic setting to generate results more sensitive
to the needs, feelings, and perceptions of student samples.

Although the factor analysis and reliability results for the short composites used in this study compare reasonably well with other generalized measures, such as Rotter's (1966) LOC instrument, a measure more sensitive to an academic environment could achieve greater success at uncovering differences between groups. (p. 10)

This observation is also consistent with Lefcourt's (1976) experience:

If one wishes to use the perception of control as a powerful predictor, then it will most always be profitable to design one's own assessment devices for the criterion of interest. This is similar to stating that people are not so much to be characterized as internals and externals as they may be said to hold internal and external control expectancies about different aspects of their lives. (p. 153)

The results of Behuniak and Gables' study tend to support this investigator's hypothesis that high school seniors will have a more internal LOC orientation than 9th graders because they are more in command of their school and general life circumstances. Secondly, their observation about designing situation-specific affective assessment instruments supports the procedure of this investigation to use SE and LOC devices designed specifically for the school setting.

Bhagat and Chassie (1978) conducted a study to determine the relationships between LOC, task-specific SE, prediction of academic performance, program satisfaction, and personal life satisfaction for a group of 137 undergraduates in a major southwestern university. They predicted that high task-specific self-esteem (TSSE) students would perform better, be more satisfied with their studies and lives in general than those low in TSSE. They also predicted that internals would perform better and be generally more satisfied than externals. First, a relationship between TSSE and LOC significant to the .01 level was produced:
internality and high TSSE correlated. Secondly, their results supported their hypotheses:

All in all, the hypotheses relating to the role of these two individual difference variables in the differential predictions of performance, program satisfaction, and life satisfaction found strong empirical support.

and...

The findings on effects of the locus of control variable are strongly supportive of an earlier study carried out by Broedling (1975) which showed that people's perception of their environmental influence had effects on their attitudes and their behaviors. Individuals who perceive themselves to be in reasonable control of their environment (i.e., the internals) tend to be relatively better performers, report greater task-role satisfaction and are generally more well-adjusted with their lives compared to those who perceive themselves to be in poor control of their environment. Thus, the findings are in accordance with social learning theory predictions (Rotter, 1966). (p. 324)

Assuming these relationships would hold in a high school setting, the degree of student satisfaction in school and/or the degree of internality or externality could conceivably affect students' evaluations of their teachers.

In one of the first studies designed to correlate LOC and SE, Heaton and Duerfeldt (1973) hypothesized that high self-esteem among college undergraduates would positively relate to a high degree of LOC internality and self-reinforcement (SR). Their results supported a strong relationship between LOC and SR, i.e., internals were high in self-reinforcement, externals were low in SR. The relationships were mixed between SE and LOC which led the authors to conclude that SE instruments may measure specific aspects or elements of self-esteem rather than reflect a more generalized global self-esteem. They conclude:

Since locus of control was found to be related to SR, and SR was found to be related to SE, it is not too surprising to discover that a person's level of SE is related to where he perceives his
locus of control to be. The present results indicate that degree of externality is positively correlated with level of SE. As with the above correlations involving SE measures, only two of the correlations between locus of control and SE reached statistical significance, and this again argues for the conception of differing aspects of SE being estimated from different measures. (p. 11)

In a more recent study, Evans (1980) discovered that LOC and SE relationships are complex as Heaton and Duerfeldt projected. Evans hypothesized that vulnerable self-esteem internals and externals would react more defensively than more secure self-esteem (congruent) internals and externals to negative feedback in a college setting. He used Rotter's I-E scale and the Marlowe-Crowne Social Desirability Scale to measure LOC and defensive tendencies among the 108 undergraduates sampled.

His design and findings are provocative because he achieves a statistical distinction between vulnerable self-esteem and secure self-esteem among both internals and externals. Here-to-fore, the tendency for researchers has been to think of internals as secure in self-esteem and externals as having vulnerable self-esteem because of the numbers of studies which have found statistical relationships to exist between high self-esteem and internality and low self-esteem and externality.

Secondly, his results are particularly interesting because they demonstrate that, at least for his sample, it is the degree of self-esteem vulnerability or strength, not LOC internality or externality, which mediate how the subjects respond to negative feedback or threatening circumstances.

Evans' findings demonstrate that the relationships between self-esteem and locus of control are considerably more complex than most researchers have considered them to be over the years.
Finally, in 1982 Geist and Borecki proposed that individuals' social discomfort is indicative of their respective LOC orientations and SE levels. They administered the SAD questionnaire (Social Avoidance Distress), Rotter's I-E scale, and the Janis-Field Personality Inventory to 143 University of Alaska undergraduates. The authors' results supported their hypotheses:

As predicted, the students who rated high on the SAD scale tended to perceive themselves as externally controlled and manifested a low level of self-esteem. On the contrary, those Ss with a low rating on SAD viewed themselves as internally controlled and experienced a high level of self-esteem. Ss with moderate SAD scores, correspondingly, fell between the other two groups on internality-externality.

They speculate further:

It is possible that a higher level of self-esteem would enable an individual to perceive social situations as less threatening, and the individual therefore would be more likely to approach a social situation. However, an individual with low self-esteem would feel less confident in the ability to interact with others, which would result in an avoidance of social situations. A person who feels that rewards are externally controlled would not risk being in a situation that would increase feelings of powerlessness. The individual who feels in control of situations, however, would not experience social interactions as threatening. (p. 612).

Locus of Control and Self-esteem Perceptions: Black/White Minority Research

The National Longitudinal Study previously reviewed established that significant differences in LOC and SE perceptions existed among minority and caucasian populations for the high school class of 1972. However, research in this area is contradictory and tends to indicate that ethnic comparisons related to affective variables is complex and sometimes confounding. Smith (1979) has attempted to review minority research to determine if affective patterns exist specifically among blacks and whites. She reports on research related to a variety of
developmental areas including: academic achievement, creativity, achievement motivation, locus of control, self-concept, personality, aspirations, and attitudes and beliefs.

Regarding locus of control, she reports that Battle and Rotter (1963), Lessing (1969), and Zytkoskee, Strickland, and Watson (1971) all found differences in LOC between white and black youths. Battle and Rotters' results showed middle class white youths to be more internal and lower class black youths to be more external. Lessing found that black students had weaker feelings of personal control than whites, but his effect disappeared after I.Q. was controlled. Zytkoskee, Strickland and Watson, following similar procedures to Lessing's, found that 145 ninth graders in urban high schools also showed significant differences in LOC orientation: whites were more internal than blacks. By Smith's review, the literature tends to support the NLS study.

Regarding self-esteem, Smith describes the findings of 7 different studies conducted during the 14 year period from 1965 to 1979. Of the seven, she reports that six established blacks as having significantly higher self-esteem than whites at various levels:

<table>
<thead>
<tr>
<th>Year</th>
<th>Investigators</th>
<th>Student Sample</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>McDonald and Gynther</td>
<td>black and white high school seniors in segregated urban schools</td>
<td>blacks were higher in self-dominance and self-love than whites</td>
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<tr>
<td>1968</td>
<td>Wendland</td>
<td>685 black and white 8th graders in North Carolina</td>
<td>blacks had higher SE on Tennessee Self-Concept Scale</td>
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<td>1970</td>
<td>Powell and Fuller</td>
<td>614 black and white students, grades 7-9, in segregated and integrated schools in a central southern city</td>
<td>blacks had higher SE; blacks in segregated schools had higher SE than those in integrated schools</td>
</tr>
<tr>
<td>1972</td>
<td>Ellis</td>
<td>120 seventh graders in Florida</td>
<td>race was not a factor in self-esteem</td>
</tr>
<tr>
<td>Year</td>
<td>Investigators</td>
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<tr>
<td>1972</td>
<td>Dales and Keller</td>
<td>black and white adolescents in impoverished areas in North Florida</td>
<td>blacks' SE scores on Bills Index of Adjustment were higher, particularly in 9th and 12th grades</td>
</tr>
<tr>
<td>1973</td>
<td>Rosenberg, Rosenberg, Simmons</td>
<td>2600 black and white students in Baltimore, MD., grades 3-12</td>
<td>black SE was higher across all grade and levels before and after SES was controlled</td>
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<tr>
<td>1979</td>
<td>Tidwell</td>
<td>193 tenth grade blacks and whites from 46 high schools in Los Angeles, California</td>
<td>blacks had higher SE on Piers-Harris and Learner Self-concept measures; no racial differences obtained for LOC or other affective variables.</td>
</tr>
</tbody>
</table>

(This chart compiled from information reported by Smith in Journal of Negro Education, Vol. XLIII, No. 3, 1979)

In effect, these studies' findings contradict Coleman's EEOP report and the NLS results in terms of black and white self-esteem.

In summary, Smith speaks to the most recent trends in cross-ethnic research findings:

One can see certain trends developing over the past twenty years. Locus of control and achievement motivation are the most often studied variables and the results appear promising. Second, self-concept research appears to be yielding findings at variance from previous research and from the stereotype of black youth. The most recent results indicate that black students do not have a negative self-concept nor do they have a lower self-concept than white students. The interpretation generally being offered is that the self-concept of black youths is undergoing a positive change as a result of the emphasis on black awareness and pride, racial heritage, and positive achievements of the civil rights movement.

The change in self-concept suggests that other psychological variables associated with academic achievement may also be expected to change, thus yielding in the long run changes in achievement. Presumably, black youth are externally oriented, at least to some extent, because their social experiences tend to confirm the belief that their fate is largely determined by events beyond their control. As society becomes more responsive to the evidence of injustice, to the requirements of law, and to
the expressed grievances of citizens, black youths may begin to exhibit a shift toward internal orientation. (p. 323)

Finally, she states that cross-ethnic research to-date is not very extensive and, consequently, not conclusive enough on which to make definitive professional decisions:

Perhaps the single most surprising observation which emerges from this summary is the relatively small amount of cross-ethnic research which exists. The large volume of opinion and popular literature, with its confident tone, would lead one to believe that there is a large research data base on which this literature rests. The paucity is especially pronounced in the field of social science research. There remains much to be done before educators, policymakers, and persons in the public service are able to act on the basis of carefully researched fact rather than stereotype. (p. 323)

The rest of the review of black/white minority research is organized similarly to the previous sections of this chapter: elementary level studies (2), multi-level research (1), high school level research studies (1), and college level research projects (1). The "trends" which Smith describes are not quite as clearly defined by these studies as by those she reviewed.

