

Leadership Abilities and Development Among Gifted Teens

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1. Introduction

The study of leadership has intensified in recent years with most studies carried out in the fields of management and education. In the last three decades controlled experiments have given rise to a body of knowledge regarding leadership which had previously been absent. As yet, however, little work has been done to pull this knowledge together to generate a systematic theory of leadership. The application of research on leadership has been scanty. What has been done is primarily among business executives and educational administrators, not applied to students.

On July 4, 1960 John F. Kennedy said, "It is time for a new generation of leadership, to cope with new problems and new opportunities, for there is a new world to be won" (TV Speech). This call for an emphasis on developing leaders, and the growing critical need for leaders has been echoed in the field of education. Harry Passow writes,

The general welfare, the standard of living, the cultural level of society all depend to a great extent on the contributions of a comparatively small number of citizens-- individuals who have developed their outstanding abilities and who are providing leadership. (1979, p.5)

During the past two decades there has been an increasing demand for quality leadership. Political affairs people are crying out for good leadership to avoid military and economic disasters. The business world puts high demands on top leaders, and rewards them far out of proportion to the average worker or supervisor. In many fields, such as education and medicine, the managerial demands on top level administrators has led to stress breakdowns, early retirement and the briefest tenure among top positions in recent history.

Some people speculate that the pace of life and the demands put upon leaders are unreasonable. They contend that no human being can long endure under such stress. That this is true does not change the present situation or the need for leaders.

Because there has been little effort to correlate information between business and education in regard to leadership, there is no unified definition of leadership, description of leadership development, means to identify leadership potential, method of training, or systematic theory of application. Thus, the discrepancy between the present need and the ability to meet that need has been a growing phenomena for more than twenty years. Nathan Kravetz has said, "Discrepancies in any field, academic, social, or physical-recreational, bring about distorted, unbalanced, and skewed development. When left unexamined and unremedied, they may produce the incomplete and inadequate citizen" (1982). Or, in the field before us, these leadership discrepancies may produce the inadequate country or world.

With the increase in the massive amounts of information available in the new "information age," and the

increasing complexity of the technology needed to solve major problems, intellectually gifted people will be in demand in the future, and their decisions will affect the lives and welfare of the peoples of the world.

While some leadership skills and abilities may be found in a child's early years, sufficient maturity and opportunity to exercise social leadership is usually not present until junior high or high school age. Young adults are able to lead research projects, serve effectively in student councils, direct group activities (such as school projects, yearbooks, church or community youth groups), and participate in high level decision making (such as reviewing values, assessing personal factors in problems, maintaining goal directedness, using proper methods of communications and motivation). Many junior high students are able to get jobs such as paper routes or sales positions. A few students this age enter fields such as entertainment, technology or writing.

Since it is at this age (12-14) that young adults begin to take personal and group leadership and make decisions which affect other people, it seems appropriate to discern what leadership information can be taught so that effective abilities are developed. This is especially true for gifted students. They have better ability to understand, process and internalize the information necessary to develop their skills.

This report correlates some of the leadership research data from business and education, develops a teaching unit on leadership, describes the administration of that unit to a seventh grade class of gifted students, evaluates the leadership tendencies present in the class members, proposes a theory of leadership, and assesses the effectiveness of the unit in educating the students regarding leadership abilities and characteristics of leaders. Second, it reports whether any particular instrument is effective in identifying leadership potential and provides a short term (five years) assessment of the actual leadership involvement of the top students picked out in a class.

Because this is a report focusing on developing a teaching unit on leadership, it will not include an exhaustive study of leadership, will not generate a conclusive specific theory of leadership, will not research the effectiveness of instruments in identifying leaders, and will not predict the effectiveness of the teaching unit to develop leadership talent over time beyond a level attainable by brief sampling.

2. Review of Literature

This section will review the literature which exists on both leadership and giftedness, looking for correlations or relationships which have been studied between the two fields. In the field of leadership much has been written in general. While little has been unified in terms of theory, there has been considerable effort to consolidate the findings of thousands of research reports.

The struggle to identify a theory of leadership has been well summarized by Burke. "Debate between those who contend that there is one best style of leadership and those who contend that situations call for different styles has raged for years among theorists and researchers" (1980, p. 54). There are many groups and leaders who contend that one style is best for all situations. They disagree as to which one is the best style. Other theorists maintain that leaders have to deal with whatever situation they face and that the style of leadership must change for new or changing situations. The first group focuses on the leaders. The second group focuses on the environment in which the leader must work.

The development of leadership theory has followed a chronological pattern from basic theories in the 1950's, to massive research projects in the 1960's and 1970's, to review and revision of theory in the late 1970's and 1980's.

The discussion of the research will follow this chronological pattern, while relating the various parts.

