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RELATIONSHIP OF EDUCATIONAL VALUES
AND ATTITUDES TOWARD "DOUBLE SESSIONS"
IN A RURAL COMMUNITY

by

Patrick Clayton Harrington

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
Degree of Doctor of Education
Department of Educational Leadership

Western Michigan University
Kalamazoo, Michigan
August 1980
ACKNOWLEDGEMENTS

A particular expression of appreciation is extended to Dr. Richard E. Munsterman, my committee chairman, for the instructive counsel and continued encouragement he provided during the preparation of this manuscript. I would also like to express my gratitude to committee members, Dr. Mader and Dr. Smidchens, for their guidance in my doctoral studies.

A special thanks is extended to Rose Edgerton, whose assistance was essential to bringing this task to completion and also to Betty Halsey for her assistance and encouragement.

Additional appreciation is extended to Steve Hunt for his always willing counsel and also for his expert assistance with statistical analysis interpretations.

Finally, I wish to express my sincere appreciation to my wife, Barby, and my children, Greg and Kelly, for their patience, understanding, and support during the period of writing this document. Their caring and loving cooperation made the completion of this dissertation possible.

Patrick Clayton Harrington
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TO

my parents, Dick and Trudy,

my wife, Barby,

my son, Gregory,

and,

my daughter, Kelly
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CHAPTER I

INTRODUCTION

Many school districts have been forced to or could soon face the prospect of considering double sessions to accommodate students. Double sessions is a term which refers to a school day with separate sessions for two groups of pupils in the same instructional space; for example, one school building used by high school students during a morning session and by junior high students during an afternoon session. This prospect has come as a result of urban flight to the suburbs, because of condemnation of present buildings and facilities, and/or because of the current trend of taxpayers to vote negatively on bond and millage proposals. The Michigan Department of Education report on voting patterns for millage and bond proposals for fiscal year 1978-9 is listed in Table 1.

Table 1

Michigan Operational Millage and Bond Issue Report

<table>
<thead>
<tr>
<th>Proposal</th>
<th>Total Number</th>
<th>Passed</th>
<th>Failed</th>
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<tr>
<td>Renewal Millage</td>
<td>292</td>
<td>275 (94%)</td>
<td>17 (6%)</td>
</tr>
<tr>
<td>Additional Millage</td>
<td>210</td>
<td>65 (31%)</td>
<td>145 (69%)</td>
</tr>
<tr>
<td>Renewal With Additional</td>
<td>85</td>
<td>37 (44%)</td>
<td>48 (56%)</td>
</tr>
<tr>
<td>Bond</td>
<td>75</td>
<td>26 (35%)</td>
<td>49 (65%)</td>
</tr>
<tr>
<td>Combined Totals</td>
<td>587</td>
<td>378 (64%)</td>
<td>209 (31%)</td>
</tr>
</tbody>
</table>


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As the 65 percent failure rate on bond issues listed in Table 1 indicates, a high probability exists that a double-session format will be needed to effectively house students in the future for many districts. Communities which presently have double sessions and those who are considering instituting double sessions are concerned with the impact this format has on the quality of the total educational program in their community. There are those who purport that double sessions provides for more efficient use of facilities, creates a savings in school taxes, and has no dilatory effect on student academic and other learning opportunities (Cypress, 1970). Advocates of double sessions maintain that although this kind of schedule may create some inconveniences, they are minor in comparison to the inefficiency and resulting cost of conducting full day sessions in these inflationary times.

Those who oppose the adoption of double sessions sustain the belief that double sessions is a weak form of education that carries with it a cost that can be measured both in terms of increased taxation and decreasing educational dividends (Fowkes, 1969). They oppose the widespread belief of many taxpayers that a negative vote on a bond issue means an automatic savings in school taxes. An argument cited is that frequently expensive portable classrooms are introduced on a temporary basis to cope with over crowding, but often they become costly permanent fixtures which rarely solve the problem (Fowkes, 1969). The longer operating day, they maintain, is bound to increase taxes as it requires higher operational funds to
cover the cost of more heat, light maintenance, electricity, and transportation.

In terms of learning opportunities, opponents of double sessions maintain that the curriculum is negatively affected. Time missed by shortened periods or length of school day creates less instruction time and scheduling difficulties because the number of classes per day on each session are reduced. Frequently electives become financially uneconomical to offer because the number of students available with flexible schedules are too limited. Opponents also cite expenses that are not measured in terms of dollars and cents but in terms of how double sessions affect the morale, spirit, and intellectual progress of the community. This is reflected in the apathy of student participation in the extracurricular program. They contend that it is difficult to maintain student interest and enthusiasm in clubs and intramurals. Thus, this lack of interest in school functions causes students to identify themselves with "other than school activities," namely, social friends, a car, or an after-school job.

The greatest detriment to education as a result of double sessions is the apparent lack of concern of parents who accept this form of educational mediocrity. Often they permit themselves to believe that early morning tardiness isn't important, or that extraclass tutoring, clubs, sports, and intramurals are only fringes that can be done without. Although impossible to compute in dollars and cents, the student on double sessions is clearly put at an academic disadvantage because his chances for a more meaningful and abundant
life are curtailed.

The opponents of double sessions agree that the alternative is not easy to accept because it usually entails a building program and higher taxes. However, if a problem of overcrowding exists, it should be acted upon at the earliest possible time because building costs and land prices keep rising. If citizens are concerned about economy in education, it is prudent that they consider the total cost of double sessions, both the economic input on their pocketbooks and the noneconomic impact on the children of their community as it relates to their learning.

Although many communities are faced with a declining enrollment problem in their schools, there are and will be many communities that face the prospect of double sessions. Districts confronted with this reality will have to weigh carefully the possible implications of adopting a double sessions schedule against their responsibility for providing an adequate educational program for their children (Thelen, 1951).

The educational leaders and eligible voters share this responsibility. The educational leaders are charged with designing and maintaining the best program possible with the available funds and resources. The voters are charged with the responsibility of supporting or not supporting tax issues which determine the amount of these resources.
Purpose of the Study

The purpose of the study was to examine a community currently experiencing a double-sessions school organization. The citizens, students, graduates, and staff of the Yale School District, Yale, Michigan, were surveyed to determine their attitudes held toward double sessions and their opinions held on selected educational values. The data was examined to determine if there was a direct relationship between the opinions held on these selected values and agreement-disagreement with double sessions and to determine differences among participants regarding their opinions.

An additional purpose was to determine if there were any differences among eligible voters regarding their attitudes toward eliminating double sessions. These findings would be useful in developing strategies for bond referendums. Based on these varied purposes, the following research questions were deemed appropriate by this researcher:

1. What were the varying district constituents' (parents, other voters, graduates, students, and teachers) opinions regarding what should be emphasized in the educational program, and what were their attitudes toward double sessions?

2. Was there a relationship between what the participants emphasized in the educational program and their attitudes held toward double sessions?
3. Was there a difference in attitudes toward eliminating double sessions among the eligible voters?

District Background

The Yale Public School District of St. Clair County, Michigan is located approximately sixty miles north of Detroit, Michigan. Although an historically agricultural community, the area also serves as a bedroom community to the surrounding industrial cities of Port Huron, Flint, and Detroit. The school district has a large geographical area of approximately 170 square miles with a 2246 student population.

The district currently has five elementary schools housing kindergarten through sixth grades and one high school serving 1100 students in grades 7-12. The high school, built in 1966, was designed for a four hundred fifty student population. The building capacity has been increased with the conversion of the cafeteria into three general classrooms and with the addition of two portable classrooms.

The community has turned down five consecutive bond proposals for building additional facilities to accommodate secondary students. Thus, double sessions were instituted in 1972 with grades 10-12 attending from 7:00 a.m. to 12:10 p.m. and grades 7-9 attending from 12:21 p.m. to 5:21 p.m. This double sessions format is necessary to accommodate space needs for the 1100 7-12 students who have had double sessions for the past eight consecutive years.
Rationale of the Study

Traditionally, the institution of double sessions in schools has been viewed as a temporary solution to accommodate students until new facilities could be constructed to get students back on full days. However, the current tax revolt, exemplified by the Proposition 13 Bill passed by the California legislature reducing property taxes by 50% and the 65% failure rate of bond referendums in Michigan, will curtail new school construction. Coupled with taxpayer reluctance to provide additional facilities, communities faced with increasing enrollments may well face the prospect of limited space to house students.

The arguments against double sessions are many and varied. In addition to the related literature on this topic, the researcher sought the assistance of several Yale teachers in identifying their concerns with a double-sessions schedule. A memo was sent to all teachers in grades 7-12 which indicated my intention to conduct a study on the merits of double-session scheduling. The senior and junior high staffs were requested to provide assistance by attending respective staff meetings to present their viewpoints. Twelve senior high and nine junior high teachers volunteered through this process.

The teachers were asked to discuss and then list what they perceived to be the major concerns associated with a double-session schedule. Significant concerns from these discussions and from the literature follow.
The disruption to family life is cited as a major argument. Meyers and Meredith (1962) found that parents maintain that their authority and interaction with their children are diminished because it is difficult to plan meals together, and parent work schedules often do not allow for proper supervision. For instance, when parents work during the day, there is no supervision in the morning for children who attend afternoon sessions. Additionally, parents who work the afternoon or midnight shift seldom see their children who attend the afternoon session. Student participation in extracurricular programs only adds to the problem of scheduling common meal times and time spent with parents.

According to Mayhew (1962), of even greater concern to many parents and educators is that the double-sessions schedule places many hardships on the students and that children are denied the valuable benefits that a full day operation provides. One hardship mentioned by Mayhew is that students find it difficult to get the proper amount of rest. An example of this problem is that many students have to catch a bus as early as 5:40 a.m. after having been up late to attend a school athletic or social function. Likewise, Yale teachers pointed out in our staff meetings that several afternoon students who have jobs or chores to do in the morning have been up approximately five to six hours before they attend their first class.

The benefits lost due to attendance on double versus full day sessions are primarily related to the reduced time spent in school.
Usually the instruction hours are reduced from six class periods with a lunch break to five consecutive hours without a lunch program. This format has several effects; consecutive class hours with no breaks allowed for little student social-interaction, the fast pace reduces opportunity to formulate meaningful teacher-student relationships, and space and opportunities for extracurricular experiences are curtailed because building and facilities are in constant use. Meyers (1962) points out that students who are bussed cannot come early or stay after school. Thus, the reduced amount of time spent in school with the related reduction of opportunities to get involved in extracurricular activities allows for an increase in student idle and unsupervised time. Fowkes (1969) cites this lack of identification with school coupled with increased idle time often promotes other than school activities, jobs, and cars taking precedence over school activities and studies.

The Yale staff also enumerated several problems associated with a double-sessions schedule. Paramount to the Yale teachers is the lack of an in-school preparation period which curtails professional interaction and communication with peers and students. Also, because there is no place to work or meet when the building facilities/classrooms are in constant use, they contend this inhibits staff unity and thus promotes poor staff morale.

Yale school personnel also listed concerns regarding a lack of service and opportunities provided to students. The primary concern is that curriculum offerings and flexibility are reduced because of
the shortened five-hour session. Opportunities for individual student tutoring during and after school are reduced because of space use problems. Also, the Yale staff reported that the fast pace of five consecutive hour sessions increases teacher and student fatigue.

Gabbard (1953) found that school administrators relate issues that are not readily apparent such as the problems that can arise with teachers sharing facilities and classrooms. Another burden faced by administrators is the scheduling of facilities for athletic and other extracurricular groups. Plus, the constant use of the building for both school sessions and extracurricular activities reduces the opportunity for proper cleaning and maintenance of facilities.

Whether the above mentioned concerns and problems associated with double sessions warrant the investment in providing additional space to have full-day schedules is an individual community decision. Anderson (1954) suggests that a study of the educational values and opinions of double sessions of those who are experiencing such a schedule could lead to an improved understanding of educational expectations which may or may not be realized with a double-sessions schedule.