Elementary Level Minority Research:
Black/White SE and LOC Relationships

Burbach and Bridgeman (1976) studied the relationship between SE and LOC among 274 5th graders in an urban Virginia school district. The Coopersmith SE Inventory and the Intellectual Achievement Responsibility Questionnaire were used to assess SE and LOC orientations. The data was differentiated on the basis of sex and race. Only one significant difference in LOC orientation and SE obtained by race: white males of high self-esteem accepted blame for their academic failures whereas all other sex and race categories did not. Though significant to the .05 level,
the authors note that the relationship between LOC and SE was weak for their sample:

Perhaps even more interesting than the relationships observed is the general lack of relationship between these two variables. In no case is more than 16% of the variance in locus of control scores linearly accounted for by self-concept scores, and scattergrams failed to reveal any non-linear trends. Thus, a good self-concept is only slightly related to accepting personal responsibility for success, and except for white males, is unrelated to a willingness to accept blame for failures. (p.37)

As a followup to several years of bussing in a large midwestern city, Gerken (1980) examined SE and LOC among 299 elementary students grades K-6 in a specific target school. She administered the Piers-Harris SE scale, the Nowicki-Strickland I-E Scale for Children, Clifford's revised Academic Achievement Accountability Questionnaire and then differentiated the data by the following student categories: black opt-out students (those choosing to attend a school outside of their neighborhood); white opt-in students (those outside of the neighborhood choosing to attend the target school); neighborhood whites; and neighborhood blacks. Gerken found that the opt-out blacks, regardless of grade level, were more externally oriented than the opt-in whites and that the black neighborhood children and 3rd and 4th graders as a group (regardless of ethnicity) had self-reported higher self-concepts than the other groups.

Multi-level Minority Research: Black/White SE and LOC Relationships

Harms (1977) sampled 2,983 5th graders and 1,957 11th graders from 27 Colorado school districts to determine if "Learner Self Concept" and LOC perceptions differed among black, white, Chicano, and Indian students. "Learner self-concept" was defined as the "confidence in one's ability to learn the things that schools are trying to teach." (p.
Harms developed the student self-report instruments which were administered as part of the 1973 Colorado Needs Assessment Project. No significant differences existed in SE and LOC for whites, blacks, and Indians. Chicano students showed a significant decline in learner self-concept (LSC) between grade levels. Blacks and whites showed an increase in LSC from the 5th grade to the 11th grade. No significant ethnic differences in internality obtained, although whites showed a decline in internality across grade levels.

High School Level Minority Research: Black/White SE and LOC Relationships

Ducette and Wolk (1972) sampled 289 11th and 12th grade students from an all-black ghetto school, 192 11th and 12th graders from a predominantly white, middle class high school, and 186 11th and 12th graders from an all white, college preparatory high school in an affluent suburb to the same city. The authors sought to determine if there were differences among these student bodies in LOC orientations and occupational aspirations. The finding pertinent to the present study was that no significant differences in LOC orientations were generated for the three different socio-economic level student bodies. Their LOC means and standard deviations and their percentages of internals and externals were all the same. (Rotter's I-E scale was used to generate the data.) This result is dramatically contrary to most LOC research.

College Level Minority Research: Black/White SE and LOC Relationships

Barbarin (1975) conducted a study whereby 40 black and 40 white college undergraduates were assessed for self-esteem and then subjected
to a series of memory tasks about which contrived negative and positive feedback were given. As hypothesized, no significant differences in global self-esteem were found as measured by the Tennessee Self-concept Scale. No differences occurred either in terms of actual performance on the memory tasks, but the self-evaluations following negative feedback were significantly different for black and white males and females. The white males sampled were far less affected by negative feedback than either blacks in general or white females. Black males in particular decreased in performance by 50% following the negative feedback.

Barbarin points out that self-esteem or other self-report affective measures need to be designed in terms of specific situational circumstances in order to measure the desired effect of affect. He summarizes:

It is important that the distinction be made between report of self-evaluation that occurs in a context of specific feedback and one which does not. Choice of one procedure over the other may determine whether racial differences will be found. (p. 33)

This is especially true in situations where research uses as measure of self-esteem a single dimension and when that dimension, for example, academic behavior, has been subjected to a long history of negative or positive external feedback. It would be clearly misleading to infer that an individual's self-evaluation is characterized by the level of self-evaluation on that single dimension. As a rule, it makes sense to talk about a specific area of self-evaluation rather than risk the danger of distortion in generalizing too readily on the basis of limited data.

In summary, on the basis of these data, there appears to be little basis for ascribing to race differences in global self-esteem. On the other hand, Blacks and Whites do respond differently in the presence of negative external feedback. It is suggested that these differences between Blacks and Whites in self-evaluation is attributable to differential expectation and feedback provided to Blacks and Whites by the larger social system. (p. 34)
Summary of Research Related to Self-esteem and Locus of Control Perceptions Across Grade Levels and Among Black and White Students

Five observations pertinent to the present study can be made from this review of locus of control and self-esteem research. These observations fall into two categories: 1) locus of control and self-esteem as affective variables; and 2) procedural considerations related to locus of control and self-esteem.

Locus of Control and Self-esteem as Affective Variables

A. Many studies related to self-esteem and locus of control, performed across grade and age levels, have shown relationships to exist between these two affective variables. Most have demonstrated high self-esteem to be related to LOC internality and low self-esteem to be related to LOC externality:

<table>
<thead>
<tr>
<th>Elementary Level</th>
<th>Jr. High Level</th>
<th>Cross-level (K-12)</th>
<th>Post-Secondary</th>
</tr>
</thead>
</table>

Others have demonstrated that SE and LOC are related, but more complexly so than originally thought and reported. Piers (1977) found that for sixth graders a strong self-esteem did not necessarily mean that they would accept responsibility for their own failures (theoretically, acceptance of responsibility for failure is a trait of LOC internals). Prawat, Jones and Hampton (1978) and Prawat, Grissom, and
Parish (1979) found that self-esteem and locus of control among adolescents was less predictable than is commonly believed and expressed in professional literature. Evans (1980) established that LOC internals and externals both could have secure and vulnerable self-esteem perceptions.

Whether simply or complexly related, self-esteem and locus of control as psychological constructs have been demonstrated to offer some potential for examining student behavior and attitudes. The research reviewed here has provided support to consider locus of control and self-esteem as viable affective variables.

B. Students' locus of control perceptions have been demonstrated to relate to their perceptions of teacher/student interaction. In one study, externals perceived themselves to be punished regularly by teachers as a matter of daily course, whereas, internals perceived themselves to be punished only when they deserved it (Kennelly and Kinley, 1975). In another study, internals were generally more satisfied with their teachers than externals (Arlin, 1975). And in two others (McNab, 1974; Shavit and Rabinowitz, 1978), internals and externals responded differently as groups to teacher praise and negative feedback.

C. Locus of control internality has been demonstrated to increase with age (older students tended to be more internal than younger ones): Zerega (1972); Ingram (1972); Prawat, Grissom and Parish (1979); Behuniak and Gable (1981).

D. The body of affective research comparing blacks and whites is limited and conflicting. More minority research in general is needed as well as research comparing blacks and whites specifically. Secondly,
more is needed whereby affective measures are designed to meet either
to a series of memory tasks about which contrived negative and positive
circumstances of specific cultural situations or designed to account for
cultural differences like differences in language and values.

Procedural Consideration Related to Locus of Control and Self-esteem

E. Several researchers — namely, Behuniak and Gable (1981), Heaton and
Duerfeldt (1973), Conger and Constanzo (1976), and Lefcourt (1976) —
have found that instruments measuring global feelings are inadequate to
analyze attitudes in specific settings. They recommend that instruments
measuring affective variables like LOC and SE be designed to account for
the circumstances found in the situations, i.e., that the instruments be
situation-specific rather than global in design.

This concludes a review of research pertinent to this study. In
summary, this chapter was organized to review the research related
specifically to: (1) student evaluations of teachers and teacher char-
acteristics (this section summarized on page 28); (2) generally
confirmed relationships between LOC and SE perceptions; and (3)
confirmed relationships between SE and LOC perceptions as they pertain
to black and white students in particular.
III. DESIGN OF THE STUDY

This Chapter deals with four topics related to the design of the investigation: 1) population and sample; 2) survey design; 3) measuring instrument; 4) treatment of data.

Population and Sample

The populations consisted of 9th grade and 12th grade black and white students enrolled in the Yakima and Pasco school districts each located in two different cities 85 miles apart in eastern Washington State. The Yakima School District serves 800 9th graders and 700 12th graders while Pasco serves 385 9th graders and 390 12th graders. Percentage of white and black enrollment at each grade level and in each school district is presented below:

<table>
<thead>
<tr>
<th>YAKIMA</th>
<th>9th grade total enrollment</th>
<th>PASCO</th>
<th>12th grade total enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>9th grade total enrollment</td>
<td>385</td>
<td></td>
</tr>
<tr>
<td>40 (5%)</td>
<td>black enrollment (8%)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>730 (79%)</td>
<td>white enrollment (71%)</td>
<td>272</td>
<td></td>
</tr>
<tr>
<td>130 (16%)</td>
<td>other enrollment (21%)</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>700</td>
<td>12th grade total enrollment</td>
<td>390</td>
<td></td>
</tr>
<tr>
<td>27 (4%)</td>
<td>black enrollment (10%)</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>603 (86%)</td>
<td>white enrollment (68%)</td>
<td>265</td>
<td></td>
</tr>
<tr>
<td>70 (10%)</td>
<td>other enrollment (22%)</td>
<td>87</td>
<td></td>
</tr>
</tbody>
</table>

To be consistent with the eastern Virginia study procedures, an equal number of black and white, male and female, 9th and 12th grade students was selected. The sample consisted of the following numbers selected randomly from both school districts. Approximately the same total number of students was surveyed from each city (i.e., 80).

<table>
<thead>
<tr>
<th>9th graders</th>
<th>12th graders</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 female black students</td>
<td>20</td>
</tr>
<tr>
<td>20 male black students</td>
<td>20</td>
</tr>
<tr>
<td>20 male white students</td>
<td>20</td>
</tr>
</tbody>
</table>
Since the black student populations in both cities were considerably smaller than the respective white student populations, about 75% of all of the black students enrolled in both school districts was sampled. Approximately every fourth person was selected from an alphabetical listing of Yakima and Pasco black students and eliminated from the sample. The remaining students listed served as the black student sample at both the 9th and 12th grade levels.

Though most of the 9th and 12th grade black students from these two school districts were surveyed, the total number of black students from which it was possible to sample was small; consequently, it must be noted here that results obtained from this black student sample may have been limited by the sample size.

The 9th and 12th grade white student sample included approximately every 17th student selected from an alphabetically organized listing of 9th and 12 grade white students from both districts.

**Survey Design**

The survey procedures involved several steps: A. administering a modified version of the Personnel Decision Analysis developed by Alan Brown (1964) to obtain students' specific perceptions of good and bad teaching characteristics; B. administering a combination of Rosenberg's Self-Esteem Scale (RSE) and a modification of the same to assess both the students' global and in-school self-esteem perceptions; C. administering a locus of control instrument, the Academic Achievement Account-
ability Questionnaire modified for the secondary level, to assess students' locus of control perceptions in the school setting.