1. The 1950s and 1960s

In the 1950's the understanding was that there were two styles, or dimensions, of leadership. Some researchers called them task roles and group building roles. Others called them task and socio-emotional factors. In the late 1950's and early 1960's Fred Fiedler called them task motivation and relationship motivation (1977).

These labels, or similar ones, have been widely used both in research and in the business and educational marketplace. Fiedler argued that one style or the other could be used depending on the situation, but that the most effective leader needs to know, and be able to implement, both styles. This blending of the two earlier theories has set the pace for recent theory development.

2. The 1970s

Fiedler's theory has been supplemented by research done by Paul Hersey and Ken Blanchard. They developed the following chart to reflect the identification of different leadership styles.

HIGH #9; #9; 9,1 9,9

Relationship

LOW 1,1 1,9

Task

Their theory is that different types of leadership, represented by the four quadrants in the chart, are needed, depending on the nature of the task.

Robert Blake and Jane Mouton have disagreed with Hersey and Blanchard. They argue that the best style of leadership always involves both a concern for production and a concern for people. Thus, only the top right quadrant in the chart represents good leadership to Blake and Mouton. They believe that good leaders, who are concerned with both people and production, will need a variety of strategies and techniques.

Actually, the difference between Hersey/Blanchard and Blake/ Mouton is best seen, respectively, as a difference between a theory focused on leadership and a theory focused on identification of leaders. There is not as much conflict between these two positions as has been thought (Burke, 1980).

In the 1970's much more was done in terms of extensive research. Jay Hall studied more than 11,000 managers from various levels of organizations. His definition of effectiveness, or success, as a leader was measured in terms of high managerial level and youth. While one can argue with this method of measuring success, his findings are compelling. The greater a leader's achievement the more the following characteristics were present:

1. a high need for personal fulfillment.

2. choice of subordinates who have a high need for personal fulfillment.
3. better interpersonal skills.
4. subordinates involved in decision making.
5. a participative style of management.
6. an equal emphasis on task and people.

These findings tended to confirm Blake/Mouton at increasing levels of interpersonal influence and added the element of participative decision making.

3. Ralph Stogdill

Also in the early 1970's, Ralph Stogdill, for ten years the Associate Director of the Ohio State University Leadership Studies, organized an inventory of "all the published research findings on leadership" (1974, p.vii). His group studied more than 7000 books and articles. There are references to more than 3000 reports in the 40 sections of his *Handbook*.

In the preface Stogdill comments,

Four decades of research on leadership have produced a bewildering mass of findings. The endless accumulation of empirical data has not produced an integrated understanding of leadership. There is need for a stocktaking--for an inventory of results. (p. vii)

Almost every sentence in the book is footnoted with one or more research reports. It is advisable here to summarize the major findings and suggest some applications.

One of the early problems is the definition of a leader, or of leadership. Some researchers viewed leadership as unidirectional influence, persuasion, or direction from one member of a group to the rest of the group. Other researchers disagreed. They believed leadership is an interactive process. Stogdill's conclusion (pp. 16,23) was that a number of traits (personality, interpersonal skill, problem solving skills, etc.) prepare a person for a leadership role; then, social or environmental factors allow the person to actively initiate leadership. This active leadership is then sustained over time based on position, personal initiative, interactive communication and success.

Of special interest is Stogdill's conclusion regarding trait characteristics:

The following conclusions are supported by uniformly positive evidence from 15 or more of the studies surveyed. The average person who occupies a position of leadership exceeds the average member of his group in the following respects: (1) intelligence, (2) scholarship, (3) dependability in exercising responsibility, (4) activity and social participation, and (5) socio-economic status.

(p. 62)

He highlights two traits (intelligence and scholarship) which definitely can be associated with gifted children.

Many of the studies on leadership function were factor analysis studies. Six common functions were identified (p.30).

1. defining objectives and maintaining goal direction.
2. providing means for goal attainment.
3. providing and maintaining group structure.
4. facilitating group action and interaction.
5. maintaining group cohesiveness and member satisfaction.
6. facilitating group task performance.

Note that none of these deals with actual production. All deal with directing and maintaining the group in its efforts to achieve a goal. Especially in natural groups, the leader who is spontaneous and encourages participation is quickly promoted and highly valued.

Leader characteristics were also studied using factor analysis. There were twenty-six primary characteristics and five seemingly indispensable characteristics (p. 93).

1. social and interpersonal skills.
2. technical management skills.
3. social nearness and friendliness.
4. task motivation and application.
5. group task supportiveness.

All studies of leaders in which these five were absent showed low leader effectiveness. Stogdill pointed out that the primary leadership functions and leader characteristics are teachable/learnable. This has very important implications for teachers and parents of gifted children. We can literally train leaders for tomorrow.