Data from this study also has the potential of advancing the understanding of the consequences of double sessions for communities faced with this prospect. Additionally, the results of this study could serve as a springboard for further investigation and study of the effects of a double-sessions educational program.
Overview of Dissertation

Presented in Chapter II is a review of pertinent literature related to the topics of double-sessioned school organization and instruments devised to measure values. This review leads to the logical development of the eight research hypotheses, regarding the relationships and differences of perceived values held toward education and perceived attitudes held toward double sessions. The hypotheses are listed in the beginning of Chapter III.

The methodology utilized to develop instruments, the method of sampling, the data collection procedures, and the statistical analysis procedures which were used to test the hypotheses are also presented in Chapter III. The return percentages of the survey questionnaire with the corresponding demographics of the samples and hypothesis testing are presented in Chapter IV.

Chapter V concludes the body of the dissertation with conclusions based on the findings of the hypothesis testing, possible implications to public education and recommendations for further investigation. Appendices are included, in which pertinent documents and appropriate statistical information are presented.
CHAPTER II

REVIEW OF SELECTED RELATED LITERATURE

The focus of the literature review is an examination of material pertinent to the two components of the major research questions. These components are (1) the double sessions school schedule and related problems, and (2) determining selected values held toward education. The review is divided into the following sections: Gaining Perspective on the State of the Art, Historical Perspective—Double sessions, Double Sessions Studies, Values Instrumentation, and Conclusions Based on the Literature Review.

Gaining Perspective on the State of the Art

Current literature on the effects of double sessions is rather scant during this period of general decline in student enrollments and the resulting closings of many school buildings. Although it is true that these declining enrollment conditions exist in many communities, there are also many districts that are faced with increasing enrollments coupled with inadequate space to house their students.

The reasons for this seemingly paradoxical situation stem from the growth of nonmetropolitan areas and a significant decline in metropolitan population growth continuing the historic reversal which began about 1970 (Plotkin, 1978). Thus, while urban school populations are declining, causing the closings of several buildings,
many nonmetropolitan areas are confronted with increasing enrollments and the need for additional educational housing and facilities. Plotkin's (1978) population studies signal that this is particularly true for the "sunbelt" states of California, Florida, and Texas which have received about 40 percent of the population growth of 13 million in the United States since 1970.

Added to the educational community's concern of increased suburban and decreased urban student population patterns is the current trend of voters, as exemplified by Michigan citizens, to reject bond issues for new buildings (see Table 1, p. 1). Thus, it is apparent that problems associated with declining enrollments and school closings will be shifted to focus on the school housing shortages being experienced by a growing number of suburban and rural communities.

**Historical Perspective - Double Sessions**

The introduction of one plan for meeting rapid enrollment increases is that of the split shift, half day, or double session. Many communities throughout the United States have used some variation of this plan to double the capacity of their school plants. Basically, the double session is, in effect, operating two shortened school programs in one day by having separate student groups attending classes at different times (Brandes, 1953).

Historically, the use of a double-sessions schedule or variation thereof has been utilized on a temporary basis until construction
of facilities could keep pace with burgeoning enrollments or until an emergency space shortage created by a fire or other disaster was resolved. This was particularly true during the post World War II era which gave rise to what has become known as the "baby boom" where a very large number of children were born.

An increase in the United States population of 131,669,275 in 1940 to 179,323,175 in 1960 attests to the significant increase of school age children (Paxton, 1973). Thus, many communities had no other recourse but to install a variation of the double sessions format to accommodate students.

The major criticism of this type of school operation centered on the concern that students would not be able to complete work normally included in a full or regular day program. Estimates were that students would lose 20% to 30% of their instructional time under a plan of this nature (Fowkes, 1969; Klotz, 1959; Thomas, 1953; Wyman, 1957). Other evidences of criticism were offered by Oliver (1959) indicating a striking reduction in the use of the library, curtailed enrollment in fine arts, and inability of students to get help from teachers outside of class as the major disadvantages of double sessions.

French (1965) stated that most people who have worked with double sessions will avoid using them, if at all possible. The review of literature suggests that, indeed, avoidance of the double sessions schedule format has historically been the general rule. The researcher could find no evidence of any school district that
has employed the double session schedule for an extended period of time. Rather, the installation of a double session formula has been implemented as a temporary stop-gap measure until new facilities could be constructed.

From the experience of this researcher, the tendency to view double sessions negatively persists in our contemporary setting. Often school district bond and operational millage campaigns are predicated on the threat that double sessions would have to be instituted unless their millage requests received favorable attention.

Double Sessions Studies

The literature on double sessions almost exclusively regards the decision to employ half-day sessions to be based more on expediency than anything else. Traditionally, educational leaders and citizens alike have come to regard double sessions as a necessary evil that must be tolerated until a better way to relieve overcrowded school facilities could be found (Cypress, 1970).

The purpose of the educational process thus becomes the issue in terms of what kind of preparation is necessary for young people to adequately meet the challenges of post high school experiences. Clarizio (1969) summarized this point by the following:

Most reasonable persons would agree today that the legitimate functions of the school extend beyond the development of intellectual skills and the transmission of subject-matter knowledge. The school also has undeniable responsibilities with respect to mental
health and personality development, simply because it is a place where children spend a good part of their waking hours, perform much of their purposeful activity, obtain a large share of their status, and interact significantly with adults, age-mates, and the demands of society. Hence, as long as the organizational, administrative, disciplinary, and interpersonal aspects of the school environment inevitably affect the mental health and personality development of its future citizens, it obviously behooves society to arrange these matters as appropriately and constructively as possible. (p.27)

Hence, the preponderance of literature on double sessions is directed towards how this schedule format affects the quality of the school environment with respect to not only the transmission of subject-matter knowledge, but also to other school activities, experiences, and opportunities that contribute to the educational experience and ultimately to the preparation for adult life.

Fowkes (1969) referred to this reduction of a quality school environment in terms that such a schedule affects the morale, spirit, and intellectual progress of the community. Further, he stated that, "double sessioned education is a retrogressive step as it seeks to destroy the educational program that has been slowly and carefully built into the system, and it places the students of that community at a competitive disadvantage (p.77)."

It is this disruption to the educational setting and procedures that the majority of the researchers have investigated. Shreve (1976) in his study of student perceptions of double sessions expressed the concern that students attending half-day schedules had a more negative attitude towards learning than did students on a regular day. Students objected strongly to the following adverse
effects the schedule had on their personal life: curtailment of social opportunities, the early (or late) arrival to school, and transportation and scheduling problems incurred in participation of extra-curricular activities.

Beyer (1975) also expressed concern with the effect on how double-session students made use of their free time both in and out of school. He found that a smaller proportion of students reported involvement in extra-curricular activities after the introduction of overlapping sessions. Also, he found a marked tendency for students to devote less time to eating lunch and doing "volunteer work" in the school, and for students to devote more time to working at a part-time job. In addition to personal inconvenience as a leading problem, Tarbet (1975) stated that an equally significant problem that surfaced in his study was the feeling of depersonalization generated by the assembly-line type process of a two-shift school. This was supported by attitudes that students did not communicate with other students as much, that it was difficult to arrange conferences with teachers, and that there was a great deal of difficulty associated with extra-curricular activities.

Another major criticism voiced in the literature dealt with the communication problems created with a double-shift schedule. Beyer (1975) concluded in his study that there was general agreement that overlapping sessions had eroded channels of and opportunities for communication within the school. Teachers and school officials in particular cite the communication difficulties

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as a major problem because the double-shift schedule does not allow for an in-school preparation period which allows for professional interaction and communication with peers and students (Meyers, 1962). Further, many teachers contend that because there is no place to prepare lessons or to meet with fellow staff members to discuss educational issues and concerns that this lack of opportunity for communication reduces educational program quality (Gabbard, 1953).

Included in the reduction of in-school communication is the inaccessibility students have to the guidance services. Because study periods are necessarily eliminated under a split-shift organization, students find it most difficult to visit the counseling center for personal or academic guidance (Nighswander, 1971). Thus, it becomes apparent that a student must, unless transportation before school or after school is not a problem, forfeit valuable classroom instruction time to avail themselves of personal guidance services.

Similar to the problem of accessibility to guidance services is the difficulty students have finding non-class time to use the library and media center materials. Oliver (1959) found in his study that there was a striking reduction in the use of library resources due to the split shift. The circulation of books per student dropped 38 percent. Attendance in the library dropped 38%, and the use of the library by classes dropped 21%. Even when students were within walking distance of the school or could provide their own transportation, their use of the library was
often restricted to their particular session to avoid supervision problems.

Student opportunities to engage in extracurricular programs are also curtailed by the necessary limitations imposed by a double shift. French (1965) and Thomas, (1953) alluded to this problem by expressing concern with the crowded facilities. Club meetings, play practices, and athletic and intramural practices and events are difficult to schedule because the facilities are in constant use. The morning shift students are required to leave school and return after the completion of the afternoon session for practice periods. The hardship for the afternoon students is similar because they often return home late and miss meal times in order to participate in these activities. Thus, many students, as Fowkes (1969) points out, do not or cannot avail themselves to these school activities.

Cramped facilities not only curtail the availability and frequency of use by specific groups for extra-curricular activities, but also these conditions have significant implications to classroom usage. Bassa-Quansah (1964) stated that it is rather difficult under the double-shift system for a teacher to have any absolute control over books and the arrangement of visual-aid materials in the classroom when used by two teachers and two groups of students. Thomas (1953) also cited the problem of room sharing as a major deterrent to individual students or groups of students engaging in class projects because of inadequate storage and/or security. He
further states that the limitations of double room use promotes an indifferent attitude towards educational projects that reduces the opportunity for valuable educational experiences.

Gabbard (1953) expressed that room sharing can also cause friction among the teaching staff. Disagreements often arise over general classroom maintenance responsibilities, use of available storage areas, and use of chalk and bulletin board space.

The disruption to the educational setting and procedures caused by double sessions has a corresponding impact in family life. Drummond (1975) cites transportation as one of the major problems expressed by parents. For example, if a student wishes to participate in an extracurricular activity such as a club, play, or athletic program, they must be transported to the school. Then, the parent must return to the school to pick their child up or wait until the activity is over. After school use by the morning session student or before school use by the afternoon session student is impossible because the facilities are in constant use. Obviously, this transportation problem is compounded if a parent has children attending both school shifts. Nightswander's (1971) study suggests that transportation problems were cited by many students as the reason why they could not participate in extracurricular activities under the split-session schedule.

Parents cited many other inconveniences to family life caused by a double sessions schedule. Meyers and Meredith (1962) found that parents were greatly concerned with the idle time allowed children under this schedule. Supervision and authority over
their children is diminished, parents believe, because it is
difficult to constantly monitor their children's whereabouts. If
the children are in school, parents know where they are and that
they are being supervised.

Two additional parental concerns mentioned in the literature
revolve around the sleeping and eating patterns of their children.
The early arrival to school or the late return from school makes
it inconvenient and often impossible to schedule common meal times
(Thomas, 1953). Students quite often skip meals in order to get
to school on time or to attend an after-school activity. Bassa-
Quansah (1964) found that many students skip their breakfast in
order to be at school by 7:00 a.m. Goodall (1976) maintained that
afternoon session students, in particular, have irregular eating
habits. She stressed the fact that many students do not eat a
proper lunch because there is often no one in the home to prepare
and/or to supervise the meal selection. Furthermore, students who
participate in after-school activities often skip supper or fill
up on "junk food". She cites these poor nutritional habits during
the child's growing years as a contributing factor in poor student
performance in school.

Assuring that children receive the proper amount of rest is
listed as a major concern by parents (Mayhew, 1962). Parents
maintain that it is difficult for children to get the proper rest
regardless of which school shift they attend. With school work,
social and school activities, and television viewing, it is difficult
for the morning shift students to get to bed early enough to get
the proper amount of rest and awake as early as 5:30 a.m. to catch
a 6:15 a.m. bus to school. Bassa-Quansah (1964), Goodall (1976),
and Thomas (1953) reported that teachers in the afternoon shift
report that many of their pupils are usually very sleepy; this is
because many students exhaust themselves playing all morning or by
working a part-time job before school. Thus, they contend these
reasons invariably tend to lower attention during the afternoon
classes.