A. Students' Perceptions of Teacher Characteristics --

Brown's Personnel Decision Analysis was modified to enable the students to differentiate between "good" and "bad" teaching characteristics. The students were asked to select their three best and three worst teachers from each of the previous two years. They expressed in their own words the most important differences between each good and bad teacher. Eighteen differentiating statements were generated. The comparison format is described below:

<table>
<thead>
<tr>
<th>&quot;Good&quot; teachers from last year</th>
<th>&quot;Bad&quot; teachers from last year</th>
<th>&quot;Good&quot; teachers from 2 yrs ago</th>
<th>&quot;Bad&quot; teachers from 2 years ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 1</td>
<td>(1) a</td>
<td>(2) 1</td>
<td>(2) a</td>
</tr>
<tr>
<td>(1) 2</td>
<td>(1) b</td>
<td>(2) 2</td>
<td>(2) b</td>
</tr>
<tr>
<td>(1) 3</td>
<td>(1) c</td>
<td>(2) 3</td>
<td>(2) c</td>
</tr>
</tbody>
</table>

Differentiating statements were made for the following pairings:

<table>
<thead>
<tr>
<th>Pairing</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 1 -- (1) a</td>
<td>(1) 2 -- (1) a</td>
</tr>
<tr>
<td>(1) 1 -- (1) b</td>
<td>(1) 2 -- (1) b</td>
</tr>
<tr>
<td>(1) 1 -- (1) c</td>
<td>(1) 2 -- (1) c</td>
</tr>
<tr>
<td>(2) 1 -- (2) a</td>
<td>(2) 2 -- (2) a</td>
</tr>
<tr>
<td>(2) 1 -- (2) b</td>
<td>(2) 2 -- (2) b</td>
</tr>
<tr>
<td>(2) 1 -- (2) c</td>
<td>(2) 2 -- (2) c</td>
</tr>
</tbody>
</table>

To complete the analysis the 3600 different statements (18 X 200) were categorized according to Ryan's (1960) dimensions of teacher behaviors: warmth, organization, stimulation. Analysis of variance was used to determine if statistically significant perceptual differences existed by grade level and ethnicity.

B. Students' Global and In-school Self-esteem --

Rosenberg's Self-esteem Scale (RSE) was chosen to assess students' global self-esteem. It is a 10 item scale with a Coefficient of Scal-
ability of 72 per cent and a Coefficient of Reproducibility of 92 per cent. Ruth Wylie (1974), in her exhaustive analysis of self-esteem instruments, reports that with only 10 items and a short scale, the RSE has attained impressive reliability and has achieved relationship with other scales which support the instrument's construct validity. She states further that "ALL things considered...this scale deserves more research, development, and application." (p. 189)

The RSE was of interest for this project because of its brevity. Since the students were asked to complete several different instruments, keeping them as simple and straightforward as possible was important -- as long as the instruments promised reliable results. The ease and economy of time with which the RSE is administered and its reliability were all appealing for this study.

To assess students' self-esteem in the school setting, a re- phrasing of the RSE's 10 items was performed to make it situation-specific to the school scene. The semantic structure of each item was retained, but words and phrases were added to narrow the focus of self-esteem to the person's perception of himself specifically as a student. For each item the respondents were asked to strongly agree, agree, disagree, or strongly disagree. (The asterisks indicate low self-esteem responses.)

<table>
<thead>
<tr>
<th>RSE items assessing global S-E</th>
<th>RSE modified to assess in-school S-E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) On the whole I am satisfied with myself.</td>
<td>1) On the whole, I am satisfied with myself as a student.</td>
</tr>
<tr>
<td>2) At times I think I am no good at all.</td>
<td>2) At times I think I am no good at all as a student.</td>
</tr>
<tr>
<td>3) I feel that I have a number of good qualities.</td>
<td>3) I feel that I have a number of good student qualities.</td>
</tr>
<tr>
<td>4) I am able to do things as well as most other people.</td>
<td>4) I am able to do things as well as most other students.</td>
</tr>
</tbody>
</table>
RSE items assessing global S-E  
RSE modified to assess in-school S-E

5) I feel I do not have much to be proud of.  
   SA A D SD  
   5) I feel I do not have much to be proud of as a student.

6) I certainly feel useless at times.  
   SA A D SD  
   6) I certainly feel useless as a student at times.

7) I feel that I am a person of worth, at least on an equal plane with others.  
   SA A D SD  
   7) I feel that I am a good student, at least on an equal plane with others.

8) I wish I could have more respect for myself.  
   SA A D SD  
   8) I wish I could have more respect for myself as a student.

9) All in all, I am inclined to feel that I am a failure.  
   SA A D SD  
   9) All in all, I am inclined to feel that I am a failure as a student.

10) I take a positive attitude toward myself.  
    SA A D SD  
    10) I take a positive attitude toward myself as a student.

C. Students' Locus of Control Perceptions --

Several points need to be addressed about locus of control instruments. First, many researchers feel that locus of control is potentially an important psychological concept, but that it should be examined with respect to highly specific situations and circumstances. Lefcourt (1976) summarizes this position when he states that "...the (locus of control) construct will have its greatest utility if potential investigators design procedures for their own specific purposes..." (p. 153) However, several precautions must be taken when selecting or designing a locus of control instrument for any situation. Stipek and Weisz (1981) have just recently completed an analysis of locus of control measures. They report that LOC questionnaire measures vary greatly in both content and form, that there is a wide variation of characteristics of children tested, that few attempts have been made to examine the reliability of children's responses, that some indirect evidence
exists to indicate that children's responses vary to a considerable degree depending upon how the questions are stated and interpreted. In addition, they state that locus of control measures may be more reliable for some children than others:

Evidence from Gorsuch, Henighan, and Bernard (1972) suggests that reading ability may affect the reliability of some locus of control measures. To be sure, more scales of this type are probably more reliable for good readers than for poor readers. This is important to keep in mind...because of differences in a scale's reliability across a range of levels of ability on another measure...may lead to spurious correlations between the scale and the (other) measure. (p.106)

Given these concerns, the instrument chosen as a model for this study was the Academic Achievement Accountability measure (AAA) developed by Clifford and Cleary (1972). It is designed to be easily read, quickly answered, and is stated as directly and simply as possible to leave little room for varied interpretations. Since a substantial percentage of the sample population included persons of low reading skill and of low academic achievement, it was important that the measure be short in length, to the point, and easily understood. The AAA has 15 items to which the students answer yes or no and requires far less reading than most other scales. Crandall and Katkovskys' IAR scale (1965) is also designed for the school setting and probably one of the most widely used instruments; but, it has 34 items, requires about 80% more reading than the AAA and is less reliable:

AAA--internal consistency--.66  IAR--internal consistency--.54-.60
--test-re-test         --.67     --test-re-test         --.47-.74

One problem posed by the AAA was that it is designed to be used at the intermediate level (grades 4-6) and reliability figures do not pertain to the 9th and 12th grades. However, for this study the AAA served primarily as a model. It was modified to be administered to 9th and 12 graders by changing some of the phrasing, dropping four items, and
adding nine others. The format remains the same, but the instrument used for this study was clearly a modified version of the AAA.

ACADEMIC ACHIEVEMENT ACCOUNTABILITY SURVEY  
MODIFIED FOR SECONDARY LEVEL  

<table>
<thead>
<tr>
<th></th>
<th>YES (MOST OF THE TIME)</th>
<th>NO (NOT OFTEN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>If teachers like you, are they more apt to give you better grades?</td>
<td>X</td>
</tr>
<tr>
<td>2.</td>
<td>Can you do well in school even though the classwork may get difficult?</td>
<td>X</td>
</tr>
<tr>
<td>3.</td>
<td>Are you able to do your school work as well as or better than most students?</td>
<td>X</td>
</tr>
<tr>
<td>*4.</td>
<td>Do you feel it is important to do well in school?</td>
<td>*</td>
</tr>
<tr>
<td>5.</td>
<td>If you get a bad grade, do you feel it's your fault?</td>
<td>X</td>
</tr>
<tr>
<td>6.</td>
<td>If you really want a better grade than usual, can you get it?</td>
<td>X</td>
</tr>
<tr>
<td>7.</td>
<td>Are tests just a lot of guesswork for you?</td>
<td>X</td>
</tr>
<tr>
<td>*8.</td>
<td>Do you enjoy school?</td>
<td>*</td>
</tr>
<tr>
<td>9.</td>
<td>Does studying before you take tests help you get higher scores?</td>
<td>X</td>
</tr>
<tr>
<td>10.</td>
<td>Do you consider yourself lucky to receive high grades?</td>
<td>X</td>
</tr>
<tr>
<td>*11.</td>
<td>Do you feel you would be better off doing something else -- like working at a full time job -- rather than being in school?</td>
<td>*</td>
</tr>
<tr>
<td>12.</td>
<td>Do you usually do better on your school work when the teacher gives you special help?</td>
<td>X</td>
</tr>
<tr>
<td>13.</td>
<td>Do you usually get low grades even when you study hard?</td>
<td>X</td>
</tr>
<tr>
<td>14.</td>
<td>If teachers don't like you, are they more apt to give you lower grades?</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>15. Are you surprised when you receive a good grade?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>16. Deep down, do you feel school is a waste of time?</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>17. Do your grades get worse when you don't study regularly?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>18. Generally, do you think you deserve the grades you get?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>19. Do you feel doing well in school is important to your future?</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>20. If teachers don't think you are a very good student, can you still get good grades from them anyway?</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

X = indicates external locus of control responses
* = Indicates those items which are designed to assess whether school is important to the student, i.e., school is a part of the student's value system (see below); personal value system responses are not scored with the locus of control responses.

A score for the instrument is the number of the locus of control responses selected by an individual. A high score suggests a belief that the student's success in school is controlled by luck, chance, task difficulty, or a powerful other (teacher) rather than by the student.

Four of the 9 items added were 2, 3, 12 and 20. The focus of concern for two of these (12 and 20) was teacher influence on student performance, a dimension not strongly emphasized by the AAA used at the elementary level. Item two was concerned with the influence of task difficulty on student performance, and item three was related to the student's perception of his own ability. Parenthetically, the four items from the original AAA questionnaire replaced by these four were:

4. Do you think studying for tests is a waste of time?
6. Are you surprised when the teacher says you've done an assignment well?
9. Do you think students get low marks just because luck is against them?
11. Do your test marks seem to go up when you study?

Items 4, 8, 11, 16 and 19 were new and were designed to determine if school in general was perceived to be of value to the individual student. It is posited by Stipek and Weisz that the students' locus of control perceptions in the school setting may be difficult to assess if the students do not value instruction or other school activities. The argument is that if a student doesn't care about school, who or what controls the setting may not be of importance to him either, and the questionnaire results may be affected. Responses to these 5 items served as a cross-check variable in the final determination whether a statistically significant relationship existed between students' locus of control perceptions and their perceptions of teacher characteristics.

**Statistical Measurement**

Sizemore used analysis of variance in the eastern Virginia study to determine if statistically significant differences in student perceptions of teacher characteristics existed by race and grade level. For the replication stage of this proposed project analysis of variance was indeed used, but multiple regression was chosen to help explain the relationships of the added independent variables (global and in-school self-esteem and locus of control perceptions) to the dependent variable (the students' perceptions of teacher characteristics).