The performance of leaders on the job occurs in three main categories (p. 163). Supervision of subordinates and projects take 39% of the leader's time. Planning and general managerial functions take 32% of the leader's time. All other factors combined take 29%, and no single element is over 8%. Thus, training needs to include planning

and controlling as main aspects.

Research has long shown that leaders who are highly task oriented usually accomplish results. Leaders who are highly people oriented build loyalty, commitment and satisfaction. Stogdill points out that the converse is also true, namely that leaders who are low task oriented don't accomplish results and leaders who are low people oriented don't build loyalty, etc. Further research has shown that this combination of task and person orientation almost always results in successful experiences in production and in member satisfaction. The task related trait that correlates most highly with production is structuring, or organizing and differentiating jobs.

4. R. K. Greenleaf and Servant Leadership

A different approach to the issue of leadership was developed by R. K. Greenleaf (1977). He was Director of Management Research for AT&T. He teaches and consults at Harvard, Dartmouth, Ohio State, MIT, the Ford Foundation, the R. K. Mellon Foundation, the Lilly Endowment, and the Brookings Institute.

In the introduction he indicates that he:

has a concern for the total process of education and what appears to be indifference to the individual as servant and leader, as a person and in society, on the tacit assumption that intellectual preparation favors optimal growth in these ways, where quite the reverse may be true. (p. 6)

He lays the blame on the educational process. "An occasional gifted teacher will take some initiative, but the institutions rarely sanction the effort" (p. 4).

The nature of national and international companies or schools is to fit the individual into the needs of the community. The present needs, for some decades, have been for technicians and administrators, not visionaries or dynamic leaders who genuinely seek to serve. Greenleaf believes that we reap what we sow, therefore, most "leaders" of business and society today are philanthropists only skin deep. He thinks that most politicians and social leaders are also shallow. Thus, no foundation is being laid for change.

After identifying the problem of so many anti-leaders briefly, he begins his proposal for a well founded counter-action. Leadership is given to people by the sheer fact that others follow the person. Greenleaf says this comes from one of two reasons. Either the situation presents a problem no one else can adequately resolve, or the leader has so served the people it is almost natural to bestow the position of "leader" on the person.

In the first case a person is called to leadership because of skills or abilities he possesses. He will remain a leader as long as his skills are needed. In the second case the person has so given of himself, his time, his effort, he has so identified with the ones he is serving, it is obvious he is the leader. The contention is that both forms are valuable, both forms can be learned; but that in the long run a servant leader is more trustworthy and will accomplish more of a qualitative nature for the good of humankind.

Four of Greenleaf's articles are on education. In the first the concern is with two issues: (1) an assumption in education that some individuals know what others ought to learn and that the teachers are justified in imposing

their judgments - backed up with sanctions. Greenleaf questions the morality modeled in this aspect of the system. He concludes that all education should be voluntary and should not grant degrees or credentials, as was the case in the University of Virginia when Jefferson was rector. (2) The second assumption is that our total educational system is based on mandatory attendance, then on social and economic factors. His contention is that removal of adverse sanctions and any form of coercion, would set free the spirit of the student learners. What would quickly rise to the top are the people who (a) desire to learn, (b) use what they learn, and (c) by default become the leaders of society. This would make servant leaders available to society.

Much of this sounds like the Platonic idealism of the *Republic*. But there is merit in the idea of modeling freedom, initiative and self-determination to students.

In an article Greenleaf presented as a Senior Woodrow Wilson Fellow, he offers a proposal for establishing a leadership training program for a voluntary group of students led by faculty volunteers. The goals of the program are that the students learn (1) to clarify and establish values for themselves as persons and in community, and (2) to use the resources of the university and the community to find and implement solutions to human problems. Greenleaf believes these goals are capable of fulfillment and that the process will train the students to do the same thing in society, because the university is part of the world.

Another article was the opening address to representatives of 75 colleges under a Lilly Endowment for the liberal arts. It is a proposal that resource people from local communities serve as mentors and coaches to students who are identified as having abilities, interests and drive to become leaders in the future in a similar role as the mentor now holds. This link between society and the schools is usually missing.

5. The late 1970s and 1980s

The late 1970's also saw a rise in the international study of leadership. The Japanese leadership style, based on success in the marketplace with very little formal research is largely participative. Their business environment resembles much more of a "family" approach. Once hired an employee has "tenure" unless he or she "dishonors" the company. Future management personnel are identified early and trained within the company (i.e., mentorship is a planned phenomena as part of a total training package). From the Board of Directors down there is a continual concern for both production and personnel.

In 1979 Hunt and Larson published *Crosscurrents in Leadership*, which is the fifth volume in the Leadership Symposia Series. The fourteen articles are arranged in three main sections. This work updates the 1974 work by Stogdill. Most research begins with a theory, selects a relevant population and tests the theory. While this approach is fine for testing small aspects of a theory or practice, it is not appropriate for building general field theory (its assumptions are far too broad, its population usually is picked because it already demonstrates some aspects of what is being looked for in the group). This is confirmed in another field by Turner's sociological analysis.