Meyers and Meredith (1962) reported that parents maintain
their authority and interaction with children is greatly diminished
under the double-shift format. The lack of common meal times and
conflicting parent work schedules often does not allow for proper
supervision. The disruption to family life is compounded when
children of a family attend different sessions.

The research on the effect a double-sessions formula has on
student academic achievement is scant, and what research has been
done is conflicting and inconclusive in nature (Ashley, 1963;
Beyer, 1975; and Zold, 1972). However, when considering the
concerns and problems associated with the double-session format
found in the literature, Anderson (1954) suggests that communities
confronted with overcrowding determine their educational expecta-
tions and determine how those expectations may or may not be
realized with a double-sessions schedule. Even if this were done,
Cypress (1970) warns that given the financial and physical
conditions existing in most school districts, it is unlikely that double sessions will disappear. She further concludes that the disadvantages, then, must be weighed against the advantage of considerable savings in educational expenses. Thus, the current trend of negative voter response on bond issues may dictate that double session accommodations such as the ten hour day may indeed be necessary.

Summary. The majority of the literature on the double-session school organization is negative in nature. No evidence was found that this form of school schedule was accepted as a long term solution or as a planned method of permanent operation for schools. Rather, the institution of a double-session format has been viewed as a temporary solution until voters approved bond referendums and construction of additional facilities could be completed. However, the current trend of negative voter response on bond issues indicates a voter reluctance to support the construction of additional school facilities (See Table 1, page 1).

Much of the literature speaks to the reduction in the quality of the school environment with the induction of a double-shift schedule. Also, the professional literature is replete with the hardships this form of school schedule places on the educational community, the students, and the disrupting influences to family life.

It was this evidence of multiple concerns with double sessions expressed by educators, students, and parents that led to the
development of several hypotheses that relate to the research questions concerning the study participants' opinions held toward what should be emphasized in the educational program and their opinions held toward double sessions. Statements regarding these hypotheses and how each specifically relates to the research questions is presented in the last section of this chapter, Conclusions Based on the Literature Review.

Presented in the next section is a brief review of instruments that have been developed to measure values, including the two sub-scales of the VAL-ED instrument utilized in this investigation.

Values Instrumentation

Several instruments have been devised to measure values held by various groups and to determine the degree of value congruence between and within these groups. Four of these related instruments will be reviewed presently, as well as the Val-Ed instrument utilized in the present investigation. The instruments reviewed are: (1) Rokeach Value Survey, (2) Study of Values, (3) Survey of Personal Values, (4) Differential Value Profile, and (5) Val-Ed.

The Rokeach Value Survey (RVS) instrument was first published in 1967 and later revised in 1973. Rokeach (1968) defined a value as "abstract ideals, positive or negative, not tied to any specific object or situation, representing a person's beliefs about modes of conduct and ideal terminal modes" (p. 160).

The Rokeach Value Survey has two parts, each of which contains
a list of 18 values in alphabetical order as follows:

**Terminal Values:** a comfortable life, an exciting life, a sense of accomplishment, a world at peace, a world of beauty, equality, family security, freedom, happiness, inner harmony, mature love, national security, pleasure, salvation, self-respect, social recognition, true friendship, and wisdom.

**Instrumental Values:** ambitious, broadminded, capable, cheerful, clean, courageous, forgiving, helpful, honest, imaginative, independent, intellectual, logical, loving, obedient, polite, responsible, and self-controlled.

Each value term is accompanied by a short defining phrase. Respondents are instructed to rank-order each list separately according to the importance of the values as a guiding principle to them. A value's score is simply its rank. The author claims successful use of the survey with respondents from 11 to 90 years of age.

A review of the literature found several investigators that have employed the Rokeach Value Survey in their studies (Biller, 1973; Butler, 1973; McCarthy, 1972; and Yanker, 1973). The instrument was well suited to the purposes of the aforementioned investigations which sought to identify value congruence (value congruence defined as the similarity of shared values). The author purports that the Rokeach Value Survey is a useful tool in the analysis of groups to determine the reported value priorities.
within a selected group or population.

The Study of Values (SV) instrument was primarily designed for use with college students or adults who have had some post high school education. The scale was first published in 1931 and later revised in 1951 and 1960. As described by its developers:

The Study of Values aims to measure the relative prominence of six basic interests or motives in personality: the theoretical, economic, aesthetic, social, political, and religious. The classification is based directly on Edward Spranger's Types of Men, a brilliant work which defends the view that the personalities of men are best known through a study of their values or evaluative attitudes (Allport, Vernon, Lindzey, 1960, pp. 3-4).

The Study of Values is a 45 item, scale constructed, self-administered instrument. Unlike many other instruments it does not measure the person's absolute value strength on each scale, but rather the relative strength of each value. Therefore, a high value on one scale may be obtained only by decreasing the score on one or more of the other scales.

Gordon's (1978) Survey of Personal Values (SPV) instrument is similar to the Study of Values instrument in that they both measure broad areas of personal interest. Gordon's six scales for the Survey of Personal Values are as follows: Practical Mindedness (getting one's dollar's worth); Variety (doing new things); Decisiveness (making up one's mind and sticking to it); Orderliness (being well-organized); Goal Orientation (having definite goals clearly in mind).

All six of the scales appear to this researcher to be based on
human motivation and thus would serve as a predictor of individual and/or group differences. Sherman's (1969) study of personal value differences between Negro and white college freshman supports this contention. Murray (1970) also supported these premises by using the Survey of Personal Values in a study of rating job applicants to similarity-dissimilarity in value orientation.

The Differential Value Profile (DVP) measuring six value clusters is another instrument designed for use primarily with college students. The scales appear to closely resemble the six categories of the Study of Values as follows: aesthetic, humanitarian, intellectual, material, power, and religious. The respondents check one of four response options on a Likert-type scale.

The scales are intended to provide information useful in a variety of areas of educational research such as school-related personality changes, prediction of academic achievement, and counseling. Small (1969) supported this use of the Differential Value Profile as a tool for academic prediction and for student counseling in a study measuring value orientation versus academic success for college freshman.

Although the aforementioned value instruments have been utilized in educational research studies, the VAL-ED instrument was selected for this study because it was specifically designed to measure educational values which are a major component of this inquiry.

The VAL-ED instrument is one of a series of seven scales developed by Schutz (1967). The measuring instruments are all
derived from the theory of the author originally presented in FIRO-A Three Dimensional Theory of Behavior (Schutz, 1958). The VAL-ED scale was designed specifically to explore the varied relationships found within the educational setting. Schutz (1978) described the general instrument in the manual as:

VAL-ED (Educational Values): The scales explore personal relations among students, teachers, administrators, and community members. These relations include values about academic freedom, contact between teachers and the community, the right of the community to control school policy, and the teacher's right to privacy. (p.17)

The instrument consists of 126 items which constitute 14 subscales and are scored on a Likert-type scale. The VAL-ED is based on the theory that all human interaction may be divided into three categories: issues surrounding inclusion, issues surrounding control, and issues surrounding affection. Additionally, two other scales measure (1) the importance of education beyond its occupational advantages (IMP), and (2) whether schools should develop the mind or develop the whole personality (MIND). (A more detailed account of these VAL-ED sub-scales' reliability and validity may be found in Chapter III - Survey Instruments.)

The Importance (IMP) sub-scale refers to an often debated issue regarding whether the school should support "global learning" (high score) or stick to the "practical" preparation of students for employment (low score). The Mind (MIND) sub-scale refers to a school program and procedure that places an overemphasis on subject matter to the exclusion of students' feelings, sensations, and body. A low scorer supports the inclusion of a more holistic
approach to learning while a high score indicates preference for the more traditional training of the mind.

The above two sub-scales of the VAL-ED were selected for use in this study because they measure the "kind" of educational program people believe should be emphasized in the schools. These measurements would indicate the degree to which respondents value educational programs that include learning opportunities that are not specifically related to just job preparation and/or learning opportunities that involve more than just strict academic emphasis to include personality development experiences and understandings. Measurements from these sub-scales would provide an indication of how respondents value a broad based curriculum that includes such learning opportunities as fine arts, health and physical education, electives that stress leisure time interests and skills, and extracurricular experiences in athletics and clubs.

Conclusions Based on the Literature Review

The preceding review of literature has indicated an apparent lack of contemporary investigation into the problems associated with a double-sessions or a similar restrictive school schedule. Similarly, this researcher found no evidence of investigations into the long term effects of the double-sessions schedule.

The literature search indicates that this form of school schedule has historically been adopted on a short term emergency basis until new facilities could be constructed. There appears to be a consensus among authorities that double-sessioned education
not only poses considerable inconvenience to all concerned, but also has a dilatorius impact on the school environment which restricts potential learning opportunities for students.

There is, however, scant evidence in the literature regarding definitive research on the impact double sessions has on actual student achievement. This lack of evidence is presumably based on the historical precedence of the short term employment of this kind of schedule in any particular school district. Additionally, the literature indicates authorities currently to be preoccupied with the dilemma of prescribing possible remedies to reduced enrollments and the closings of buildings as opposed to proposing remedies to overcrowded conditions.

The literature is also replete with the following major concerns with a double-sessions schedule as opposed to a regular full-day program. A double-sessions format curtails inter-school communications; reduces student classroom time; restricts curricular offerings because of a reduced time schedule; provides too much idle and thus unproductive student time; and a double-sessions format is seen to have a very disruptive influence on family life.

Based on these findings in the literature which indicate the restrictive nature of double sessions, Hypotheses 1 and 2 were developed to correspond with a major purpose of the study which was to determine whether those currently affected by double-sessioned education believed this organizational plan could meet the educational expectations they value. Of the several value
instruments reviewed, the selection of the MIND and IMP (importance) sub-scales of the VAL-ED for inclusion in this investigation was considered apropos as the scales allow for the measurement of the relationship that specific educational values have to other organizational variables in the educational setting, such as double sessions.

Specifically, Hypotheses 1 and 2 relate to Research Questions 1 and 2 regarding respondents' attitudes toward educational program emphasis and double sessions and the relationship these attitudes have to each other. Hypothesis 1 states that there is a direct relationship between the degree to which respondents believe schools should emphasize student learning experiences that go beyond just job preparation for employment (IMP sub-scale) and the degree to which they favor eliminating double sessions. Hypothesis 2 states that there is a direct relationship between the degree to which respondents believe schools should emphasize student learning experiences that go beyond just the training of students' minds to include an understanding of their feelings, sensations, and body (MIND sub-scale) and the degree to which they favor eliminating double sessions.

Hypotheses 1 and 2 were developed on the assumptions drawn from the comments expressed by parents, students, and educators found in the review of literature which overwhelmingly support the view that double-sessioned education restricts potential learning opportunities for students. Although specific voter (those without
school age children) opinions were not found in the literature, it was decided to include this population in the hypotheses to determine if they held similar views to the other groups because of their influence in deciding millage issues. Therefore, Hypotheses 3-5, which relate to Research Question 2, were developed to determine if there were differences of opinion among respondent sub-groups toward educational emphasis and double sessions, as measured by the MIND, IMP (sub-scales of the VAL-ED) and double-sessions questionnaires.

Based on the warning of Cypress (1970) that given the financial and physical conditions existing in most school districts, it is unlikely that double sessions will disappear, and on the evidence of Michigan voter resistance to pass bond referendums, Hypotheses 6-8 were developed to answer Research Question 3. This research question regarded whether there were differences of opinion among eligible voters regarding their attitudes toward eliminating double sessions.