Multiple regression was chosen because one of its major strengths is its capacity to handle any number and kind of independent variables. It has exceptional capacity to handle non-experimental data. Kerlinger
and Pedhazur (1973) claim that it is the best method for conducting such analyses. Specifically, they state:

"Multiple regression analysis is suited to almost any nonexperimental research in which there are several independent variables and one dependent variable. No matter what the scales of measurement or what kind of variable, useful analysis can be done with interpretations made... Valuable results that are unobtainable with cross-break and univariate analysis can often be gotten with multiple regression analysis of nonexperimental data. (p. 445)

Secondly, multiple regression is capable of yielding the same kinds of information as analysis of variance. In fact, MR yields analysis of variance figures as part of its information, but it also produces more descriptive statistics: an analysis of the overall relation between the independent variables and the dependent variable; an estimated accounting of each variable's proportion of variance; regression coefficients and their statistical significance; and additional interpretive measures like partial correlations and squared partial correlations designed to describe correlations among the independent variables.

Since the purpose of this project was to examine relationships between a variety of nonexperimental variables in a school setting including demographic and affective variables (grade level, sex, ethnicity, global self-esteem, in-school self-esteem, in-school locus of control perceptions, and perceptions of teacher characteristics), multiple regression was appropriately chosen given its various capacities and powers.

**Treatment of Data**

Following is a table outlining the procedures employed in conducting this investigation. The statistical treatment for each step is included.
STEP 1

ACTIVITY
Administer modified version of Personnel Decision Analysis

INFO. AND RELATIONSHIPS SOUGHT
a) Info. -- students' specific perceptions of good and bad teaching characteristics organized by Ryan's categories of teacher behaviors: warmth, organization, stimulation;
b) Relationships -- the degrees to which black, white, 9th graders and 12th graders' perceptions differ regarding teacher behaviors.

HYPOTHESIS TESTED
Ho1/Ha1 through Ho6/Ha6

INSTRUMENT OF ANALYSIS
Analysis of variance

STEP 2

One week after step 1, administer: 1) the Rosenberg Self-Esteem scale (RSE); b) the Academic Achievement Accountability Scale modified for secondary level; c) the modified RSE scale designed to assess in-school self-esteem.

INFO. AND RELATIONSHIPS SOUGHT
a) Info. -- students' global self-esteem, in-school self-esteem, and in-school locus of control perceptions;
b) Relationships --
   (1) the respective relationships between students' global and in-school self-esteem and locus of control scores to their perceptions of teacher warmth;
   (2) the identification of those independent variables which are most significant predictors of the dependent variable (teacher "warmth");
   a listing of the independent variables in the order beginning with the strongest predictor variable to the weakest predictor variable;
   (3) the relationships between students' LOC perceptions and their respective grade levels.

HYPOTHESIS TESTED
Ho7/Ha7 through Ho10/Ha10

INSTRUMENT OF ANALYSIS
Stepwise Multiple Regression

STATISTIC GENERATED FOR ANALYSIS
(1) $r_{12.3456}$ -- where a correlation between variables 1 and 2 is analyzed by partialing out variables 3, 4, 5 and 6 from the regression equation
(2) F statistic for various combinations of independent variables in relation to the dependent variable; multiple $R^2$ generated to determine the proportion of variance accounted for by the respective independent variables and combinations of same.

F statistic
IV. FINDINGS

This chapter deals with three areas related to the findings of the investigation; (1) purposes of the study; (2) statement of the 11 hypotheses tested; (3) the statistical analysis used for each hypothesis and the findings of each.

Purposes of the Study

Two purposes prompted this investigation. First, it was intended to replicate the findings of a study performed in eastern Virginia whereby the investigator found that 9th graders and black students identified teacher warmth behaviors as being important teacher characteristics more frequently than did 12th graders and white students. The second purpose was to expand the eastern Virginia study design by introducing three new independent variables: students' in-school locus of control perceptions, students' global self-esteem perceptions, and students' in-school self-esteem perceptions. The purpose in examining these three variables in relation to the students' perceptions of teacher characteristics was to determine if these three new variables have significant predictive qualities to explain the tendencies of some students to cite teacher warmth behaviors as being important more frequently than they cite other teacher characteristics.

Hypotheses Tested

Eleven hypotheses were tested. Hypotheses 1, 2, 3, 4, 5, 6, and 10 related specifically to the replication stage of this study.

$H_{01}$: Of the 9th and 12th grade black and white students to be surveyed, the 9th graders will not identify teacher warmth behaviors as being the most important teacher characteristics significantly
more frequently (at the .05 level of confidence) than 12th graders.

\( H_{a1} \): Of the 9th and 12th grade black and white students to be surveyed, the 9th graders will identify teacher warmth behaviors as being the most important teacher characteristics significantly more frequently (at the 0.5 level of confidence) than 12th graders.

\( H_{02} \): Of the 9th and 12th grade black and white students surveyed, the black students will not identify teacher warmth behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than the white students.

\( H_{a2} \): Of the 9th and 12th grade black and white students surveyed, the black students will identify teacher warmth behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than the white students.

\( H_{03} \): Of the students to be surveyed, 12th graders will not identify teacher organization behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than the 9th graders.

\( H_{a3} \): Of the students to be surveyed, 12th graders will identify teacher organization behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than the 9th graders.

\( H_{04} \): Of the students to be surveyed, white students will not identify teacher organization behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than black students.

\( H_{a4} \): Of the students to be surveyed, white students will identify teacher organization behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than black students.

\( H_{05} \): Of the students to be surveyed, 12th graders will not identify teacher stimulation behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than 9th graders.

\( H_{a5} \): Of the students to be surveyed, 12th graders will identify teacher stimulation behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than 9th graders.

\( H_{06} \): Of the students to be surveyed, white students will not identify teacher stimulation behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than black students.
Ha₆: Of the students to be surveyed, white students will identify teacher stimulation behaviors as being the most important teacher characteristics significantly more frequently (at the .05 level of confidence) than black students.

H₀₁₀: No significant relationship exists between 9th and 12th grade boys' and girls' perceptions of teacher characteristics and their relative importance.

Ha₁₀: A relationship significant to the .05 level exists between 9th and 12th grade boys' and girls' perceptions of teacher characteristics and their relative importance.

Analysis of variance was used to determine if statistically significant differences in student perceptions of teacher characteristics did exist by race, grade level, and sex in eastern Washington State. A comparison was made of the eastern Virginia and eastern Washington findings.

Hypotheses 7, 8, 9, and 11 related to the second stage of this investigation and focused on the three new independent variables, student locus of control perceptions, student global self-esteem, and student in-school self-esteem perceptions as they relate to student perceptions of the three categories of teacher behavior, teacher warmth, teacher organization, and teacher stimulation behaviors.

H₀₇: No significant relationship exists between students' low global self-esteem scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

Ha₇: A direct, positive relationship significant to the .05 level exists between students' low global self-esteem scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

H₀₈: No significant relationship exists between students' low in-school self-esteem scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

Ha₈: A direct, positive relationship significant to the .05 level exists between students' low in-school self-esteem scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

H₀₉: No significant relationship exists between students' high in-school external locus of control scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.
school external locus of control scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

$H_a^9$: A direct, positive relationship significant to the .05 level exists between students' high in-school external locus of control scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

$H_{011}$: Of the students to be surveyed, 9th grade students will not, at the .05 level of significance, register higher in-school external locus of control scores than 12th grade students.

$H_{a11}$: Of the students to be surveyed, 9th grade students will register at the .05 level of significance higher in-school external locus of control scores than 12th grade students.

A stepwise multiple regression instrument was used (Belanger and Boyle, 1980) to analyze the overall relation between the independent variables and the dependent variable, to describe correlations among the various independent variables, to identify in order of greatest influence the independent variables which have significant qualities to "predict" the occurrence of the dependent variable, and finally, to estimate the proportion of variance accounted for by various combinations of independent variables.

**Stage I -- Replication Results**

**Table 1a**

Mean Scores on Warmth by Race, Grade Level, and Sex

**EASTERN VIRGINIA SAMPLE**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard Dev.</th>
<th>Standard Error</th>
<th>$N^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Grade Blacks</td>
<td>10.416</td>
<td>3.765</td>
<td>.344</td>
<td>120</td>
</tr>
<tr>
<td>9th Grade Whites</td>
<td>8.033</td>
<td>4.044</td>
<td>.369</td>
<td>120</td>
</tr>
<tr>
<td>12th Grade Blacks</td>
<td>7.566</td>
<td>3.590</td>
<td>.328</td>
<td>120</td>
</tr>
<tr>
<td>12th Grade Whites</td>
<td>6.125</td>
<td>3.458</td>
<td>.316</td>
<td>120</td>
</tr>
<tr>
<td>Group</td>
<td>Mean</td>
<td>Standard Dev.</td>
<td>Standard Error</td>
<td>N&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------</td>
<td>---------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>9th Grade Males</td>
<td>9.470</td>
<td>4.174</td>
<td>.383</td>
<td>119</td>
</tr>
<tr>
<td>9th Grade Females</td>
<td>8.983</td>
<td>3.983</td>
<td>.362</td>
<td>121</td>
</tr>
<tr>
<td>12th Grade Males</td>
<td>6.824</td>
<td>3.742</td>
<td>.335</td>
<td>125</td>
</tr>
<tr>
<td>12th Grade Females</td>
<td>6.869</td>
<td>3.435</td>
<td>.320</td>
<td>115</td>
</tr>
<tr>
<td>Black Males</td>
<td>9.258</td>
<td>3.866</td>
<td>.353</td>
<td>120</td>
</tr>
<tr>
<td>Black Females</td>
<td>8.725</td>
<td>4.008</td>
<td>.366</td>
<td>120</td>
</tr>
<tr>
<td>White Males</td>
<td>7.008</td>
<td>4.162</td>
<td>.374</td>
<td>124</td>
</tr>
<tr>
<td>White Females</td>
<td>7.155</td>
<td>3.557</td>
<td>.330</td>
<td>116</td>
</tr>
</tbody>
</table>

<sup>a</sup> Number of subjects in sample population

Table 1b

Mean Scores on Warmth by Race, Grade Level, and Sex

EASTERN WASHINGTON SAMPLE

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard Dev.</th>
<th>Standard Error</th>
<th>N&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Grade Blacks</td>
<td>9.842</td>
<td>5.127</td>
<td>.832</td>
<td>38</td>
</tr>
<tr>
<td>9th Grade Whites</td>
<td>8.650</td>
<td>4.830</td>
<td>.763</td>
<td>40</td>
</tr>
<tr>
<td>12th Grade Blacks</td>
<td>9.275</td>
<td>3.780</td>
<td>.598</td>
<td>40</td>
</tr>
<tr>
<td>12th Grade Whites</td>
<td>6.425</td>
<td>3.936</td>
<td>.622</td>
<td>40</td>
</tr>
<tr>
<td>9th Grade Males</td>
<td>8.700</td>
<td>4.956</td>
<td>.784</td>
<td>40</td>
</tr>
<tr>
<td>9th Grade Females</td>
<td>9.789</td>
<td>5.074</td>
<td>.823</td>
<td>38</td>
</tr>
<tr>
<td>12th Grade Males</td>
<td>7.925</td>
<td>4.303</td>
<td>.680</td>
<td>40</td>
</tr>
<tr>
<td>12th Grade Females</td>
<td>7.775</td>
<td>3.761</td>
<td>.595</td>
<td>40</td>
</tr>
<tr>
<td>Group</td>
<td>Mean</td>
<td>Standard Dev.</td>
<td>Standard Error</td>
<td>N^a</td>
</tr>
<tr>
<td>------------------</td>
<td>--------</td>
<td>---------------</td>
<td>----------------</td>
<td>-----</td>
</tr>
<tr>
<td>Black Males</td>
<td>9.925</td>
<td>4.384</td>
<td>.693</td>
<td>40</td>
</tr>
<tr>
<td>Black Females</td>
<td>9.158</td>
<td>4.562</td>
<td>.740</td>
<td>38</td>
</tr>
<tr>
<td>White Males</td>
<td>6.700</td>
<td>4.355</td>
<td>.689</td>
<td>40</td>
</tr>
<tr>
<td>White Females</td>
<td>8.375</td>
<td>4.641</td>
<td>.734</td>
<td>40</td>
</tr>
</tbody>
</table>