The contention of these authors is that the study of leadership needs to make mid-course corrections in the research. For large groups there should be a summarizing of the research done thus far, establishing clear research methodology, and greater specificity on the exact nature of what should be studied. Unfortunately, the authors do not do in their study what their own methodology suggests. There are no significant changes from Stogdill's findings in 1974.

In 1961 Barbe collected speeches from a number of educators in a book titled *Educating Tomorrow's Leaders*. Most of the articles call for a renewed emphasis on character development and interpersonal skills as a balance with cognitive content. This began a trend which includes research from the taxonomy of the affective domain and an emphasis on interpersonal relations.

In 1969 Pasternack studied leadership patterns in gifted students in group contexts. His research largely substantiates Hollingworth's theory that intelligence combined with concern for "environmental" factors can produce effective leaders. In 1973 Isaacs studied the relationship of giftedness and leadership, but his concern was for parents and teachers of gifted students as leader models for the students. A similar work was done by Michael and Dolores Giammatteo in 1981.

Recognizing the need for both management techniques and interpersonal skills James Cribbin published *Leadership* in 1981. He attempts to teach an action-oriented interpersonal process, based on research, as the foundation for leadership. The dynamic elements of situations call for a knowledge of: the environment, the organization one is leading, and human behavior. Only with this information can the leader determine his appropriate behavior. This emphasis on behavior, focusing on motivation, interaction processes and negotiation, is directed towards leaders in the Blake/Mouton category who are seeking to balance people and production concerns.

One attempt to pull the theory together has been widely received and applied. Erwin Stanton wrote,

This book is intended for managers and executives who, regardless of organizational level and functional specialty, supervise and direct the work activities of people in profit or non-profit settings. (p. vii.)

His reality centered management system involves five elements.

1. personnel selection and placement - successful staffing of motivated people, whatever the task.
2. training and development - focused on attitudes of excellence and cooperation as well as production.
3. a good performance appraisal program - evaluating task and relationship development with goals of both honest feedback and motivation.
4. supervision and direction - ongoing application of a good leadership style to both the product process and the people involved.
5. reward system - a source of feedback that gives personal and public approval to personnel who perform well.

Thus, in business and education there has been a growing consensus that a good leader must be committed to both accomplishing a task and caring for the people needs of his subordinates. The evidence from the studies in the 1970's strongly suggests that both task concern and relationship concern are important, regardless of the

situation. Thus, while a leader may need to draw on a variety of skills in order to manage effectively, he will always need to have a commitment to both task fulfillment and people needs. In fact, the evidence of the 1980s and 1990s is leading the way to new revisions of theory and new directions for leadership.

6. Forming a Theory of Leadership

These conclusions from business and educational environments have implications for all of society. Values are becoming more humanistic and persons are valued for who they are and what their needs are, as well as for what they can contribute. Information is growing rapidly and even with the use of computers to help organize and access knowledge it is difficult for one leader to know everything necessary to make decisions. For both these reasons the leaders who involve their followers in making decisions will gain commitment which will filter through the entire organization. As field marshal Montgomery said, "A leader has the capacity and will to rally men and women to a common purpose, and the character which inspires confidence" (Sanders, 1980, p. 19).

The leader must have character qualities which build a relationship of trust and confidence. He must be able to apply leadership skills in actual situations. He must be trained to respond to a variety of situational issues and to the complex of change itself. To integrate these elements into a cohesive theory is beyond the scope of this paper, but a very simple matrix of these concerns for training leaders includes character, conviction and competence (Clinton, 1985).

Character Conviction

Competence

This beginning was expanded in the subsequent *How to Become a Discipler* (1988).

A similar direction was set by Hickman and Silva (1987) under the idea of complexity management. They make three points: New leaders must forge commitment to a common purpose by constantly relating and integrating the purposes of individuals to those of the organization. Second, the leader must use power to control the key individuals who cannot or will not commit themselves to the common purposes. Third, the leader must focus on key individuals who are pivotal. These unique few must find personal fulfillment and must achieve peak performance for the organization. Identifying and developing these leadership characteristics for junior high or high school age people is an educational task which is not addressed in the literature.

3. Project Design

1. Justification

The outcome of the literature review is that no significant data exists regarding leadership skills or aptitude among seventh-twelfth grade gifted students.

There is not sufficient evidence to direct the project nor to give specific direction to testing. Of necessity the development of the unit has had to be done based on the researcher's past experience and training, from general literature studied, and from consultation with other professionals who teach gifted students and/or leadership

curricula.