In view of the absence of information found in the literature with respect to the identification of specific voter opinions of double sessions, the researcher arbitrarily decided to examine three voter characteristics to assist Yale bond campaigners in identifying voter opinions of double sessions. Specifically, Hypothesis 6 indicated that there was a difference in respondents' attitudes toward double sessions based on age group, Hypothesis 7 indicated that differences in attitude would be evidenced by the
number of years lived in the district, and Hypothesis 8 indicated that a difference in voter attitudes toward eliminating double sessions would depend upon the extent of formal education attained.

Consideration was given to requesting additional voter characteristics such as occupation and income levels. However, as the researcher is presently employed in an administrative capacity in the school district under investigation, it was decided not to request these items out of a concern for public relations. It was assumed that some of the participants would view the inquiry of occupation and income levels as an invasion of their privacy and their reaction could affect participation in the study.

A precise statement of the hypotheses, methodology utilized to develop instruments, sampling and collection procedures, and the statistical analysis procedures which were used to test the hypotheses are presented in the next chapter.
CHAPTER III

METHODOLOGY

Research Design

This investigation was designed to obtain information from selected populations regarding their attitudes towards a double-session school organization and to determine their opinions on selected values toward education.

Information was gathered by survey questionnaire technique. Three separate instruments were designed and administered to measure the variables under investigation. A simple random sample methodology was utilized to identify representative respondents. Relationships and differences were examined through Pearson product moment correlation coefficients and one-way analysis of variance (ANOVA) techniques. A protected least squares difference post-hoc analysis was performed on the ANOVA tests. The results of the post-hoc analysis are presented in Appendix G.

Research Hypotheses

Based on discussion meetings with the Yale staff teaching on a double-session schedule and on the review of related research and literature contained in Chapter II, the following Hypotheses 1-5 were derived from Research Questions 1 and 2 posed in Chapter I. Hypotheses 6-8 were developed from Research Question 3 posed in Chapter I to generate information to assist the Yale school
administration in identifying groups of voters and to identify the
degree to which these groups support the elimination of double
sessions. For the ease of the reader, those research questions
listed in Chapter I will be restated and the research hypotheses
will follow.

1. What were the varying district constituents' (parents,
other voters, graduates, students, and teachers)
opinions regarding what should be emphasized in the
educational program, and what were their attitudes
toward double sessions?

2. Was there a relationship between what the partici­
pants believed should be emphasized in the educa­
tional program and their attitudes held toward
double sessions?

3. Was there a difference in attitudes toward
eliminating double sessions among the eligible
voters?

Hypothesis 1. There is a direct relationship between the
degree to which respondents believe schools should emphasize
student learning experiences that go beyond just preparation for
employment (IMP sub-scale of the VAL-ED) and the degree to which
they favor eliminating double sessions.

Hypothesis 2. There is a direct relationship between the
degree to which respondents believe schools should emphasize
learning experiences that go beyond just the training of students'
minds to include an understanding of their feelings, sensations, and body (MIND sub-scale of the VAL-ED) and the degree to which they favor eliminating double sessions.

**Hypothesis 3.** There is a difference in the extent to which the voter, parent, teacher, and student respondent sub-groups value the inclusion of student feelings, sensations, and body in the curriculum in addition to traditional subject matter (MIND sub-scale of the VAL-ED).

**Hypothesis 4.** There is a difference in the extent to which the voter, parent, teacher, and student respondent sub-groups value schools providing learning experiences that go beyond just preparation for employment (IMP sub-scale of the VAL-ED).

**Hypothesis 5.** There is a difference in respondents' attitudes held toward double sessions for the voter, parent, teacher, and student sub-groups.

**Hypothesis 6.** There is a difference in respondents' attitudes held toward double sessions dependent upon their age group.

**Hypothesis 7.** There is a difference in respondents' attitudes held toward double sessions dependent upon years of residency in the school district.

**Hypothesis 8.** There is a difference in respondents' attitudes held toward double sessions dependent upon the extent of their formal education.

The remainder of this chapter describes the sample population, development and validation of survey instruments, procedures.
utilized for data collection, and the methods which were used to analyze the data obtained.

Sample Population Characteristics

The populations for this study were comprised of community members, students, graduates, and teachers in the Yale Public School District, Yale, Michigan. All participants in this study were surveyed to determine both their educational values and their attitude towards double sessions. One population group consisted of community member participants who were randomly selected from the voter registration rolls and were surveyed to determine if they had children attending Yale Public Schools. Thus, the citizens were separated into two groups; voters (parents) with children in the Yale Public Schools and voters not having children in the Yale Public Schools. From a voter population of approximately 3,000 who did not have children in grades K-12, a simple random size of 100 was selected. Of the 1,000 voters with children in grades K-12, a simple random size of 100 was selected for the study.

Graduates of the Yale class of 1978 who attended double sessions were included in the study to determine the perceptions held by those who recently entered the adult world. From a class of 150 students, a random selection of 100 graduates was selected. This population was eventually eliminated from the study because a low percentage of graduates responded to the survey and it could not be determined if those who did reply represented a biased opinion of
the group. More detailed information on survey response rates are presented in Chapter IV.

All students enrolled in grades 7-12 in the fall of 1979 completed all three sections of the survey questionnaire. From this group of approximately 1100 population a sample of 200 student responses was randomly selected. This procedure of student participation was used to ease the survey instrument administration and to avoid possible bias over why some students were or were not asked to participate. Also, all teachers in grades 7-12 participated in the study. They completed the survey instrument during the same time period as their students.

Listed below is a summary of the populations and the respective sample sizes selected.

Table 2
Population Summary Table

<table>
<thead>
<tr>
<th>Approximate Total Population</th>
<th>Sample Size Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>1,000</td>
</tr>
<tr>
<td>Voters without children</td>
<td>3,000</td>
</tr>
<tr>
<td>in secondary school</td>
<td></td>
</tr>
<tr>
<td>Secondary Students</td>
<td>1,100</td>
</tr>
<tr>
<td>Graduates</td>
<td>150</td>
</tr>
<tr>
<td>Secondary Teachers</td>
<td>35</td>
</tr>
</tbody>
</table>

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Instrumentation

Three measurement instruments were utilized in this investigation. The first instrument included as part of the survey questionnaire was used to gather demographic information. The demographic instrument identified pertinent information utilized in the testing of the hypotheses with respect to the various population groups' age, sex, level of education, number of years lived in the community, and status as a parent, voter, graduate, or teacher. The demographic portion of the questionnaire had a separate section for students requesting only their sex, grade level, and years attended on a double shift schedule.

The second and third instruments which complete the survey questionnaire were designed to measure selected values of education and respondents' opinions held toward double sessions respectively. Instrument descriptions, validation and pilot testing procedures, and data collection procedures are discussed in the remainder of Chapter III.

Instrument to Measure Values Toward Education. The FIRO Awareness Scales - VAL-ED (Schutz, 1977) were designed to assess values regarding several aspects of education. Special permission was granted from Consulting Psychologists Press, Inc., (see Appendix B) to use two of the scales, totaling 18 questions, as part of the survey instrument. One scale is titled, IMPORTANCE
(IMP), which measures the importance of education beyond its occupational advantages. The second scale is titled, MIND (MIND), which measures whether schools should develop the mind or develop the whole personality.

Each of the 18 items is answered in a Likert scale fashion. Scale scores indicate the degree of agreement with the scale; 6 means strong agreement; 1 means strong disagreement.

Validity information for VAL-ED is mainly derived from a Study of Schools by Schutz (1967). Correlations of VAL-ED with other scales clearly indicate that educational values as measured by the VAL-ED are almost entirely independent of sex, marital status, age, religious preference, ethnic group, education, father's education, income, political leanings, geographical stability, and intelligence.

Table 3 is presented to display, for both VAL-ED scales, the mean, standard deviation, and reproducibility. The reported N for Importance (IMP) and MIND (MIND) was 5,847. The reproducibility figures just reach minimum levels of acceptability.

Instrument to Measure Opinions of Double Sessions. A three stage process was utilized to develop the opinions toward double sessions section of the survey questionnaire. These steps were (1) Identification of Questions, (2) Validation of Questions, and (3) Pilot Testing. Each of these stages is examined briefly.
Table 3
Means and Standard Deviations for Sub-Scales of The

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean</th>
<th>S.D.</th>
<th>Reproducibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMP</td>
<td>4.25</td>
<td>2.31</td>
<td>.86</td>
</tr>
<tr>
<td>MIND</td>
<td>3.82</td>
<td>2.29</td>
<td>.88</td>
</tr>
</tbody>
</table>

(Schutz, 1978)

Stage I - Identification of Questions. The purpose of this stage was to identify valid questions about double sessions from which attitudinal statements could be generated. The first step in developing a valid instrument involves an extensive review of the related literature pertaining to the topic under investigation (Gable and Gillung, 1977). As a result of such a review, several concerns were identified.

Additional concerns with double sessions were identified by teachers presently working in a school system experiencing double sessions. Meetings were held by the researcher with both the 7-9 grade teachers and the 10-12 grade teachers of Yale Public Schools. A total of thirty questions evolved from this process.

Stage II - Validation of Double-Sessions Questions. A panel of five experts was requested to consensually validate the questions. An expert was identified as a professional educator with at least
five years experience in educational administration or curriculum supervision. Members of the panel included the superintendent, three principals, and the curriculum director in the Yale Public Schools, all of whom had experience with double sessions.

The panel was asked to review the list of thirty questions for (1) clarity, (2) redundancy, and (3) appropriateness to double-sessioned education. Items which were judged either unclear or redundant by two or more panelists were eliminated. The list of thirty questions was reduced to 12 questions for inclusion in the survey instrument through this process.

Stage III - Pilot Testing. A pilot test of the opinions towards double sessions portion of the survey instrument was conducted. Fifteen adults were arbitrarily selected in a neighboring school district of Capac, Michigan, which had recently experienced double sessions.

The high school principal, two counselors, three secretaries, and two teachers of the Capac High School were requested to complete the pilot test. The remaining seven pilot test participants were randomly chosen Capac residents who were requested to complete the survey after an introduction and an explanation of the purpose for their assistance was provided by this researcher (see Appendix C). This population was chosen because of its accessibility and similarity to the Yale School District in geographic location, socioeconomic standing, and school district size. Also, the possibility of avoiding bias of Yale residents who might have been selected as a respondent to the final study was accomplished by
conducting the pilot study outside of the district.

The purpose of this test was to (1) establish administration procedures, (2) determine the ability of the instrument to discriminate among respondents, and (3) determine readability and clarity of questions. The pilot test participants were requested to indicate any questions that were difficult to understand or that were unclear.

The results of the pilot test indicated that there were no pilot test volunteers who had a problem understanding the purpose of the double sessions questionnaire or the survey questions. It was also determined that the instrument allowed for the identification of the various respondents.

Data Collection Procedures

Permission to survey the community attitudes toward education and opinions of double sessions was granted by the Yale Board of Education (see Appendix A). The superintendent and selected board of education members were appraised of the research procedures and also were informed of the instrument validation procedures.

Administration of the anonymous survey instrument took place the first and second weeks in November, 1979. The survey instrument was mailed to the selected random sample of citizens and graduates. Anonymity was assured all respondents by asking them not to write their names on the survey form and by assuring the respondents that no questionnaire would be traceable to any particular individual.
The secondary teachers and students were administered the questionnaire during the first hour class periods for the respective morning and afternoon school shifts. A follow-up procedure was established for the mailed survey form sent to parent, voter, and graduate participants with the inclusion of a return post card.

These participants were requested to mail the stamped school-addressed post card to indicate they had completed and returned the questionnaire. This procedure maintained the anonymity of respondents to the survey instrument yet allowed for the identification and follow-up of those who had not completed and returned the survey form.

A telephone call was made to those who had not returned the post card to personally request their assistance to the study. Those who could not be reached by telephone were sent a letter as a reminder that their participation would be appreciated and would be helpful to the study results.

**Statistical Procedures**

Once collection of data was completed, responses for items from the Demographic, VAL-ED, and Opinion of Double Sessions sections of the survey questionnaire were keypunched on computer cards. All statistical procedures were computed utilizing the Western Michigan University Computer Center during the month of January, 1980.