N^a Number of subjects in sample population

Table 2a
Variance Analysis of Teacher Warmth
EASTERN VIRGINIA SAMPLE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>F Value</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>31.833</td>
<td>.001*</td>
</tr>
<tr>
<td>Grade Level</td>
<td>49.369</td>
<td>.001*</td>
</tr>
<tr>
<td>Sex</td>
<td>0.555</td>
<td>.457</td>
</tr>
</tbody>
</table>

*Surpasses significance at the .05 level
Table 2b

Variance Analysis of Teacher Warmth

EASTERN WASHINGTON SAMPLE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>F Value</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>7.680</td>
<td>.034*</td>
</tr>
<tr>
<td>Grade Level</td>
<td>3.468</td>
<td>.069</td>
</tr>
<tr>
<td>Sex</td>
<td>.357</td>
<td>.50+</td>
</tr>
</tbody>
</table>

*Surpasses significance at the .05 level

Teacher Warmth Behaviors
as Distinguishing Characteristics
of Good Teachers

$H_{a1}$ was rejected. Even though 9th graders in Pasco and Yakima, Washington cited teacher warmth behaviors more frequently than did 12th graders, they did not do so to the .05 level of statistical significance. The computed $F$ for grade level influence related to students citing teacher warmth behaviors was 3.51. Tabulated $F$ at the .05 level is 3.91. Consequently, $H_{01}$ was retained and $H_{a1}$ was not rejected.

On the other hand, black students as a group -- including both 9th graders and 12th graders -- did cite teacher warmth behaviors significantly more frequently than did 9th grade and 12th grade white students. $H_{02}$ was rejected and $H_{a2}$ was retained. Computed $F$ for the variable ethnicity was 7.68 which is statistically significant at the .05 level (tab $F = 3.91$).
Table 3a
Mean Scores on Organization by Race, Grade Level, and Sex
EASTERN VIRGINIA SAMPLE

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard Dev.</th>
<th>Standard Error</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Grade Blacks</td>
<td>5.016</td>
<td>3.21</td>
<td>.0293</td>
<td>120</td>
</tr>
<tr>
<td>9th Grade Whites</td>
<td>6.233</td>
<td>3.514</td>
<td>.321</td>
<td>120</td>
</tr>
<tr>
<td>12th Grade Blacks</td>
<td>6.675</td>
<td>3.197</td>
<td>.292</td>
<td>120</td>
</tr>
<tr>
<td>12th Grade Whites</td>
<td>6.933</td>
<td>3.625</td>
<td>.331</td>
<td>120</td>
</tr>
<tr>
<td>9th Grade Males</td>
<td>5.302</td>
<td>3.519</td>
<td>.323</td>
<td>119</td>
</tr>
<tr>
<td>9th Grade Females</td>
<td>5.942</td>
<td>3.290</td>
<td>.299</td>
<td>121</td>
</tr>
<tr>
<td>12th Grade Males</td>
<td>6.592</td>
<td>3.481</td>
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<td>125</td>
</tr>
<tr>
<td>12th Grade Females</td>
<td>7.034</td>
<td>3.338</td>
<td>.311</td>
<td>115</td>
</tr>
<tr>
<td>Black Males</td>
<td>5.491</td>
<td>3.117</td>
<td>.285</td>
<td>120</td>
</tr>
<tr>
<td>Black Females</td>
<td>6.200</td>
<td>3.456</td>
<td>.315</td>
<td>120</td>
</tr>
<tr>
<td>White Males</td>
<td>6.419</td>
<td>3.885</td>
<td>.349</td>
<td>124</td>
</tr>
<tr>
<td>White Females</td>
<td>6.758</td>
<td>3.229</td>
<td>.300</td>
<td>116</td>
</tr>
</tbody>
</table>

Table 3b
Mean Scores on Organization by Race, Grade Level, and Sex
EASTERN WASHINGTON SAMPLE

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard Dev.</th>
<th>Standard Error</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Grade Blacks</td>
<td>5.210</td>
<td>4.137</td>
<td>.670</td>
<td>30</td>
</tr>
<tr>
<td>9th Grade Whites</td>
<td>5.900</td>
<td>4.036</td>
<td>.638</td>
<td>40</td>
</tr>
<tr>
<td>Group</td>
<td>Mean</td>
<td>Standard Dev.</td>
<td>Standard Error</td>
<td>N</td>
</tr>
<tr>
<td>------------------</td>
<td>------</td>
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<td>----------------</td>
<td>----</td>
</tr>
<tr>
<td>12th Grade Blacks</td>
<td>4.450</td>
<td>4.036</td>
<td>.638</td>
<td>40</td>
</tr>
<tr>
<td>12th Grade Whites</td>
<td>6.300</td>
<td>3.871</td>
<td>.612</td>
<td>40</td>
</tr>
<tr>
<td>9th Grade Males</td>
<td>6.000</td>
<td>4.300</td>
<td>.680</td>
<td>40</td>
</tr>
<tr>
<td>9th Grade Females</td>
<td>5.105</td>
<td>3.782</td>
<td>.614</td>
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</tr>
<tr>
<td>12th Grade Males</td>
<td>5.100</td>
<td>3.513</td>
<td>.555</td>
<td>40</td>
</tr>
<tr>
<td>12th Grade Females</td>
<td>5.675</td>
<td>3.312</td>
<td>.524</td>
<td>40</td>
</tr>
<tr>
<td>Black Males</td>
<td>4.625</td>
<td>3.603</td>
<td>.570</td>
<td>40</td>
</tr>
<tr>
<td>Black Females</td>
<td>5.026</td>
<td>3.328</td>
<td>.540</td>
<td>38</td>
</tr>
<tr>
<td>White Males</td>
<td>6.475</td>
<td>4.068</td>
<td>.643</td>
<td>40</td>
</tr>
<tr>
<td>White Females</td>
<td>5.750</td>
<td>3.773</td>
<td>.597</td>
<td>40</td>
</tr>
</tbody>
</table>

Table 4a
Variance Analysis of Teacher Organization
EASTERN VIRGINIA SAMPLE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>F Value</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>5.881</td>
<td>.016*</td>
</tr>
<tr>
<td>Grade Level</td>
<td>15.007</td>
<td>.001*</td>
</tr>
<tr>
<td>Sex</td>
<td>3.231</td>
<td>.073</td>
</tr>
</tbody>
</table>

*Surpasses significance at the .05 level
Table 4b
Variance Analysis of Teacher Organization
EASTERN WASHINGTON SAMPLE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>F Value</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>4.706</td>
<td>.034*</td>
</tr>
<tr>
<td>Grade Level</td>
<td>.085</td>
<td>.50+</td>
</tr>
<tr>
<td>Sex</td>
<td>.074</td>
<td>.50+</td>
</tr>
</tbody>
</table>

*Surpasses significance at the .05 level

Teacher Organization Behaviors
as Distinguishing Characteristics
of Good Teachers

Ho₃ was retained. Twelfth grade students did not cite teacher organization behaviors as distinguishing characteristics of good teachers more frequently (at the .05 level) than did 9th graders (F = .0854: Ho₃ retained; Ha₃ not rejected). However, white students did identify teacher organization behaviors significantly more frequently than did black students (F = 4.706: Ho₄ rejected; and Ha₄ retained).
### Table 5a
Mean Scores on Stimulation by Race, Grade Level, and Sex

**EASTERN VIRGINIA SAMPLE**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard Dev.</th>
<th>Standard Error</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Grade Blacks</td>
<td>2.566</td>
<td>2.304</td>
<td>.210</td>
<td>120</td>
</tr>
<tr>
<td>9th Grade Whites</td>
<td>3.733</td>
<td>3.105</td>
<td>.283</td>
<td>120</td>
</tr>
<tr>
<td>12th Grade Blacks</td>
<td>3.758</td>
<td>2.747</td>
<td>.251</td>
<td>120</td>
</tr>
<tr>
<td>12th Grade Whites</td>
<td>4.941</td>
<td>3.298</td>
<td>.301</td>
<td>120</td>
</tr>
<tr>
<td>9th Grade Males</td>
<td>3.226</td>
<td>3.103</td>
<td>.276</td>
<td>119</td>
</tr>
<tr>
<td>9th Grade Females</td>
<td>3.074</td>
<td>2.563</td>
<td>.233</td>
<td>121</td>
</tr>
<tr>
<td>12th Grade Males</td>
<td>4.584</td>
<td>3.363</td>
<td>.301</td>
<td>125</td>
</tr>
<tr>
<td>12th Grade Females</td>
<td>4.095</td>
<td>2.747</td>
<td>.256</td>
<td>115</td>
</tr>
<tr>
<td>Black Males</td>
<td>3.250</td>
<td>2.723</td>
<td>.249</td>
<td>120</td>
</tr>
<tr>
<td>Black Females</td>
<td>3.075</td>
<td>2.477</td>
<td>.226</td>
<td>120</td>
</tr>
<tr>
<td>White Males</td>
<td>4.572</td>
<td>3.603</td>
<td>.324</td>
<td>124</td>
</tr>
<tr>
<td>White Females</td>
<td>4.087</td>
<td>2.827</td>
<td>.262</td>
<td>116</td>
</tr>
</tbody>
</table>