2. Goals

The project has the following goals:

1. to develop a new teaching unit on leadership which will be appropriate in quantity and quality for seventh grade through high school gifted students.
2. to use two instruments to begin to assess the presence of leadership skills and aptitudes among the sample.
3. to administer the unit to a seventh grade Gifted and Talented Education class of students and do a summative evaluation.

3. Sequence

Six weeks after the beginning of the 1982-1983 school year the first session of the unit on leadership was presented. The students had been told previously that as a part of their Social Studies curriculum there would be a year long sequence on leadership. The six presentations of this unit constituted half the year's content (approximately ten hours). Since the unit was presented prior to any content from the teacher, no prior knowledge was expected. Most of these students had been in Gifted And Talented Education classes together for the previous three years. In checking with the teachers in the elementary schools it was found that there had been no planned teaching on leadership in the GATE curriculum. A formative evaluation was done in the first session. After the six presentations a summative evaluation was done. Finally, the two teachers were asked to discuss the unit and its value and to write a final evaluation from their perspective.

A five year follow-up survey was done with the two students who showed the greatest leadership potential (of the seventy in the sample). The other two top scorers had moved out of the district. The two top leaders will be compared to two low-leadership scoring students.

4. Choice of Materials and Resources

Since there were no existing materials, the unit was formed by the author. No single secondary source accounts for more than 10% of the final product. Stogdill (1974) was used as the main resource for outline purposes, since it is based on the greatest empirical data base.

A number of instruments which assess leadership potential are available. Some of these test leadership aptitude (the Leadership Opinion Questionnaire), some test for the presence of leadership ability (the Personal Profile System and the Contingency Model of Leadership Effectiveness). Other instruments test for more general qualities but have not been standardized for leaders (the Learning Style Inventory).

None of the instruments have been standardized for seventh graders, much less for gifted seventh graders. Therefore, the choice of instruments was done by the researcher based on previous experience. Three tests were

administered to the 70 students in the sample: the Personal Profile System, the Personal Rating Scale, and the Learning Style Inventory.

5. Procedures

1) Student Population

The students in the classes had all been identified as gifted either by the central GATE process (either IQ scores (>132) or by the San Bernardino District instrument), or by the GATE coordinator, working with the principal. Data was collected on most of the students including IQ score, CTBS math composite score, and whether identified. The class was evenly divided between male (35) and female (35) students (there were seventy-six students, but six failed to attend enough sessions to collect data for comparison purposes; none of the ones for whom data is missing were among the top picks as leaders, either by the instruments or by the students).

2) Educational Objective

The primary objective was to find out whether a class of seventh grade gifted students could be taught basic principles of leadership which they could apply effectively. A secondary objective was to find out if any of the instruments were effective in picking out good leaders.

3) Formative Evaluation

In the first session the students were asked to write four principles of leadership. No student listed more than one of the principles later presented in the unit.

The students also filled out a sociogram in which they were asked to identify (1) a student in the class they had worked with before on a class project who was a good leader for the group; (2) a student in the class for whom they had voted in an election for a class or school leader or as a student council officer; (3) a student in the class whom they would like to have as the leader of a team, when the team had to accomplish a research project within a six week period; (4) a student in the class whom they think would do a good job as student council president. These questions were asked prior to any training or definitions in regard to leadership skills or assessment of potential. Therefore, in effect the results are based on experience and popularity, which are two of the bases for leadership choice in Stogdill's research (pp. 232ff).

The desire of the researcher in asking these questions was to find out what persons the students already identified as leaders in popular and productive situations, at personal and social levels. The students identified by this means would be a measure of how effectively the instruments picked out the perceived leaders from within the group.

4) Summative Evaluation

At the conclusion of the six presentations the students were asked to recall from memory the following three content questions and to make two evaluations:

- (1) Define a "leader."
- (2) List the three characteristics of a leader.
- (3) List the four steps in effective exercise of leadership.
- (4) Describe the most important point you have learned from this unit.
- (5) What should be changed about the leadership unit?

The written responses were tabulated and will be presented in section 4 on Evaluation.

5) Project Evaluation

The two teachers discussed the project in light of the research goals of the project and the effectiveness of the presentations in terms of motivating the students and fitting the needs of the teacher's class objectives. The letter was sent to the project director, Dr. Kravetz. The researcher then met with the teachers and with Dr. Kravetz. The teachers felt that the objectives had been accomplished, that the unit met their overall objectives and that it had been well presented.

4. Evaluation

1. Results of the Project Testing

The leadership curriculum unit was taught to 76 seventh grade students as described above. A questionnaire was administered to them in the first session. The leadership instruments were used in the third and fourth sessions. Prior to testing, all students were assigned numbers. All data will be reported based on the identification number of the student.