Pearson product moment correlation coefficients (r's) were
computed between scores on the sub-section IMP of the VAL-ED and opinions toward double sessions, and between the scores on the sub-section MIND and opinions toward double sessions. The correlation coefficients were utilized to determine the type of relationship that existed between these two selected educational values, as measured by the respective sub-sections of the VAL-ED, and opinions of double sessions for Hypothesis 1 and Hypothesis 2.

The one-way analysis of variance (ANOVA) technique was utilized to test Hypotheses 3-8. The following were stated in null and alternate form for the purpose of statistical analysis:

Hypotheses 3, 4, and 5, \[ H_0 : \mu_v = \mu_p = \mu_t = \mu_s \]
\[ H_1 : H_0 \text{ is false} \]

Where \( v \) represents voters without children in grades K-12,
\( p \) represents parents (voters) with children in grades K-12,
\( t \) represents teachers,
\( s \) represents students in Yale secondary schools.

Hypothesis 6, \[ H_0 : \mu_1 = \mu_2 = \mu_3 \]
\[ H_1 : H_0 \text{ is false} \]

Where 1 represents respondents aged 55 and older,
2 represents respondents aged 41-54,
3 represents respondents aged 20-40.
Hypothesis 7, \( H_0 : \mu_4 = \mu_5 = \mu_6 \)  
\( H_1 : H \) is false  
Where 4 represents lived less than 10 years in the community.  
5 represents lived from 10 to 20 years in the community.  
6 represents lived over 20 years in the community.

Hypothesis 8, \( H_0 : \mu = \mu_7 = \mu_8 \)  
\( H_1 : H \) is false  
Where 7 is equal to or less than a high school graduate education.  
8 represents some college training.

An alpha level of .05 was used for all the ANOVA computations.

A protected least squares difference (PLSD) post hoc analysis was performed on the ANOVA test results for Hypotheses 3-7 to determine if there were any significant differences present among the population means at the .05 significance level. Petroelje (1978) in his study of pairwise comparison procedures stated that the first consists of performing an overall test of the null hypothesis by means of the F ratio in a one way analysis of variance.

If the F ratio is significant, he maintained the second stage consists of a procedure analogous to the t test and is used to make all pairwise comparisons of means at the same significance level as that for the F ratio. If the F ratio is not significant, no pairwise comparisons of means are made.
The following PLSD formula was utilized in the present investigation and the results are presented in Table 14, Appendix G.

\[
t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\text{MSW} \left( \frac{1}{N_1} + \frac{1}{N_2} \right)}}
\]

\[\alpha = .05\]
CHAPTER IV

SAMPLE REPRESENTATION AND INSTRUMENT ANALYSIS

Introduction

Chapter IV continues the sequential presentation of information pertinent to the organization of this investigation. Presented in Chapter III were the rationale for research design, population selection, hypotheses selection, and statistical analysis procedures. Results of the survey response rates, sample population characteristics, and hypothesis testing are presented in this chapter, while the summary, conclusions and implications, and recommendations are discussed in Chapter V.

Survey Response Information

Table 4 indicates the number of surveys sent to each population and the number and percentage returned. While ten returned surveys could not be utilized because respondents failed to identify their population group, an additional four people from the voter group indicated an unwillingness to participate in the study.

The survey forms were mailed to participants on November 19, 1979. Respondents were requested to complete and mail the anonymous questionnaire and return an enclosed, stamped post card indicating they had participated in the study.

A telephone follow-up procedure was initiated on December 3,
requesting those who had not returned surveys to please be of assistance to the study. On December 12, a second telephone reminder was made to those who had not participated.

The most difficult population to contact was the Yale graduating class of 1978. Several of these individuals had left their parents' home and the area and could not be reached with the follow-up procedure. Where new addresses could be secured, additional questionnaires were mailed to those identified individuals.

It was decided to drop the graduate population from the study as a result of the low percentage (33%) of questionnaires returned. This minimal return percentage was deemed too low to avoid the possibility of having a biased sample.

Table 4
Frequency and Percentage of Returned Questionnaires from the Various Populations

<table>
<thead>
<tr>
<th>Population</th>
<th>Number Questionnaires Sent</th>
<th>Number &amp; Percent of Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduates of 1978</td>
<td>100</td>
<td>33 - 33</td>
</tr>
<tr>
<td>Parents (with children in school)</td>
<td>100</td>
<td>81 - 81</td>
</tr>
<tr>
<td>Voters (not having children in school)</td>
<td>100</td>
<td>60 - 60</td>
</tr>
<tr>
<td>Students (7th thru 12th)</td>
<td>200</td>
<td>200 - 100</td>
</tr>
<tr>
<td>Teachers (7th thru 12th)</td>
<td>35</td>
<td>35 - 100</td>
</tr>
<tr>
<td>Non-usable</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
Examination of Table 4 indicates two population groups, students and teachers, with a 100% response rate as the questionnaire was administered in a controlled setting during the school day. The 81% questionnaire return rate from the parent group was considered a good response. The 60% response from the voter group, those not having children in school, was deemed low considering the effort extended through telephone reminders soliciting their input to the study. This low response may be indicative of a general lack of concern for the school system which has seen the district operate on a double-sessions schedule for the past 8 consecutive years.

Demographics of the Populations

Summarized in Table 5 and Table 6 are the demographic characteristics of the parent, voter, and teacher respondents. As stated previously, insufficient response to the inquiry from the graduate population resulted in their being dropped from the study. The demographic information sought from the student population was dissimilar and is summarized in Table 7.

A major concern expressed in Chapter III was the potential difference in attitude towards double-shift education with respect to age, number of years lived in the community, and level of education. The means and standard deviations of participants' ages and years lived in the district were computed for each population group (see Table 5). It should be noted that the high mean of 16.3 years lived in the community for the teacher group could be misleading. Fourteen of the teachers do not live in the community and
### Table 5

Demographics of Voter, Parent, and Teacher Respondents

<table>
<thead>
<tr>
<th>Group</th>
<th>Sample Size</th>
<th>Sex-Percentage Male - Female</th>
<th>Age Mean</th>
<th>Standard Deviation</th>
<th>Years Lived in Community Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent</td>
<td>82</td>
<td>59 41</td>
<td>41.9</td>
<td>8.7</td>
<td>21.3</td>
<td>16.8</td>
</tr>
<tr>
<td>Voter</td>
<td>60</td>
<td>50 50</td>
<td>56.9</td>
<td>14.0</td>
<td>35.6</td>
<td>16.7</td>
</tr>
<tr>
<td>Teacher</td>
<td>35</td>
<td>55.6 44.4</td>
<td>34.3</td>
<td>7.9</td>
<td>16.3</td>
<td>13.1</td>
</tr>
<tr>
<td>Category</td>
<td>Parent</td>
<td>Parent</td>
<td>Group</td>
<td>Group</td>
<td>Teacher</td>
<td>Teacher</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>-------</td>
<td>-------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Less than high school graduate</td>
<td>12</td>
<td>15.0</td>
<td>9</td>
<td>15.5</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>High school graduate</td>
<td>32</td>
<td>40.0</td>
<td>28</td>
<td>48.3</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Some college training or more</td>
<td>26</td>
<td>32.5</td>
<td>10</td>
<td>17.2</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>College degree</td>
<td>8</td>
<td>10.0</td>
<td>8</td>
<td>13.8</td>
<td>12</td>
<td>35.3</td>
</tr>
<tr>
<td>Graduate college education</td>
<td>2</td>
<td>2.5</td>
<td>3</td>
<td>5.2</td>
<td>22</td>
<td>64.7</td>
</tr>
<tr>
<td>Missing data</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 7
Demographic Data of Student Sample
Population (N=200)

<table>
<thead>
<tr>
<th>Category</th>
<th>Male 53.8%</th>
<th>Female 46.2%</th>
<th>Age (Years)</th>
<th>Mean 14.9</th>
<th>Standard Deviation 1.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (Years)</td>
<td>Mean 14.9</td>
<td>Standard Deviation 1.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade Level</td>
<td>Frequency</td>
<td>Percent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>26</td>
<td>13.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>30</td>
<td>15.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>34</td>
<td>17.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>33</td>
<td>16.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>41</td>
<td>21.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>31</td>
<td>15.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing Data</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
were not included in the statistical analysis.

For the purpose of hypothesis testing, the demographic information provided in the survey instrument and presented in Table 5, was further divided for analysis. It was the opinion of this researcher that the adult population's attitudes held towards double sessions were affected by their age, number of years lived in the community, and by the extent of their formal education.

Through analysis, the adult respondents were placed in the following age groups: 55 years and over, 41-54 years, and 20 to 40 years. The rationale for this arbitrary grouping rests on the following assumptions. Respondents in the 55 years and older group are retirement oriented, generally have no school age children, and have little contact with the school system. Respondents in the 41-54 years old group have older children, are concerned with expenses for higher education, and are in their peak earning years. Those respondents in the 20-40 age group differ in that generally they have school age children, are establishing a home and career, and tend to be more selective about the educational opportunities provided for their children. Therefore, it was the assumption that attitudes of double sessions would be affected by the age group of the respondent.

Similarly, it was assumed that adult attitudes held toward double sessions were affected by the number of years lived in the community. The respondents were divided into three groups of 1-10 years, 11-20 years, and over 20 years residency in the school
district. It was assumed that the longer respondents resided in the community, the more conservative they would be in opposing the double session school organization.

Identified in Table 6 is the educational level attained by the three adult populations included in this investigation. Examination of these figures indicates 45% of the parents, 36.2% of the voters, and an obvious 100% of the teachers received post high school formalized training.

Respondents were also divided through analysis techniques according to level of education attained. Two groups were established for respondents who either matriculated through high school or less or had some college training. Again, the researcher arbitrarily assumed for the purpose of the study that the more formal education respondents had received, the more favorable they would be toward eliminating double-sessioned education in the school district.

With a mean age for parents of 41.9 and 56.9 for voters, the percentage increase of parents over voters receiving post high school training may be attributed to the ever increasing emphasis and opportunity to engage in formal learning experiences.

Demographic information on Yale students is provided in Table 7. Students in grades 7 through 12 were included in the investigation to determine what they value in education and also to determine their opinions of double sessions.
Results of Hypothesis Testing

The results of the statistical analysis for Hypotheses 1-8 are presented in this section. The first two hypotheses were tested with the Pearson product moment correlation coefficient. Hypotheses 3-8 were tested by the one-way analysis of variance (ANOVA) technique at the .05 level of significance. A protected least squares difference post-hoc analysis was performed on the ANOVA tests and the results are presented in Appendix G.

Hypothesis 1. Hypothesis 1 stated that there was a direct relationship between the degree to which respondents believe schools should emphasize student learning experiences that go beyond just preparation for employment (IMP sub-scale of the VAL-ED) and the degree to which they favor eliminating double sessions. A Pearson product moment correlation coefficient (r) of .09 at the .04 level of significance demonstrates a statistically significant relationship which supports this directional hypothesis. However, the resulting r = .09 demonstrates a very minimal relationship between the degree to which respondents favor education beyond its occupational advantage and the degree to which they also tend to favor eliminating double sessions.

Hypothesis 2. Hypothesis 2 stated there was a direct relationship between the degree to which respondents believe schools should emphasize learning experiences that go beyond just the training of students' minds to include an understanding of their feelings,
sensations, and body (MIND sub-scale of the VAL-ED) and the degree to which they favor eliminating double sessions. A Pearson product moment correlation was also used to test this hypothesis. The resulting correlation coefficient (r) was .14 at the .003 level of significance which demonstrates a statistically significant relationship and also supports this directional hypothesis. However, as was the case with Hypothesis 1, the resulting r = .14 also indicates a very minimal relationship.