### Table 5b
Mean Scores on Stimulation by Race, Grade Level, and Sex

**EASTERN WASHINGTON SAMPLE**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard Dev.</th>
<th>Standard Error</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Grade Blacks</td>
<td>2.947</td>
<td>3.010</td>
<td>.488</td>
<td>38</td>
</tr>
<tr>
<td>9th Grade Whites</td>
<td>3.550</td>
<td>3.667</td>
<td>.580</td>
<td>40</td>
</tr>
<tr>
<td>Group</td>
<td>Mean</td>
<td>Standard Dev.</td>
<td>Standard Error</td>
<td>N</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------</td>
<td>---------------</td>
<td>----------------</td>
<td>----</td>
</tr>
<tr>
<td>12th Grade Blacks</td>
<td>4.275</td>
<td>2.598</td>
<td>.411</td>
<td>40</td>
</tr>
<tr>
<td>12th Grade Whites</td>
<td>5.350</td>
<td>3.745</td>
<td>.592</td>
<td>40</td>
</tr>
<tr>
<td>9th Grade Males</td>
<td>3.300</td>
<td>3.662</td>
<td>.579</td>
<td>40</td>
</tr>
<tr>
<td>9th Grade Females</td>
<td>3.105</td>
<td>3.152</td>
<td>.511</td>
<td>38</td>
</tr>
<tr>
<td>12th Grade Males</td>
<td>4.975</td>
<td>3.738</td>
<td>.591</td>
<td>40</td>
</tr>
<tr>
<td>12th Grade Females</td>
<td>4.550</td>
<td>2.872</td>
<td>.454</td>
<td>40</td>
</tr>
<tr>
<td>Black Males</td>
<td>3.450</td>
<td>3.082</td>
<td>.487</td>
<td>40</td>
</tr>
<tr>
<td>Black Females</td>
<td>3.816</td>
<td>2.645</td>
<td>.429</td>
<td>38</td>
</tr>
<tr>
<td>White Males</td>
<td>4.825</td>
<td>4.283</td>
<td>.677</td>
<td>40</td>
</tr>
<tr>
<td>White Females</td>
<td>3.875</td>
<td>3.473</td>
<td>.549</td>
<td>40</td>
</tr>
</tbody>
</table>

**Table 6a**

Variance Analysis of Teacher Stimulation

**EASTERN VIRGINIA SAMPLE**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>F Value</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>19.585</td>
<td>.001*</td>
</tr>
<tr>
<td>Grade Level</td>
<td>20.338</td>
<td>.001*</td>
</tr>
<tr>
<td>Sex</td>
<td>1.293</td>
<td>.256</td>
</tr>
</tbody>
</table>

*Surpasses significance at the .05 level
Table 6b

Variance Analysis of Teacher Stimulation

EASTERN WASHINGTON SAMPLE

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>F Value</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>1.705</td>
<td>.196</td>
</tr>
<tr>
<td>Grade Level</td>
<td>8.27</td>
<td>.005*</td>
</tr>
<tr>
<td>Sex</td>
<td>.275</td>
<td>.50+</td>
</tr>
</tbody>
</table>

*Surpasses significance at the .05 level

Teacher Stimulation Behaviors as Distinguishing Characteristics of Good Teachers

Twelfth grade students in Pasco and Yakima, Washington did identify teacher stimulation behaviors significantly more frequently (at the .05 level of confidence) than did 9th grade students (F = 8.268: Ho5 was rejected; Ha5 was retained). On the other hand, white students did not cite teacher stimulation behaviors significantly more frequently than did black students (F = 1.7: Ho6 retained; Ha6 not rejected).
Table 7

Summary: Comparison of Eastern Virginia and Eastern Washington Study Results

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Source of Variation</th>
<th>Eastern Virginia</th>
<th>Signif. Level</th>
<th>Eastern Washington</th>
<th>Signif. Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F Value</td>
<td></td>
<td>F Value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>31.883</td>
<td>.001*</td>
<td>7.680</td>
<td>.01*</td>
<td></td>
</tr>
<tr>
<td>Teacher Warmth</td>
<td>49.369</td>
<td>.001*</td>
<td>3.470</td>
<td>.069</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.555</td>
<td>.467</td>
<td>.356</td>
<td>.50+</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>5.881</td>
<td>.016*</td>
<td>4.706</td>
<td>.034*</td>
<td></td>
</tr>
<tr>
<td>Teacher Organ.</td>
<td>15.007</td>
<td>.001*</td>
<td>.085</td>
<td>.50+</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>3.231</td>
<td>.073</td>
<td>.074</td>
<td>.50+</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>19.585</td>
<td>.001*</td>
<td>1.705</td>
<td>.196</td>
<td></td>
</tr>
<tr>
<td>Teacher Stimula.</td>
<td>20.338</td>
<td>.001*</td>
<td>8.270</td>
<td>.005*</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>1.293</td>
<td>.256</td>
<td>.275</td>
<td>.50+</td>
<td></td>
</tr>
</tbody>
</table>

*Surpasses significance at the .05 level

Half of the eastern Virginia findings were replicated in eastern Washington State (Yakima and Pasco school districts). In eastern Washington, as in eastern Virginia, ethnicity appears to be a significant independent variable in relation to students perceiving teacher warmth and teacher organization behaviors as important teacher characteristics: black students in both situations, regardless of grade level, tended to cite teacher warmth behaviors significantly more frequently than white students; white students, regardless of grade level, tended to cite teacher organization behaviors more frequently than black students.
Grade level in eastern Washington and eastern Virginia appears to be important as an independent variable in relation to teacher stimulation behaviors: in both situations twelfth graders, regardless of ethnicity or sex, identified teacher stimulation behaviors significantly more frequently than 9th graders.

The eastern Washington study did not replicate the eastern Virginia findings in three areas:

1. Though 9th graders in Eastern Washington did identify teacher warmth behaviors more frequently than 12th graders, (9th grade mean = 9.230; 12th grade mean = 7.850), they did not do so at the .05 level of significance (computed F = 3.51; tab F = 3.91).

2. Grade level was not a significant independent variable in relation to students citing teacher organization behaviors, i.e., 12th graders did not identify teacher organization significantly more frequently than 9th graders.

3. Finally, in eastern Washington white students did not cite teacher stimulation behaviors more frequently than black students as they did in Virginia.

Stage II -- Introduction of New Independent Variables: Students' Global Self-esteem; Students' In-school Locus of Control Perceptions; Students' In-school Self-esteem

In Stage II, three new independent variables were added for analysis to determine the degrees to which these and the original independent variables in combination influence or "predict" the occurrence of the dependent variable, namely, student perceptions of teacher "warmth." Again, the hypotheses tested were:
Ha₇: A direct, positive relationship exists between students' low global self-esteem scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

Ha₈: A direct, positive relationship exists between students' low in-school self-esteem scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

Ha₉: A direct, positive relationship exists between students' high in-school locus of control scores and their tendency to cite teacher warmth behaviors as important teacher characteristics.

Ha₁₁: Ninth grade students will register higher in-school external locus of control scores than 12th graders.

As previously stated, a stepwise multiple regression instrument was used to generate:

1. correlation coefficients between individual independent variables and the dependent variable (perceived teacher "warmth").
2. to generate F values for various combinations of independent variables in relation to student perceived teacher "warmth;"
3. to generate multiple R² figures to determine the proportion of variance in the dependent variable accounted for by the combinations of independent variables.

Independent Variables:

Original variables included in eastern Virginia study and also analyzed for replication study performed in eastern Washington

1. Ethnicity
2. Grade Level
3. Sex

New independent variables introduced to Washington sample

4. Global self-esteem
5. In-school locus of control
6. In-school self-esteem

Dependent Variable:

7. Student perceptions of teacher "warmth"
Table 8

List of Correlations Between Variables -- (Pearson product moments) calculated by partialing the various independent variables out of the regression equation to isolate the relationships of specific variables to each other. For 158 observations the computed correlation, r, must equal or exceed .157 at the .05 level of significance.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>-.05253</td>
<td>-.01282</td>
<td>-.07602</td>
<td>-.09895</td>
<td>-.09297</td>
<td>-.21655*</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>-.05253</td>
<td>-.22813</td>
<td>-.24935</td>
<td>-.11275</td>
<td>-.10141</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>-.05144</td>
<td>.06476</td>
<td>-.05229</td>
<td>-.04774</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>.27139</td>
<td>.57716</td>
<td>.12564</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>.39209</td>
<td>.32967*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>.28991*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*correlations with the dependent variable significant at the .05 level of confidence

Hypotheses Ho7, Ha7, Ho8, Ha8, Ho9, Ha9

For the eastern Washington student sample, correlations significant to the .05 level of confidence were computed demonstrating significant relationships between each of the following independent variables and the dependent variable (teacher "warmth"):

1. student ethnicity as it relates to the tendency for students to cite teacher warmth behaviors as important teacher characteristics (-.21655);
2. students' high in-school, external locus of control scores as they relate to the students' tendency to cite teacher warmth (.32967);
3. students' in-school low self-esteem scores as they relate to the students' tendency to cite teacher warmth behaviors (.28991).

Parenthetically, the negative value between student ethnicity and student perceptions of teacher warmth is the result of the ethnic coding used for the multiple regression computer program. This negative sign does not indicate an inverse relationship between ethnicity and warmth scores. As demonstrated earlier, black students in eastern Washington, regardless of grade level or sex, cited teacher warmth behaviors as being important significantly more frequently than did white students (computed F = 7.68). Circumstantially, the multiple regression program produced negative values for all relationships involving special coding for respective independent variables. The three specially coded variables were ethnicity, sex, and grade level.

Though seemingly not high correlations, these figures generated for students' in-school low self-esteem scores and in-school external locus of control scores as they respectively relate to the frequency of students' citings of teacher warmth are significant at the .05 level. Using these correlation figures as our instrument of analysis, Ho₈ and Ho₉ were respectively rejected and Ha₈ and Ha₉ were respectively retained.

However, no significant correlation was generated between students' global low self-esteem scores and their tendency to cite teacher warmth as important teacher characteristics (-.09895); consequently, by this method of analysis, Ho₇ was retained and Ha₇ was not rejected.

In turning to more powerful statistics than correlation coefficients for analysis of the data, the significant relationships between
the independent variables and the dependent variable are still upheld. The stepwise multiple regression program used for this analysis lists the independent variables in the order of their influence on the dependent variable and generates F values for the various combinations of independent variables.

Table 9 -- Independent Variables as Predictors

<table>
<thead>
<tr>
<th>Independ. Var. as predictors of the depend. variable</th>
<th>Source of variation</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>Comp. F</th>
<th>Multiple $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Locus of control</td>
<td>between</td>
<td>1</td>
<td>371.197</td>
<td>371.197</td>
<td>19.022</td>
<td>.10869</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>156</td>
<td>3044.144</td>
<td></td>
<td>19.514</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>between</td>
<td>2</td>
<td>487.882</td>
<td>243.941</td>
<td>12.916</td>
<td>.14285</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>155</td>
<td>2927.459</td>
<td></td>
<td>18.887</td>
<td></td>
</tr>
<tr>
<td>In-school self-esteem</td>
<td>between</td>
<td>3</td>
<td>579.727</td>
<td>193.242</td>
<td>10.495</td>
<td>.16970</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>154</td>
<td>2835.615</td>
<td></td>
<td>18.413</td>
<td></td>
</tr>
<tr>
<td>Global self-esteem</td>
<td>between</td>
<td>4</td>
<td>596.172</td>
<td>149.043</td>
<td>8.089</td>
<td>.174557</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>153</td>
<td>2819.169</td>
<td></td>
<td>18.426</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>between</td>
<td>5</td>
<td>608.031</td>
<td>121.606</td>
<td>6.584</td>
<td>.178029</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>152</td>
<td>2807.311</td>
<td></td>
<td>18.469</td>
<td></td>
</tr>
<tr>
<td>Grade Level</td>
<td>between</td>
<td>6</td>
<td>616.061</td>
<td>102.677</td>
<td>5.539</td>
<td>.180380</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>151</td>
<td>2799.281</td>
<td></td>
<td>18.538</td>
<td></td>
</tr>
</tbody>
</table>

For the Washington sample of students surveyed, students' external locus of control scores served as the strongest predictor of the depen-
dent variable, i.e., if the Yakima-Pasco students had a high external locus of control orientation (in-school), they were more apt to perceive teacher warmth behaviors as important teacher characteristics. Ethnicity and in-school self-esteem in combination with external locus of control perceptions also served as weak predictors of the dependent variable. Though the 6 variables together produced an F value significant at the .05 level (computed $F = 5.539$; tab $F = 2.16$), when considering all six independent variables, these three (external locus of control scores, ethnicity, and in-school self-esteem) together accounted for most of the variance in the dependent variable attributable to these six variables. The multiple $R^2$ value computed for these three variables in combination was .16974 or 17% of the total variance of the dependent variable. When the latter three variables were added, they only accounted for 1% more of the total variance (multiple $R^2 = .180380$).