The instruments used were the Personal Profile System (PPS), the Learning Style Inventory (LSI), and the Personal Rating Scale.

The Personal Rating Scale must be filled out both by the person being evaluated and by a coworker who knows the person well. Copies were given to the students with the request that they, one parent, and one friend fill them out. The returns were so inadequate that the instrument could not be used in evaluations.

The PPS divides student responses into four categories. A high "D" (dominance) represents a responder who is strong in setting his own goals, and pursues these goals strongly. A high "I" (influence) represents a responder who is concerned about relationships with others and tends to lead by influence. A high "S" (steadiness) represents a responder who is very stable and who functions best in leadership capacities when using his ability to not get tense under pressure and to be a calming influence on other people. A high "C" (compliance) represents a person who is concerned about details and finishing a task.

All four traits are useful to leaders and all four need to be learned skills, if they are not natural ones. Certain combinations have been identified as significant (twelve combinations are possible in the scoring), as has been any score occurring over the midline on the scale.

The LSI also divides respondents into four categories. The first category is Concrete Experiencer (CE). This type of individual processes information by getting involved with the actual situation and relates to others by his/her experience with the person.

The second category is Reflective Observer (RO). The RO is a type of person who listens, reflects on the content, then responds to their own conclusions. This person often needs more time to reflect than others do and is not usually perceived as a leader in the short run, but can perform well in a role which calls for positional authority.

The third category is Abstract Conceptualizer (AC). An AC wants to understand how the information or action fits into a wider picture or how the whole fits into a system. He tends to respond to the context as well as to the content.

The fourth category is the Active Experimenter (AE). The AE can gather data from a variety of sources and tends to respond by doing something more or less creative with the information. He wants to know why it works like that, or how it can be manipulated or applied in a new or different context.

(1) Responses to the formative questions

The class had been together about four weeks when these questions were asked. Many of the students had been in one of two sixth grade classes, therefore, they had prior experience with each other. They had not yet done any team projects in any of their classes in the current year. Student Council elections and class elections had been held in these classes.

(a) response to the first question

Thirty-four of the seventy-six students were identified as having been good leaders in the past. Seven students were listed three times each and eight students were listed two times each. This shows a high amount of persons identified as leaders, but the results are so spread that no persons stand out significantly on this item.

(b) response to the second question

One student was listed thirteen times. One student was listed ten times. Two students were listed six times. Fifteen students were listed three times or less. The four students who received six or more votes were the ones who had recently been elected to the student council. This question resulted in being very selective among the total population. The four students who stand out are numbers 3, 10, 6, and 42 respectively.

The PPS pattern on student number 3 is high I, second high (also above the midline) D. This pattern is reflective of a person who is concerned with people and relationships and also about achieving objectives. He works to bring his or the groups objectives into reality and works well with people in doing this. Number 3's LSI is high

AE and high AC. This reflects an orientation toward rational processing of information, relating specifics to a system, and working with the results in new or creative application.

The PPS pattern on number 10 is high I, second high D. This is identical to number 3's pattern. The LSI pattern for number 10 is high AE, second high AC, also identical to number 3's pattern.

The PPS pattern on number 6 is high I, second high D. The LSI pattern is high AE, second high CE. This indicates a tendency to work less with patterns or systems and more with actual people or situations.

The PPS pattern on number 42 is high I. The second score is I, but not above the midline. The LSI pattern is high AC, second high CE. This is similar to number six.

On the PPS all four students were highest on the I scale. All four student's second highest score was D, only one of them below the midline. This singular combination represents a high degree of correlation since there were twelve possible combinations.

On the LSI all students highest score was AE, with the second score evenly split between AC and CE. This also represents a fairly high correlation.

Three of the four students IQ scores are above 132. The other student had not been tested for IQ.

(c) Response to the third question

The question was asked with the intent of establishing a work situation which called for a leader who was expected to lead the group in accomplishing a task as well as being a friendly (popular) leader. The results were one student was listed ten times, one student was listed seven times, one student was listed five times, one student was listed four times. The two highest students on this question were the two highest on the previous questions, but in reverse order. The third student has a PPS pattern of high I and an LSI pattern of high AE. The fourth student has a PPS pattern of high I, second high D, and an LSI pattern of high AE.

On the PPS all four students were high I. On the LSI all four were high AE. Three of the four students have IQ scores above 132. The other student (number 3) had not been tested for IQ.

(d) Response on the fourth question

Having worked with each other for a month since the class election the students had more more opportunity to get to know each other. This vote, therefore, was in effect a popularity contest based on relatively good knowledge in a classroom context. The results were one student received twenty votes, two students received six votes, and one student received five votes. Three of these four students are among the ones already described. They all have PPS highs of I, second high D, and LSI patterns of high AE. The fourth student (one of the ones who received six votes) has a PPS with high I and a LSI with high AC, second high AE.