Hypothesis 3. Hypothesis 3 stated there was a difference in respondents' values held toward education as measured by the MIND sub-scale for the various sub-groups. The ANOVA results listed in Table 8 support the research hypothesis that a significant difference exists (p = .0001, F ratio 7.46) in that there is a difference of values, as measured by the MIND sub-scale, held by the various population groups. The post-hoc analysis performed on the ANOVA results revealed that there was not a significant difference in the value held for this MIND variable among the parent, voter, and student sub-groups. The teacher sub-group demonstrated the only significant difference of opinion with the other sub-groups on this value by supporting the concept that schools should assist the student in the development of their whole personality, not just their mind.

Interpretation of the descriptive statistics in Table 8 indicates that the voter group obtained a mean score of 4.8, student sub-group 4.6, and parent sub-group 4.3 on the MIND sub-scale.
### Table 8
One-Way Analysis of Variance
MIND with Respondent Groups

<table>
<thead>
<tr>
<th>Sources</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3</td>
<td>58.5</td>
<td>19.5</td>
<td>7.46</td>
<td>0.0001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>374</td>
<td>977.7</td>
<td>2.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>377</td>
<td>1036.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Descriptive Statistics

<table>
<thead>
<tr>
<th>Population Group</th>
<th>Frequency</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent</td>
<td>82</td>
<td>4.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Voter</td>
<td>60</td>
<td>4.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Teacher</td>
<td>37</td>
<td>3.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Student</td>
<td>199</td>
<td>4.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>378</td>
<td>4.4</td>
<td>1.7</td>
</tr>
</tbody>
</table>
Through reverse scoring, this signifies that these groups are more in favor of the role of the school in developing the mind, not the whole personality, than the teachers. It should be noted that the teacher sub-group, which did indicate a significant difference of opinion from the other respondent groups had a mean score of 3.3 on the MIND sub-scale. As one might suspect, this indicates that the teachers registered more support for the inclusion of feelings, sensations, and body into the curriculum than the other three groups. Conversely, the parent, student, and voter sub-groups demonstrated support toward the more conservative, back to basics, educational ideology. This conservative bent is further evidenced through a comparison of these sub-group means, with a range of scores 0-9, to normed data from the VAL-ED test manual which indicates a mean score of 3.82 based on an N = 5,847 (p.18).

Hypothesis 4. Hypothesis 4 stated there was a difference in respondents' values held toward education as measured by the IMP sub-scale for the various population groups. The ANOVA statistical analysis presented in Table 9 supports the research hypothesis that a significant difference exists (p = .000 and an F ratio of 8.66) in that a difference of values among the population groups exists on the sub-scale IMP, which measures support for education beyond its occupational advantages. The post-hoc analysis of the ANOVA results indicates that there was not a significant difference of opinion on the IMP variable among the parent, voter, and teacher sub-groups. The student sub-group opinion on this value differed from the parent
### Table 9

One-Way Analysis of Variance
IMP with Respondent Groups

<table>
<thead>
<tr>
<th>Sources</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3</td>
<td>52.0</td>
<td>17.3</td>
<td>8.66</td>
<td>0.0000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>374</td>
<td>747.9</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>377</td>
<td>800.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Descriptive Statistics

<table>
<thead>
<tr>
<th>Population Group</th>
<th>Frequency</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent</td>
<td>82</td>
<td>2.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Voter</td>
<td>60</td>
<td>2.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Teacher</td>
<td>37</td>
<td>3.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Student</td>
<td>199</td>
<td>2.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>378</td>
<td>2.5</td>
<td>1.5</td>
</tr>
</tbody>
</table>
and teacher sub-groups, but did not differ significantly from the voter sub-group.

The data presented in Table 9 shows the teacher, parent and voter sub-groups with mean scores ranging from 2.9 to 3.1. These statistics indicate a higher concern for the total education of the student beyond just its occupational advantages than indicated by the student sub-group. The students' educational values as measured by the IMP sub-scale result in a mean score of 2.2. This would support the premise that students tend to view the immediate goal of an education as securing employment.

It should be noted, however, that all sub-groups in this study still had lower mean scores than the normed data provided in the test manual for the sub-scale IMP (importance), on the VAL-ED. Again, the IMP sub-scale has a range of scores from 0-9 and the normed data is based on a population of 5,847 with a mean of 4.25.

**Hypothesis 5.** Hypothesis 5 stated there was a difference in respondents' attitudes held towards double sessions for the various groups. The results of the ANOVA testing indicates a significant difference with a p value of .0000 and an F ratio of 14.15 which supports the research hypothesis that there is a difference of attitude towards double sessions among the groups. Table 10 presents the ANOVA statistics on this testing. The post-hoc analysis on these ANOVA results once again reveal that the teacher sub-group registers the only significant difference of opinion among the sub-groups. There was no significant difference of opinion on attitudes toward double sessions among the parent, voter, and student sub-groups.
Table 10
One-Way Analysis of Variance
Attitudes toward Double Sessions with Respondent Groups

<table>
<thead>
<tr>
<th>Sources</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3</td>
<td>41.5</td>
<td>13.8</td>
<td>14.15</td>
<td>0.0000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>374</td>
<td>365.3</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>377</td>
<td>406.8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Descriptive Statistics

<table>
<thead>
<tr>
<th>Population Group</th>
<th>Frequency</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent</td>
<td>82</td>
<td>3.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Voter</td>
<td>60</td>
<td>3.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Teacher</td>
<td>37</td>
<td>2.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Student</td>
<td>199</td>
<td>3.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Total</td>
<td>378</td>
<td>3.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>
Based on the operational definition, the interpretation of the descriptive statistics on the testing of Hypothesis 5 listed in Table 10 indicates that the higher the mean score, the more a respondent group favors the continuance of double sessions. It should be noted that, unlike the range of scores of 0 to 9 on the VAL-ED sub-scales of MIND and IMP, the range of scores for attitudes towards double sessions (Hypotheses 5-8) was 1 to 6.

The voter, parent, and student sub-groups had mean scores ranging from 3.0 to 3.3 which indicate a lower concern with double sessions than the teachers. It is noted that the teacher sub-group, the professionally trained educators, registered the most concern with this kind of school organization with a mean score of 2.0.

Hypothesis 6. Hypothesis 6 stated there was a difference in respondents' attitudes held toward double sessions dependent upon their age group. As was stated and explained in the demographics of the sample populations section of this chapter (p. 47), the respondents were arbitrarily placed in three age groups.

Based on the operational definition, the ANOVA statistical analysis presented in Table 11 indicates that a significant difference exists among these age groups with a p value of .0003 and an F ratio of 8.65. Thus, these findings support the research hypothesis that there is a difference in attitudes held towards double-sessioned education according to age group. The interpretation of the post-hoc analysis on these ANOVA results indicates that the 20-40 age group registers a significant difference of opinion regarding double
Table 11

One-Way Analysis of Variance
Attitudes Toward Double Sessions With Age of Respondents

<table>
<thead>
<tr>
<th>Sources</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>21.2</td>
<td>10.6</td>
<td>8.65</td>
<td>.0003</td>
</tr>
<tr>
<td>Within Groups</td>
<td>175</td>
<td>214.2</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>177</td>
<td>235.3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Descriptive Statistics

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Frequency</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-40 years</td>
<td>63</td>
<td>2.4</td>
<td>1.1</td>
</tr>
<tr>
<td>41-54 years</td>
<td>52</td>
<td>2.9</td>
<td>1.1</td>
</tr>
<tr>
<td>55 + years</td>
<td>63</td>
<td>3.3</td>
<td>1.1</td>
</tr>
</tbody>
</table>
sessions than the 41-54 and 55+ age sub-groups. There was no significant difference of opinion on this variable between the 41-54 and 55+ age sub-groups.

An interpretation of the descriptive statistics in Table 11 based on the operational definition demonstrates that the lower the mean score with a range of 1 to 6, the less a respondent age group supports double sessions. The 20-40 age group had the lowest mean score of 2.4, followed by the 41-54 and 55 years and older age groups which had respective mean scores of 2.9 and 3.3. Therefore, a trend is indicated which signifies that those over 40 are likely to be less concerned with a double-sessions school organization.

**Hypothesis 7.** Hypothesis 7 stated there was a difference in respondents' attitudes held toward double sessions dependent upon years of residency in the school district. For analysis purposes, the adult respondents were placed in arbitrarily devised groups of years lived in the school district. These groups were (1) 1 to 10 years (2) 11 to 20 years, and (3) 21+ years lived in the school district.

Based on the operational definition, the ANOVA results listed in Table 12 support the research hypothesis that a significant difference exists (p = .048, F ratio 3.08) in attitudes held toward double sessions based on the number of years respondents have lived in the school district. The post-hoc analysis of these ANOVA results demonstrates that residents who have lived in the community from 1-10 years have a significantly different opinion toward
Table 12
One-Way Analysis of Variance
Double Sessions with Years Respondents Have Lived in the School District

<table>
<thead>
<tr>
<th>Sources</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>8.0</td>
<td>4.0</td>
<td>3.08</td>
<td>.048</td>
</tr>
<tr>
<td>Within Groups</td>
<td>175</td>
<td>277.34</td>
<td>1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>177</td>
<td>235.34</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Descriptive Statistics

<table>
<thead>
<tr>
<th>Years Lived In School District</th>
<th>Frequency</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10 years</td>
<td>39</td>
<td>2.5</td>
<td>.9</td>
</tr>
<tr>
<td>11-20 years</td>
<td>30</td>
<td>3.1</td>
<td>1.4</td>
</tr>
<tr>
<td>21 + years</td>
<td>109</td>
<td>3.0</td>
<td>1.1</td>
</tr>
</tbody>
</table>
supporting the elimination of double sessions than those who have lived in the community in excess of 10 years. There was not a significant difference in attitude toward double sessions between the 11-20 and 21 + years lived in the community sub-groups.

Interpretation of the descriptive statistics in Table 12 based on the operational definition, indicates that the higher the mean score, with the range of scores from 1 to 6, the less upset that respondent group is with the double-sessions format. The respective mean scores of 3.0 and 3.1 recorded for the 11-20 and 21 + years lived in the community sub-groups were not found to be significantly different. However, the respondent group who had resided in the school district from 1-10 years demonstrated a significant difference of opinion toward supporting the elimination of double sessions with a mean score of 2.5. It is interesting to note the large percentage of respondents (109 out of 178) who have lived in the school district in excess of 20 years. This high percentage might be expected in a rural-agricultural area.

Hypothesis 8. Hypothesis 8 stated there was a difference in respondents' attitudes held toward double sessions dependent upon the extent of their formal education. Similar to this researcher's arbitrarily grouping the respondents' ages and years lived in the school district for analysis purposes, the respondents were also placed in one of two educational attainment groups. These educational achievement groups are listed in Table 13 as: (1) high school diploma or less; and (2) some college training.
Based on the operational definition, the ANOVA statistical analysis presented in Table 13 indicates that a significant difference exists among these educational achievement groups with a p value .0049 and F ratio of 8.12. Thus, these findings support the research hypothesis that there is a difference in respondents' attitudes held toward double sessions dependent upon the extent of their formal education.

Based on the operational definition, an interpretation of the testing of Hypothesis 8 listed in Table 13 indicates that the higher the mean score, the more favorable that group is for the continuance of double sessions. With a range of scores from 1-6, the respondents with a high school education or less had a mean score of 3.1. Thus, this group indicated a more favorable attitude toward double sessions than did the respondents with at least some college training who had a mean score of 2.6.