Table 10

Summary of Relationships Among Variables

<table>
<thead>
<tr>
<th>Independ. Vari. in order of their strength of influence</th>
<th>correl. r with the depend. variable</th>
<th>F computed for each individual variable</th>
<th>F computed in combination with variables of greatest strength of influence on dependent variable</th>
<th>Related Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locus of control</td>
<td>.329674*</td>
<td>19.02235*</td>
<td>19.02235*</td>
<td>Ho$_9$, Ha$_9$</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.216550*</td>
<td>7.67541*</td>
<td>12.91593*</td>
<td>refer to stage I discussion</td>
</tr>
<tr>
<td>In-school self-esteem</td>
<td>.289915*</td>
<td>14.31507*</td>
<td>10.49438*</td>
<td>Ho$_8$, Ha$_8$</td>
</tr>
<tr>
<td>Global self-esteem</td>
<td>.125636</td>
<td>2.50184</td>
<td>8.08876</td>
<td>Ho$_7$, Ha$_7$</td>
</tr>
</tbody>
</table>
On the bases of correlation values, F values computed for each independent variable, and F values computed for combinations of independent variables, hypothesis Ho7 was retained and Ha7 was not rejected. On the same basis, hypotheses Ho8 and Ho9 were rejected and Ha8 and Ha9 were retained.

Finally, an analysis of variance was computed to determine if a significant difference in locus of control perceptions existed among the eastern Washington ninth graders and twelfth graders sampled.

Means for each group: $X_9 = 4.96; X_{12} = 3.74$

<table>
<thead>
<tr>
<th>Depend. variable</th>
<th>Independ. variable</th>
<th>Source of variation</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Related</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locus of grade level</td>
<td>between</td>
<td>1</td>
<td>60.158</td>
<td>60.258</td>
<td>10.34251</td>
<td>3.91</td>
<td>Ho_{10}, Ha_{10}</td>
<td></td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>156</td>
<td>907.386</td>
<td>5.817</td>
<td></td>
<td></td>
<td>refer to Stage I.</td>
<td></td>
</tr>
</tbody>
</table>

The computed F for grade levels in relation to locus of control perceptions is significant at the .05 level; hence, 9th graders in the eastern Washington sample have a significantly higher external locus of control orientation than 12th graders. Ho_{11} was rejected and Ha_{11} was retained.
V. SUMMARY, DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

This chapter presents (1) a summary of the problem investigated, (2) a description of the purposes and design of the study, (3) a discussion of the findings, (4) a discussion of the implications, and (5) recommendations for future study.

Nature of the Problem Investigated

Little research has been conducted at the kindergarten through twelfth grade levels regarding student attitudes about teacher characteristics, styles, or techniques. Little is known of what students perceive to be effective teacher behaviors at these levels. A need has existed to gather more information in this area so that the very best decisions can be made about what to teach, how to teach, and how to treat students.

Purposes of the Study

One purpose of this investigation was to replicate one of the few studies already performed in this area of student attitudes through which it was demonstrated that 9th graders and black students in an eastern Virginia urban school district identified teacher warmth behaviors as being important teacher characteristics more frequently than did 12th graders and white students (Sizemore, 1979). A second purpose was to expand on the original design by introducing three affective variables for analysis, namely, students' global self-esteem, students' in-school locus of control perceptions, and students' in-school self-esteem. These affective variables were included because they offered
some potential for explaining why students cite teacher warmth behaviors as important teacher characteristics.

**Design of the Study**

Stage I -- replication of eastern Virginia study:

Sizemore (1979) originally sampled 480 students in eastern Virginia, 60 of each of the following groups of students: ninth grade black males, ninth grade black females, ninth grade white males, ninth grade white females, twelfth grade black males, twelfth grade black females, twelfth grade white males, and twelfth grade white females. The sample for the present investigation came from two rural/urban school districts in eastern Washington State and included 20 of each of the categories listed above for a total sample of 160 students.

In both situations, eastern Virginia and eastern Washington, the students sampled were asked to compare their three "best" teachers and three "worst" teachers from each of their previous two years in school and write a single statement describing the most distinctive difference between each pairing of teachers. Each student produced 18 different descriptive statements. The students' statements were classified by Ryans' (1960) three categories of teacher behaviors -- teacher warmth, teacher organization, teacher stimulation behaviors -- and then organized on the basis of student ethnicity, sex, and grade level.

Ethnicity, sex, and grade level served as the independent variables while the students' descriptive statements, classified into categories of teacher warmth, teacher organization, and teacher stimulation, served as the dependent variables.
Mean scores were generated for the various sub groups (e.g. 9th grade whites, 9th grade blacks, 9th grade males, etc.), as were standard deviation and standard error figures. An analysis of variance was employed to determine if significant differences in student perceptions of teacher characteristics existed among the various student groups.

Stage II -- the inclusion of three affective variables: Students' global self-esteem, in-school locus of control, and in-school self-esteem scores.

The present study conducted in eastern Washington State extended Sizemore's original design by adding three affective independent variables for analysis. It was hypothesized that a low global self-esteem, a high locus of control external orientation, and a low in-school self-esteem would be significantly related to the students' tendencies to cite teacher warmth behaviors as important teacher characteristics. It was also hypothesized that the 9th graders sampled would be more LOC external than the 12th graders which, if substantiated, would partially explain the pattern demonstrated by Sizemore's Virginia findings that 9th graders cited teacher warmth behaviors significantly more frequently than 12th graders.

The students sampled were asked to complete three survey instruments, Rosenberg's self-esteem scale which measures global self-esteem, the Academic Achievement Accountability Questionnaire modified for the secondary level which measures in-school locus of control internality and externality, and a modified version of Rosenberg's self-esteem scale which was designed to measure in-school self-esteem.

A step-wise multiple regression analysis was employed to analyze all of the affective and demographic independent variables in relation to the dependent variable, teacher warmth. A listing of the variables
in order of their influence on the dependent variable was sought. \( F \) statistics for individual variables and variables in combination were generated to determine if statistically significant relationships existed between individual independent variables and combinations of same in relation to the dependent variable. Finally, multiple \( R^2 \) figures were computed to determine the degrees to which various independent variables in combination did influence the dependent variable.

Findings of the Study

Stage I -- the replication stage

A. Sizemore in eastern Virginia obtained results which showed that 1) 9th graders, regardless of sex or ethnicity, and black students, regardless of sex or grade level, identified teacher warmth behaviors as important teacher characteristics significantly more frequently than did 12th graders and white students; 2) twelfth graders, regardless of sex or ethnicity, and white students, regardless of sex or grade level, identified teacher organization and teacher stimulation behaviors as important teacher characteristics significantly more frequently than 9th graders and black students; 3) sex was unrelated to student perceptions of teacher characteristics.

B. The present study which was performed in eastern Washington State to replicate Sizemore's eastern Virginia study obtained the following results: 1) black students, regardless of grade level or sex, identified teacher warmth behaviors as important teacher characteristics significantly more frequently than did white students; 2) white students, regardless of grade level or sex, identified teacher organization
as important teacher characteristics significantly more frequently than black students; 3) twelfth grade students, regardless of sex or ethnicity, identified teacher stimulation behaviors significantly more frequently than 9th graders; 4) sex was not significantly linked with student perceptions of teacher characteristics.

However, the eastern Washington sample did not replicate the eastern Virginia findings in three areas: 1) ninth graders in eastern Washington did not identify teacher warmth behaviors as important teacher characteristics significantly more frequently than 12th graders (measured at the .05 level of confidence); 2) twelfth graders did not identify teacher organization behaviors as important teacher characteristics significantly more frequently than 9th graders; 3) white students did not cite teacher stimulation behaviors as important teacher characteristics significantly more frequently than black students.

In summary, in comparing the eastern Washington results with those of eastern Virginia, half of the eastern Virginia findings which positively linked independent variables with dependent variables were replicated in eastern Washington (3 of 6): ethnicity was related to student perceptions of teacher warmth and teacher organization, and grade level was linked to student perceptions of teacher stimulation behaviors.

In all cases, the variables were more weakly related in Washington than in Virginia.

Finally, it must be noted that in both eastern Virginia and eastern Washington sex was not significantly related to the students' perceptions of teacher characteristics.
Stage II -- Findings pertaining to students' global self-esteem, students' in-school locus of control, and students' in-school self-esteem perceptions as they relate -- in combination with student sex, ethnicity, and grade levels -- to student perceptions of teacher characteristics.

For the present study, students' global self-esteem, in-school self-esteem, and in-school locus of control scores were introduced as new variables to extend Sizemore's original design. The stepwise multiple regression instrument used to analyze all variables in combination listed the variables in order of their influence on the dependent variable, teacher warmth. The results of this multiple regression analysis showed that only three of the six variables analyzed could be considered weak predictors of students citing teacher warmth behaviors as important teacher characteristics. In order of their influence on students' perceptions of teacher warmth, the three variables were: students' in-school locus of control externality, students' ethnicity (blacks, regardless of grade level or sex, cited teacher warmth behaviors significantly more frequently than whites), and students' in-school low self-esteem. Two of these predictor variables were affective in nature: in-school locus of control and in-school self-esteem. The least influential independent variables were student sex and grade level and demographic in nature.

In this second phase of the study, all affective and demographic variables were analyzed individually in relation to the dependent variable by analysis of variance and then analyzed in combination with each other by multiple regression procedures. It is important to note that, by both analyses, grade level in the present study was not significantly related to the students citing teacher warmth behaviors as important teacher characteristics. In fact, by the multiple regression analysis
grade level was the least influential on the dependent variable when considered in combination with the other independent variables. This finding is inconsistent with Sizemore's Virginia study (if not contradictory) in that, by an analysis of variance approach, his results showed grade level to be very significantly related to students' perceptions of teacher warmth \( (p < .001) \), i.e., 9th graders cited teacher warmth behaviors significantly more frequently than 12th graders. A possible explanation of this discrepancy in findings is that locus of control and grade level share too much variance in common for them both to have significant predictive qualities. Kerlinger and Pedhazur (1973) state:

In many regression situations it may be found that the regression of (the dependent variable) on each of the independent variables, when added individually and in combination to the regression equation after the first independent variable has been entered, may add little to \( R^2 \). The reason is that the independent variables are themselves correlated.