(2). Summary of the test data.

Of the seven high peer identified leaders on all scales (students # 10, 3, 6, 42, 11, 37, 38), three appear on two or more of the question responses and two of these appear as the two top choices on three of the four questions. A closer look at these students is appropriate.

Student 10 received the highest listing on the latter two questions and on the first question. This student's IQ is 168, his CTBS math composite score is 13.2 (tested at 7.1). His PPS is high I, second high D. His LSI is high AE, second high AC. The PPS and LSI suggest an active, experimenting influencer who is moderately goal directed. The high IQ, highest in the class by 18 points (more than one standard deviation), plus the profile scores suggests a strong conceptual ability. This is supported by the CTBS math score six years above grade level. The interpretive pattern correlates well with business leadership findings to indicate a successful leader. This is confirmed by the strong class support in both popular elections and task oriented contexts.

The second highest rating student is number 3. This student was ranked highest on the second question and second highest on the last two questions (related to present choices). She has not been tested for IQ. Her PPS is high I, second high D. Her LSI is high AE, second high CE, and a third high score (above 60%) on AC. Her CTBS math score is 10.6, approximately three and one-half years above grade level.

The third highest ranking student was number 6. This student was given two or more votes on all four questions and was ranked third or fourth on two of the questions. This student's scores are: PPS-high I, second high D; LSI-high AE, second high CE; IQ-143; CTBS math-10.2. This is almost identical to the two previous students, indicating a student who is both highly gifted and a leader.

The final four students in the top ranked category are numbers 11, 37, 38, 42. Two of these students' scores are PPS high I, second high D. One of these is LSI-high AE; IQ-136; CTBS-10.9. The other student is LSI-high CE, second high AE; IQ-132; CTBS-8.1. The other two students are PPS high I, second high S (steadiness). One of these has LSI-high AE, second high AC; IQ-148; CTBS-12.9. The final student has LSI-high AC; CTBS-9.3. No IQ was available for this student.

The composite pattern of high scores from the two tests are shown on the following chart.

CE RO AC AE

D

I 1 1 5

S

C

When this summary is viewed in light of the fact that all students scored high I, and five of the seven scored second high D, that all but two scored high AE (the other two had that as their second score), and that there was no other pattern or combination of patterns in the top seven, the conclusion may be drawn that there is a fairly high correlation here.

One way to check this apparent direction is to look for other students who have similar scores on the PPS and LSI and see if there are some who have this pattern but were not picked as leaders on the preference questions. In fact only one other student, number 43, shares the PPS and LSI pattern of the top seven. This student has PPS-high I, second high D; LSI-high AE; IQ-126; CTBS-12.9. This student received three votes on question four, tied with one of the seven leaders. The overall voting pattern for this student indicates that he would have been fifth overall in terms of the vote for school president. Discussion with two of the GATE teachers supported the idea that this student is looked upon as a leader by a limited number of peers, but that perceived personality factors influence others not to follow this student.

These findings support the idea that a pattern emerges from considering PPS and LSI scores compared with actual leadership indicators. In fact, the correlation is that six of the top eight leaders share an identical pattern and that those six exhaust that particular category. The other two leaders vary by only one or two scores from this pattern.

A further question concerns the relationship between leadership and giftedness. Five of the seven leaders have IQ scores within the top 14 students in the total number of 76. Three of the top four IQ scores for the whole class are in the seven leaders. Of the top five leaders, all have CTBS math composite scores of 9.7 or higher, that is, at least two and one-half years above grade level.

All the top leaders have high IQ and CTBS math scores. Other high scoring people do not appear to be natural leaders. This one-way correlation strongly supports the idea that leaders often have high intellectual ability. This may be especially so in the present case since the context of production is a highly academic GATE class.

There is a high correlation between a particular PPS-LSI pattern and actual leadership preference, significant at a <.05% level. There is also a strong one-way correlation between leadership preference and high intellectual ability.

2. Follow-up examination

The top two leadership students (#s 10 and 3) and two students with non-leadership instrument results were tracked for five years. The two non-leadership indicated students held no positions of leadership either by appointment or by election. The two leadership identified students held over 40 positions of elected or appointed leadership in the subsequent five years.

3. Results of the Teaching Unit

Upon completion of the teaching unit the students were asked to answer five questions. Three of these were recall questions from the content. Two of these were questions which asked them to make an evaluation of the content. The questions and the students' responses will be given below.

Question 1. Define a leader.

The answer to question one should be "A leader is one who has the ability to initiate, communicate, motivate, and sustain commonality of purpose." Of 67 respondents, 58 (86.9%) answered the question with the correct answer.

Many of these correct respondents have partial answers, but included at least three of the four components and the idea of common purpose. 42% gave the answer correctly and completely.