Summary. A summary of the hypotheses 1-5 testing indicates the following: (1) there was an expected, but extremely weak correlation between the opinions of the selected values and attitudes toward double sessions for Hypotheses 1 and 2; (2) the teacher sub-group registered the only significant difference of opinion among the respondents toward the MIND value sub-scale (favoring the development of the whole personality) tested in Hypothesis 3; (3) the student sub-group demonstrated the only significant difference of opinion among the respondent groups toward the Importance value sub-scale (favoring the occupational advantages of education) tested in...
## Table 13
### One-Way Analysis of Variance
#### Double Sessions with Educational Level of Respondents

<table>
<thead>
<tr>
<th>Sources</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Group</td>
<td>1</td>
<td>10.36</td>
<td>10.36</td>
<td>8.12</td>
<td>.0049</td>
</tr>
<tr>
<td>Within Groups</td>
<td>170</td>
<td>216.78</td>
<td>1.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>171</td>
<td>227.14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Descriptive Statistics

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Frequency</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Diploma or Less</td>
<td>81</td>
<td>3.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Some College Training or More</td>
<td>91</td>
<td>2.6</td>
<td>1.2</td>
</tr>
</tbody>
</table>
Hypothesis 4; and (4) the teacher sub-group registered the most concern with double sessions among the respondent groups tested in Hypothesis 5. Hypotheses 6-8 testing indicated the 20-40 age sub-group, the 1-10 years lived in community sub-group, and the at least some college training sub-group to be more in favor of eliminating double sessions among the other eligible voter sub-groups.

Chapter V concludes the body of this investigation with a summary and a report on the conclusions and implications, and recommendations for future investigations on this topic.
CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS, RECOMMENDATIONS

Introduction

This concluding chapter is divided into three major sections. The first section contains a brief summary of the problem investigated, including a brief discussion of previous related studies. The conclusions and implications relative to the hypotheses examined in this study are contained in the second section, while recommendations for future study are discussed in the third section.

Summary

The purpose of this study was to investigate the double sessions school organization in the Yale School District, Yale, Michigan, which had entered its 8th consecutive year on this type of schedule. Concern about the ability of this type of schedule to meet the needs of students prompted further inquiry related to what did the people, who had allowed this schedule to perpetuate, value in education and what were their opinions of double sessions.

The investigation of this problem involved a review of previous research and literature on the double-session school schedule. Generally, the literature on this topic was very negative. The rise of this schedule format has historically been utilized on a temporary basis until construction of facilities could keep pace with increased
student enrollments. There was no evidence that any community had accepted or planned for a double-sessions schedule as a permanent operation for schools.

On the contrary, the preponderance of literature spoke to the reduction in the quality of the school program with the institution of a double-sessions formula. Some examples of reduced quality cited were: students would lose 20% to 30% of actual instructional time; there is a reduction in channels of, and opportunities for, communication within the school; cramped facilities reduces opportunities for participation in extracurricular activities; and the half day promotes negative attitudes towards learning because of the quantity of unstructured free time allowed students.

Researchers indicated that it's not just the school program that is affected. Previous investigations of double sessions also emphasized the corresponding negative effect the half school day had on family life. For instance, parents cited such things as transportation problems, establishing sleeping and eating habits, and providing adequate supervision for children with so much free time as just a few of the problems brought about by a double sessions school schedule.

With such general negative opinions of double sessioned educational programs found in the literature, it was the decision of this researcher to expand this inquiry beyond determining attitudes held toward double sessions to include determining selected values of education held by people involved in this investigation. The VAL-ED instrument was selected because it was designed to measure the "kind"
of educational program people believed should be emphasized in the
schools. There are two specific values identified by this instrument
which are titled: IMPORTANCE (IMP) which measures the importance of
education beyond its occupational advantages, and MIND (MIND) which
measures whether schools should develop the mind or develop the
whole personality.

Thus, the study of the following questions was undertaken as
the basis of this investigation.

1. What were the varying district constituents' (parents,
other voters, graduates, students, and teachers) opinions
regarding what should be emphasized in the educational
program, and what were their attitudes toward double
sessions?

2. Was there a relationship between what the participants
emphasized in the educational program and their attitudes
held toward double sessions?

3. Was there a difference in attitudes toward eliminating
double sessions among the eligible voters?

The exploration of these major questions was pursued through the
use of research hypotheses. Eight hypotheses were developed for the
investigation.

The random sampled population of the study consisted of 436
subjects. These participants included parents, voters (without
children in school), students, and teachers in a 7-12 rural public
high school with a 1100 student population in Yale, Michigan.
During the fall of 1979, the participants of the study responded to a questionnaire which included the VAL-ED instrument in conjunction with an instrument developed by this researcher to measure attitudes held toward double sessions. Data from these instruments were tabulated, manipulated, and compared through the use of Pearson product moment correlation coefficients and one-way analysis of variance techniques. A post-hoc analysis was performed on the ANOVA results for Hypotheses 3-7. Based upon the results of these analyses, conclusions were made concerning each of the hypotheses developed for this investigation.

Conclusions and Implications

A discussion of the findings of this study and of the conclusions and implications which can be drawn from them appear in the following pages of this section of the chapter.

The development of Hypothesis I, that there was a direct relationship between the value of education beyond occupational advantages and double sessions, was based on the beliefs that other learning (enrichment) opportunities are equally essential to the preparation for adult life, and that double sessions limit these opportunities. There was considerable support found in the literature to substantiate the problems and restrictions to learning associated with double-sessions schedule.

The results of the examination of Hypothesis 1 revealed that there was a direct relationship between the degree to which respondents favor education beyond its occupational advantage and the
degree to which they favor eliminating double sessions. Although this relationship was in the expected direction, the correlation coefficient \( r = .09 \) indicated a very weak relationship. Therefore, it was concluded that the participants do not see a strong relationship between the restrictive nature of a double-sessions program and how a double-sessions schedule limits learning activities beyond occupational preparation.

The implications this has to those who believe double sessions curtail enrichment courses and extracurricular opportunities, indicate a need to support an informational program for the community regarding the educational shortcomings of a double-sessions school organization. Additionally, it behooves these individuals who believe a double-sessions program is inadequate to fight actively for the restoration of a full-day program by supporting a bond campaign to accomplish this task.

The basis of the development of Hypothesis 2 was analogous to Hypothesis 1 in that it was believed education should be pluralistic. That is, just as education should be more than occupational training, the function of the educational delivery system should be to assist in the total development of children, not just their minds. As pointed out in Chapter II, the belief that double sessions do in fact inhibit opportunities for total personality development is supported in the literature. Students on half-day schedules often do not or cannot avail themselves to joining clubs, plays, intramurals, and athletics because of the reductions or impositions...
caused by double sessions (Fowkes, 1969).

Hypothesis 2 test results revealed that there was a direct relationship between the degree to which respondents believe schools should assist in the development of the whole personality and the degree to which they favor the elimination of double sessions. Although this relationship was in the expected direction, the correlation coefficient ($r = .14$) again indicated a weak relationship. It was therefore concluded that the participants do not perceive a strong relationship existing between school learning experiences that contribute to total personality development and how a double-sessions schedule curtails these learning opportunities.

The implications to those who value a school program that includes learning experiences that contribute to an understanding of students' feelings, sensations, and body that assist in the development of the child's whole personality appear clear to this researcher. They must decide whether they believe the restrictions inherent with a double-sessions format will allow for the appropriate opportunities for total personality development to adequately meet the challenges of post high school experiences. If they do not ascribe to this belief, they should actively support a program to restore a full day school operation in their community.

A possible conclusion that could be drawn from Hypotheses 1 and 2 test results which demonstrate a weak relationship between the extent to which those surveyed believe in a more "wholistic" educational program and also favor elimination of double sessions

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is that the voters of this primarily rural-agricultural commu-
nity, many of whom are retired and own large parcels of land, are concerned with rising property taxes. The fact, as stated in Chapter I (p. 6), that the voters of the Yale community have turned down five consecutive bond proposals for additional facilities provides some evidence for this conclusion.

As an item on the Survey Instrument (#20) requested an opinion whether double sessions were preferable to paying for a new building, this question may have influenced voter opinion. Therefore, these results could be interpreted more as a negative reaction to taxes than actual voter opinion of the educational merits of a double sessions-school organization.

A review of the findings of Hypothesis 3 testing indicated that the participant groups of this study, with the exception of teachers, had a higher mean score on the MIND sub-scale than the VAL-ED normed mean. This indicates support for the role of the school in developing the mind, not the whole personality.

With the assumption that double sessions are synonymous with restricted learning potentials, the researcher drew a conclusion from the testing of Hypothesis 3. These results provide an indication that the community as a whole supports a more narrow curriculum favoring traditional subjects, as opposed to a curriculum which includes varied course selections and learning opportunities.

Results of the Hypothesis 4 testing also provided an indication that the community supports a conservative educational program when
its mean scores on the IMP are compared to the normed mean established by the VAL-ED. All participant groups in this investigation, including teachers, had a lower mean than the established normed mean. Again, it is noted that the higher score reflects greater concern for the total education of the student, beyond just its occupational advantages.

These results of Hypotheses 3 and 4 testing have implications to those who do not subscribe to these more conservative values of educational emphasis. To the contrary, community members who support a more varied curriculum and oppose the restrictions of half day schedules that produce reduced class periods and confined extracurricular opportunities, will have to actively involve themselves in campaigns aimed toward expanding, not restricting, educational opportunity.

Hypothesis 5 test results provided evidence to support the expected conclusion that the professional educators do recognize the harmful aspects of a double-sessions school schedule and would register the greatest concern toward this form of scheduling. The surprising result of the testing of this hypothesis was the conclusion that no significant difference in attitude towards double sessions was evidenced among the voter, parent, and student respondents.

It was previously assumed that those directly (students) and indirectly (parents) served by the schools would register a progressively more negative attitude towards double sessions. The
Immediate implication these results appear to have to the school administration and teachers, who recognize the educational disadvantages inherent with a double-sessions organization, is to make a concerted effort to inform the parents and students of the educational advantages that could be gained by a return to a full day schedule.

Additionally, these results imply that parents of elementary children not directly involved with double sessions (grades K-6), should be informed of the educational consequences to their children with the continuance of a double-session educational delivery system. If these parents are thoroughly informed of the educational disadvantages of double sessions, they would undoubtedly be the most supportive and active in promoting an effort to restore a normal school program.

It was concluded that based on a review of mean scores and the post-hoc analysis of the ANOVA results from Hypothesis 6-8 testing that trends emerged regarding participants' attitudes toward double sessions that could not be ignored. For instance, the interpretation of these statistics reveal characteristics of the more pro-school, more anti-double sessions voter as being aged 20-40, having lived in the school district ten years or less, and having received some post high school education. In contrast, those voters registering less concern with double sessions tended to be over 40 years of age, having resided in the district in excess of ten years, and attaining only a high school education or less.

A review of these statistics only demonstrated that there were
trends in voter behavior and that the attitude patterns which were evidenced should not be ignored. It is implied that this information could be of assistance to those planning campaign strategies. Bond campaign planners could use this information to target the kind of information and/or level of campaign emphasis dependent upon their audience.

For instance it would be unwise, according to these study results, for a bond spokesperson to emphasize the need for extra enrichment courses like art and music, or the need for extracurricular programs when addressing a senior citizens group. The people in this group most likely have no children in school, are 41 or more years old, have lived in the community for many years, have less post high school education than other voters, and have indicated the least concern with double sessions. Therefore, it would be logical to assume that senior citizen groups would be less sympathetic to these enrichment and extracurricular needs. Rather, as Hypothesis 3 testing results indicated, a more positive response from this group might be invoked by emphasizing that double sessions restrict scheduling flexibility for academic (MIND) courses.

On the other hand, when dealing with parents of school children, it would be advisable for a bond campaigner to emphasize the reduction of learning opportunities caused by double sessions. Parents of school children would be more likely to listen favorably to arguments that the restrictions imposed by double sessions put their children at a competitive disadvantage when compared with
children attending schools with full programs on regular schedules.

**Summary.** It was concluded that results of the hypotheses testing indicated the following: a positive but very weak relationship exists between the degree to which respondents favor the elimination of double-sessioned education and the degree to which they favor the expansion of learning opportunities available in the school; the teacher sub-group registered the only difference in attitude toward double sessions among the various study groups; and eligible voter attitudes toward double sessions are influenced by their age, the number of years they have lived in the school district, and by the amount of formal education they have received. It was also concluded that the descriptive statistics from the hypotheses testing provided indications concerning eligible voters' attitudes toward education generally and double sessions specifically. An overall conclusion was that these trends should not be ignored by those interested in forming bond campaign strategy.