In general, the larger the (correlation between independent variables) is, the less effective adding the second variable to the regression equation will be. (p. 45)

Though the correlation between LOC and grade level appears to be small \( (r = .25) \), it is significant at the .05 level and may explain why grade level in this situation, in combination with the other variables, is the weakest predictor of student warmth.

The analysis of variance performed on grade level and locus of control scores did show a significant relationship to exist between grade level and LOC externality: 9th graders in Washington State were more LOC external than 12th graders. This result tends to substantiate Kerlinger and Pedhazur's point about shared variance, i.e., since LOC externality and grade level are significantly related (by correlational and ANOVA analyses), one of these two variables will show little pre-
dicitive quality when placed in the multiple regression equation. In-school locus of control externality was the strongest predictor variable of all independent variables; consequently, grade level, which shares much variance in common with the LOC scores, is the weakest predictor by a multiple regression equation -- even though grade level showed a stronger significant individual relationship with the dependent variable than other independent variables like sex or global self-esteem.

Analysis of variance may show significant statistical relationships to exist between variables, as in Sizemore's investigation, but ANOVA results, by themselves, may not have the predictive strength of other measures like multiple regression analysis. Given the results of the present study, one is tempted to wonder what an MR analysis, in conjunction with the ANOVA Sizemore employed, would have produced for Sizemore given this combination of three affective and three demographic variables?

In summary, for the eastern Washington sample of students, in-school LOC externality, student ethnicity, and students' in-school self-esteem perceptions offered some explanation for why students cited teacher warmth behaviors as important teacher characteristics, but other variables not examined were somehow involved. Probably the most significant statistics produced by the various analyses were the multiple $R^2$ values which showed that these three statistically significant variables together accounted for only 17% of the total variance in students' citings of teacher warmth behaviors. This figure made these variables only weak predictors of the dependent variable for this sample.
Implications

The following implications are presented on the basis of data generated by this investigation. Some of the findings support research previously conducted. Some implications are inherent to the information of this study.

Stage I -- Implications based on the replication procedures.

1. Based on the findings of both the eastern Virginia and eastern Washington State studies, it appears that, in general, students perceive teacher warmth behaviors to be important teacher characteristics. For both samples, ninth grade and twelfth grade mean scores for teacher warmth exceeded the mean scores for students citing teacher organization and stimulation behaviors. Teacher warmth is highly important to students, and educators, in their daily interaction with and instruction of students, should be sensitive to this student need.

2. On the basis of results generated by both the Virginia and Washington State studies it can be cautiously stated that black students in culturally dissonant American school settings appear to need teachers to be warm, caring, friendly, and fair more than white students. White students, on the other hand, tend to feel the need for teachers to be organized more than black students do. Given the results of both of these studies, it is tempting to speculate that in a hierarchy of student needs, the need for teacher warmth may possibly precede the need for teachers to be organized or intellectually stimulating. White students, as the dominant student population in culturally dissonant American school settings, may possibly perceive their needs for teacher warmth to be met more frequently than black students; consequently,
white students may be more free emotionally and intellectually to perceive that other needs can be met. Black students, however, feeling somewhat estranged as the minority student population in these settings, may perceive their needs for teacher warmth to go unmet more frequently than white students and may be emotionally and intellectually restricted to perceive that other classroom needs exist or are important in comparison.

In any case, these two studies tend to imply that student ethnicity in culturally mixed American schools plays a role in how students perceive teacher characteristics.

3. Grade level does not appear to be as significant a variable in relation to students citing teacher warmth behaviors as originally shown by Sizemore in eastern Virginia. Though twelfth grade mean scores for the Washington sample were smaller for teacher warmth than ninth grade mean scores, they were not significantly smaller. Ninth graders and twelfth graders alike perceived teacher warmth to be important.

Secondly, the multiple regression analysis conducted for the present study showed grade level to be the least influential of all of the variables in relation to students citing teacher warmth behaviors as important teacher characteristics.

4. Grade level does not appear to be a significant factor in students perceiving teacher organization behaviors as important teacher characteristics. The results for the Washington sample of students did not support the eastern Virginia findings. Ninth graders and twelfth graders cited teacher organization behaviors with equal frequency.

5. Sex does not appear to be a significant variable in relation to students' perceptions of teacher characteristics at these grade levels.
Male and female students from both samples characterized teachers very much the same, citing the various categories of teacher characteristics with equal frequency.

Stage II -- Implications based on the analysis of student self-esteem and locus of control perceptions in relation to the students' perceptions of teacher characteristics.

1. For the Washington State sample of students, the situation-specific affective variables like students' in-school locus of control or in-school self-esteem perceptions, seemed to be stronger predictors of the students' other in-school attitudes than was the global affective variable, global self-esteem. This finding tends to support Heaton and Duerfeldt (1973), Lefcourt (1976), and Behuniak and Gable (1981) who found that instruments measuring global feelings were inadequate to analyze attitudinal variables in specific situations.

2. On the whole, the affective variables examined for the Washington sample of students were also better predictors of the dependent variable, teacher warmth, than were the demographic variables. The implication of this finding is that attitudes, like students' perceptions of teacher characteristics, are too complex to be analyzed by demographics alone. Conger and Constanzo (1976) suggest that groups should be organized on the basis of dynamic variables like locus of control and self-esteem because these affective variables are subject to change, "significantly and meaningfully modified by life experiences." (p. 9) That in-school LOC perceptions and students' in-school self-esteem were stronger predictors of teacher warmth for the Washington State sample of students than most of the demographic variables examined, tends to support this point. Investigating students' in-school
attitudes by examining them only in relation to static demographic variables is likely to result in incomplete analyses at best.

3. In-school locus of control appears to be an important variable to consider when analyzing students' in-school attitudes or perceptions. I-SLOC externality was the strongest predictor of the dependent variable, teacher warmth, in the present study and it offers some potential for examining other student attitudes and perceptions in the school setting.

4. In analyzing students' perceptions of teacher characteristics multiple variables should be considered. The six variables examined through this investigation accounted for only 18% of the variance in the dependent variable, teacher warmth, which demonstrates that other factors than these six influence students' perceptions of teacher characteristics. In short, these student perceptions appear to be complex attitudes requiring an examination of many potential independent variables through an application of multiple statistical analyses.

Recommendations for Further Study

On the basis of the information gathered in the process of investigation, and on the implications of the various statistical analyses conducted, the following recommendations for further study are made.

1. The body of affective research comparing black and white students is limited and conflicting. Different student samples should be sought to expand on this area of information:

   a. It is recommended that student samples similar to the ones from Virginia and Washington be assessed in other localities and this study be replicated to determine if the findings related to
students' perceptions of teacher characteristics are common to other areas.

b. Since the eastern Virginia and Washington State samples were taken from racially mixed and culturally dissonant school settings, it is also recommended that future studies focus on sampling black and white students from racially and culturally consonant settings. Black students from predominantly black schools should be assessed and compared to white students from predominantly white schools. The purpose would be to determine if the findings of the Virginia and Washington studies related to ethnicity would be upheld under these new circumstances.

c. Likewise, it is recommended that a complexion of dominant/minority student population students different from white/black be sought and assessed to determine if the dominant and minority student populations perceive teacher characteristics as the white and black students have perceived them in Virginia and Washington State.

d. A caution was noted earlier that the Washington State sample of black students was taken from a small total population of black students. It is recommended that samples be taken from large student populations so that the most reliable results can be obtained.

2. In-school locus of control and in-school self-esteem for the Washington sample demonstrated some potential for explaining or predicting student perceptions of teacher characteristics. It is recommended that researchers continue to examine these situation-specific affective variables when studying student perceptions in the school setting.
Other affective and demographic variables should also be examined. For the Washington sample, most of the variance in the dependent variable, teacher warmth, was unaccounted for by the six variables examined in the Washington study.

3. Finally, it is recommended that multiple statistical analyses be employed when examining complex affective variables like students' perceptions of teacher characteristics, rather than relying on a single statistical tool. The use of multiple regression analysis for the Washington State study demonstrated that analysis of variance was simply not powerful enough to produce a complete interpretation of relationships among variables. The various statistics generated by the multiple regression equation gave a more comprehensive picture of how the variables were inter-related.
BIBLIOGRAPHY


APPENDICES
APPENDIX A

GLOSSARY

For the purposes of this study, terms were defined as follows:

1. **Consonant context** -- a social/cultural setting which presents the individual with a consistent system of cultural and social values and pattern of value reinforcements whereby the individual lives relatively free of value conflicts. The values introduced in childhood are reinforced in daily interaction with others of the same cultural/social orientation.

2. **Dissonant context** -- a social/cultural setting which consistently presents the individual with conflicting cultural and social values. In such a setting the individual constantly encounters others who are of different political, cultural, religious persuasions and who are of different social and economic classes, and probably who speak distinctly different dialects of the same language or possibly foreign languages. Characteristic of such settings are visibly differing ethnic backgrounds of those persons involved, which appear to emphasize the value differences among them.

3. **Locus of control (LOC)** -- the point(s) or source(s) of control in any given situation as perceived by the individual.

   a. **External locus of control (external LOC)** -- the individual's perception that an event is contingent on luck, chance, fate, the control of powerful others, or on the great complexity of surrounding circumstances rather than on his own efforts, behavior, or talents. (Rotter, 1966, p. 1)
b. Internal locus of control (internal LOC) -- the individual's perception that an event is contingent upon his own behavior or his own relatively permanent characteristics. (Ibid., p. 1)

c. In-school locus of control (I-SLOC) -- the point(s) or source(s) of control in the school setting as perceived by the student.

4. Self-esteem (SE) -- The individual's conscious beliefs, opinions, attitudes, values and feelings about -- and his positive or negative orientation toward -- himself. (Rosenberg, 1972, p. 9)
   a. Global self-esteem (global SE) -- a general positive or negative feeling of overall worthiness, adequacy, competency, efficiency, etc. that a person has about himself. (Ibid, p. 10)
   b. High self-esteem (high SE) -- having fundamental respect for the self and a feeling of inherent individual worth. (Ibid., p. 9)
   c. Low self-esteem (low SE) -- lacking respect for the self, considering the self as inadequate, deficient, and unworthy. (Ibid., p. 9)
   d. In-school self-esteem (I-SSE) -- a student's positive or negative feeling of worthiness, adequacy, competency, efficiency, success as a student -- a feeling specific to the school setting.

5. Teacher organization behaviors -- teacher instructional behaviors characterized by such factors as clarity of expression, classroom control, and planned, outlined, sequential, orderly, classroom operations. (Sizemore, 1979, p. 3)

6. Teacher stimulation behaviors -- teacher instructional behaviors characterized by teacher enthusiasm for the subject matter and
learning activities, interesting lessons, and varieties of learning activities and instructional techniques. (Ibid., p. 3)

7. Teacher warmth behaviors -- teacher behaviors characterized by such factors as being personable, nice, friendly, caring, fair, accessible, approachable, trusting. (Ibid., p. 3)