Final remarks involve the several additional comments respondents wrote on the questionnaires that did not allow for interpretation of results in precise and absolute terms. Therefore, they were not included in the statistical analysis, but deserve comment because they do support the conclusions of the study.

From these remarks, the researcher concluded that some differences of opinion exist between voters, students, parents, and teachers on the extent of the problems created by double sessions. Voters, without children in school, generally expressed a more
positive attitude toward two-shift scheduling while parents and students could see double sessions having both good and bad features. School people, on the other hand, expressed comments extremely critical of double shifts and see as its only virtue, the relieving of over-crowded conditions.

Recommendations for Future Investigation

Three recommendations are made for future investigation. Much has been said about the perceived educational, social, and economic advantages and disadvantages of a double-sessions school program. Little evidence exists, however, on the impact this kind of schedule format has on actual student academic achievement. Further investigation regarding student standardized test scores could produce evidence to support or reject present perceived notions regarding the merits of a double session schedule to student learning.

The second recommendation for future study concerns an in-depth investigation of the populace in a district experiencing double sessions. A limitation of this investigation involved the measurement of just two general educational values held by the study participants. It was concluded that the opinions obtained on these less specific educational value questions, in a community with demonstrated reluctance to pass bond issues, may have been just masking voter opinions on rising property taxes. The measurement of additional specific values of education that are not so general in nature could provide important information regarding
community opinions with respect to the kind of role the schools should play. Based on this information, school leaders could design educational programs to meet the community's expectations or inform them that additional assistance is needed to provide the kind of educational program the community indicates it wants for its children.

A concluding recommendation for future investigation on this topic would be for a neutral, outside party to conduct the research. As this study was conducted by a researcher employed in the school district which also sanctioned the investigation, it is possible that some of the results obtained from the respondents reflected a biased opinion toward the institution itself or toward individuals employed by the district. An investigation of this topic by an agency and/or researcher not identified with the district under study could reduce this potential limitation.
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Appendix A

YALE PUBLIC SCHOOLS
198 School Drive  Yale, Michigan 49007

ALBERT F. KIMMEL
Superintendent of Schools

September 18, 1979

Dr. Richard Munsterman
Doctoral Committee Chairman
Department of Educational Leadership
Western Michigan University
Kalamazoo, Michigan 49008

Dear Dr. Munsterman:

Mr. Patrick Harrington, Yale High School Principal, formally requested permission to conduct a study regarding our community. His study will involve an investigation of determining district values held toward education and opinions of double sessions.

The Board of Education and myself have been thoroughly appraised of Mr. Harrington's study and we understand that it will be necessary to conduct a survey of the community. The Board of Education has taken formal action to endorse this investigation which should prove to be a valuable information source and will be of assistance to the administration and Board of Education in charting future strategies of enlisting community support for the educational program.

In closing please acknowledge that Mr. Harrington has received our full encouragement and support for this study involving our school district.

Respectfully,

Albert F. Kimmel
Superintendent

AFK:hh
Appendix B

CONSULTING PSYCHOLOGISTS PRESS INC.
577 COLLEGE AVENUE
PALO ALTO, CALIFORNIA 94306

Patrick C. Harrington, Principal
Yale High School
133 School Drive
Yale, Michigan 48097

In response to your request of July 9, 1979 permission is hereby granted to use the first 18 items (Scales I, P and H) of the Val-Ed as part of a survey you are developing to use in gathering data for your doctoral research.

subject to the following restrictions:

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CONSULTING PSYCHOLOGISTS PRESS INC.

By: Permissions Editor

Date: 7/5/79

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Appendix C

YALE PUBLIC SCHOOLS
158 School Drive
Yale, Michigan 48097

ALBERT F. KIMMEL
Superintendent of Schools

Pilot Test Information

Dear Pilot Test Volunteer:

Thank you for consenting to assist me with a study I am conducting in the Yale School District. This project will serve as partial fulfillment for a doctoral degree from Western Michigan University as well as providing helpful information to the Yale Public Schools.

The attached questionnaire is one portion of a survey instrument that will be mailed to Yale residents. The purpose of the pilot test is to:

1. establish administration procedures,
2. determine the ability of the instrument to discriminate among respondents,
3. determine readability and clarity of questions.

Again, thank you for your assistance. Please feel free to make any constructive comments or indicate any questions that appear unclear.

Respectfully,

Patrick Harrington
Principal

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Dear Parent, Citizen, Student, Teacher or Graduate,

I am presently engaged in a research study of the Yale School District. This study will serve as partial fulfillment for the requirements of a doctoral degree from Western Michigan University and will hopefully provide helpful information for determining the future direction of our instruction program.

For this purpose I am gathering information from many sources including parents, citizens without children attending Yale Schools, students, teachers and graduates. A random sample in each of these groups will receive this form. You have been included in this sample.

I would sincerely appreciate your participation in this study by taking a few minutes to respond to the enclosed survey questionnaire. All participants are assured that their responses will be confidential and that there is no way to trace the completed survey to any particular individual.

Please base your answers on your own experiences, and on the attitudes and opinions you have formed regarding the survey questions.

Again, your participation in this study of our school district would be greatly appreciated.

Thank you.

Respectfully,

Patrick Harrington
Principal, Yale High School
Appendix E

Dear Survey Participant:

Because a cross section of the community has been randomly selected to answer the questionnaire, the information below is necessary to assist in the interpretation of the results. Please do not write your name on the questionnaire. The enclosed postcard, mailed separately, will identify that you have participated in the study. There is no possible way to identify returned questionnaires to any particular individual.

Please check or fill-in the appropriate information:

A. 1. Parent (with children in grades K-12)  
   2. Voter (do not have children in grades K-12)  
   3. Graduate - Yale class of 1978  
   4. Teacher

B. ______ Male _________ Female

C. ______ Age

D. Level of Education
   1. Less than high school graduate  
   2. High school graduate  
   3. Some college or post high school training  
   4. College Degree  
   5. Graduate college education

E. ______ Number of years you have lived in the Yale School District.

---

STUDENTS ONLY

A. 1. ______ Male  
    2. ______ Female

B. ______ Age

C. ______ Present Grade

D. ______ Number of years you have been on double sessions through junior and senior high school.

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Appendix F

QUESTIONNAIRE

DIRECTIONS: When you have completed the enclosed survey please:
1. Place survey in self-addressed envelope and mail.
2. Mail post card separately that indicates you have completed and returned the survey.

For every item please circle the number that indicates your opinion. The numbers mean:
1. Strongly Disagree
2. Disagree
3. Mildly Disagree
4. Mildly Agree
5. Agree
6. Strongly Agree

1. The aim of the school should be the development of students' total personalities, not only their minds.
2. Education makes people doubt and question things that should be accepted on faith.
3. The school, to be effective, does not have time for vocational courses like auto shop or shorthand.
4. A college education causes people to become too critical of the American way of life.
5. Nonacademic courses like band and homemaking are just as worthy of a portion of the school's time as are foreign languages and geometry.
6. The main value of an education is to help a person find a better job.
7. Active involvement, like discussion, is a more effective way of producing learning than a lecture by the best of subject matter experts.
8. A college education makes a person more aware of important world issues.
9. The presentation of what students need to know by teachers who are experts in their subjects produces the best learning.
10. Women need education as much as men do.
11. Today's schools need to devote some time to subjects other than the basic subjects (English, science, mathematics).

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Mildly Disagree</th>
<th>Mildly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
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Appendix F continued

<p>| | | | | | |</p>
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<tr>
<td>12</td>
<td>Much of what is taught in schools is of little value because it is too far removed from real life.</td>
<td>1</td>
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<tr>
<td>13</td>
<td>The best learning occurs when students are exposed to teachers who are masters of their subjects.</td>
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<td>14</td>
<td>Drive is much more important in getting ahead than the type of education one gets in school.</td>
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<td>4</td>
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<tr>
<td>15</td>
<td>The school should consider the personal and social needs of students and not only their minds.</td>
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<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>16</td>
<td>Education is valuable even if all it does is to help people increase their knowledge of the world and of people.</td>
<td>1</td>
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<td>4</td>
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<tr>
<td>17</td>
<td>If schools are to train the minds, they cannot devote time to nonacademic activities as well (crafts, clubs, sewing).</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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<tr>
<td>18</td>
<td>Experience is the best teacher, not schools and books.</td>
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<tr>
<td>19</td>
<td>The double shift has a disruptive effect on family life.</td>
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<tr>
<td>20</td>
<td>Double shifts are preferable to paying for a new building.</td>
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<tr>
<td>21</td>
<td>Working students view school as less important than their jobs.</td>
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<tr>
<td>22</td>
<td>The double shift creates a transportation problem.</td>
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<td>4</td>
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<td>23</td>
<td>You would not mind moving to a school district that had double sessions.</td>
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<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>24</td>
<td>Student involvement in extracurricular activities is reduced under double shifts.</td>
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<tr>
<td>25</td>
<td>Interest and pride in the Yale schools have been negatively affected by the double shift.</td>
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<td>4</td>
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<tr>
<td>26</td>
<td>Academic achievement is adversely affected by the double shift.</td>
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<td>27</td>
<td>School seems less important under double shift scheduling.</td>
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<td>28</td>
<td>Teacher-student relationships are hurt by double sessions.</td>
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<td>29</td>
<td>In general, students like the double sessions schedule.</td>
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<td>30</td>
<td>Parents appear to like double shift schedule.</td>
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</tbody>
</table>

Please feel free to make any additional comments.

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Appendix G

Protected Least Squares Differences Post-hoc Analyses Results for Hypotheses 3-7

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Paired Comparisons</th>
<th>Calculated t Value</th>
<th>Table t *</th>
<th>Decision</th>
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</thead>
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<tr>
<td>3</td>
<td>Parents With Voters</td>
<td>1.82</td>
<td>1.96</td>
<td>Accept</td>
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<tr>
<td></td>
<td>Parents With Teachers</td>
<td>3.13</td>
<td>1.96</td>
<td>Reject</td>
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<td></td>
<td>Parents With Students</td>
<td>0.75</td>
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<td>Voters With Teachers</td>
<td>4.45</td>
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<td>Voters With Students</td>
<td>0.48</td>
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<td>Teachers With Students</td>
<td>2.98</td>
<td>1.96</td>
<td>Reject</td>
</tr>
</tbody>
</table>

* α = .05, df = 373

| 4          | Parents With Voters     | 0.0                | 1.96      | Accept   |
|            | Parents With Teachers   | 0.71               | 1.96      | Accept   |
|            | Parents With Students   | 1.98               | 1.96      | Reject   |
|            | Voters With Teachers    | 0.67               | 1.96      | Accept   |
|            | Voters With Students    | 1.91               | 1.96      | Accept   |
|            | Teachers With Students  | 2.29               | 1.96      | Reject   |

* α = .05, df = 373
<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Paired Comparisons</th>
<th>Calculated t Value</th>
<th>Table t *</th>
<th>Decision</th>
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<tbody>
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<td>1.76</td>
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<td>Teachers With Students</td>
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<td>3.87</td>
<td>1.96</td>
<td>Reject</td>
</tr>
</tbody>
</table>

* α = .05, df = 373

| 6 Age 20-40 With Age 41-54 |                                     | 2.45               | 1.96      | Reject   |
| Age 20-40 With Age 55 +    |                                     | 4.61               | 1.96      | Reject   |
| Age 41-54 With Age 55 +    |                                     | 1.95               | 1.96      | Accept   |

* α = .05, df = 174

| 7 1-10 Years With 11-20 Years Lived In Community |                                     | 2.17               | 1.96      | Reject   |
| 1-10 Years With 20 + Years Lived In Community  |                                     | 2.35               | 1.96      | Reject   |
| 11-20 Years With 20 + Years Lived In Community |                                     | 0.43               | 1.96      | Accept   |

* α = .05, df = 174