Question 2. List the three characteristics of a leader.

This should have been answered, "character, conviction, competence." Of the 67 respondents, 64 listed all three parts of the answer. Two others listed two of the correct parts. One student had no response.

Question 3. List four steps in effective exercise of leadership.

This related to the main point of the training on competence, i.e. the functions which a leader does to be an effective leader. The response should have been, "plan, organize, manage and control." Fourteen respondents gave two or less correct parts. Fifteen (22%) gave three correct parts, and thirty-eight (56%) gave all four correct responses.

Question 4. Describe the most important point you have learned from this unit.

The most important points listed were:

- a. knowledge about myself as a leader (19)
- b. knowing how I can become a good leader (18)
- c. knowing what makes a good leader (14)
- d. knowing how to organize and complete a project (9)

These responses indicate that 37 (55%) students personalized the fact that they learned about themselves as leaders and how they could be good leaders. Fourteen other students (20%) gave a similar response, but stated impersonally.

Question 5. What would you like to see changed about the leadership unit?

The total response listed was:

- a. no response - 23
- b. have shorter sessions - 14
- c. have more about convictions - 6
- d. have more sessions and more content - 3

e. have more student participation - 3

f. use more tests about us - 2

g. teach more about competence - 2

These responses were helpful in planning the final form of the unit so that it could be used again.

Fourteen students wanted shorter sessions. The six sessions were seventy-five minutes long because the school had double sessions for social studies. Normal sessions are about forty minutes.

Thirteen students asked for more content and three asked for more student participation. These could be met by increasing the content in the indicated sections and by having more time for the students to practice the skills being taught. The teacher planned to do the latter in subsequent sessions in the year long plan.

5. Conclusion

The teaching unit seems to have effectively taught the students the goal of a leader, the characteristics of leadership, and how to be an effective leader. It also seems to have motivated the students to believe that they can become effective leaders. The student suggestions for improving the unit were all helpful.

The testing part of the project indicates that a certain pattern correlates closely with perceived leadership. The two instruments indicated may be used in further testing both to show the students some of the specific characteristics of leaders and to inform them of their own natural potential and ways in which they can develop and/or adapt in their leadership style.

Those perceived as leaders were in the top 15% of the class of gifted students in IQ and/or CTBS math scores. Thus, in this case, high IQ matches with leadership.

There is a possibility of using the two instruments to search for leadership potential in teenage students. A more exhaustive analytical study would have to be carried out to confirm these preliminary findings regarding predictive ability.

Additional study needs to be done in many areas. The instruments were normed on adults. Junior high norms have not been established. The unification of diverse information into a cohesive whole, as presented in the unit, was of necessity done on the basis of the researcher's experience, since no comprehensive theory exists.

The extent of giftedness among leaders in the business and political communities is unknown. A longitudinal study on a significant number of gifted leaders would hopefully reveal much about the development of leadership potential in actual experience. This could follow the format of Bloom's 1985 study on development of talent.

A study could be set up to test gifted students' ability to learn and then apply the functions of effective leadership. It could also be set up to see how much of leadership skills are trainable and how much must be natural.

Bibliography

- Barbe, W. B. (1961). Educating Tomorrow's Leaders. Columbus, OH: Board of Education.
- Barber, Cyril and Strauss, Gary. (1981). Leadership: the Dynamic of Success. San Bernardino: Here's Life Publishers.
- Bass, B. et.al. (1975). Management Styles, Journal of Applied Psychology 60:720-729.
- Blake, Robert and Mouton, Jane. (1964). The Managerial Grid. Huston: Gulf.
- Blanchard, Kenneth; Zigarmi, Patriccia; Zigarmi, Drea. (1985). Leadership and the One Minute Manager. NY: Morrow.
- Bloom, Benjamin, et.al. (1985). Developing Talent in Youth. Chicago: University of Chicago Press.
- Burke, Warner. (Nov., 1980). Leadership: Is there One Best Approach? Management Review.
- Clinton, Stephen M. (Dec., 1985). A Theory of Leadership, CAG Communicator.
- Clinton, Stephen M. (1988). How to Become a Discipler. Orlando: International Leadership Council.
- Clous, Bonnidell. (1985). Moral Development. Grand Rapids, MI: Baker Book House.
- Cribbin, J. J. (1981). Leadership. NY: American Management Association.
- Douglass, Stephen. (1976). The Ministry of Management. San Bernardino, CA: Here's Life Publishers.
- Egan, Gerard. (1975). The Skilled Helper. Monterey, CA: Brooks/Cole Pub.
- Eims, Leroy. (1975). Be the Leader You Were Meant to Be. Wheaton, IL: Victor Books.
- Fiedler, Fred. (1974). Leadership and Effective Management. Glenview, IL: Scott, Foresman and Co.
- (1977). Improving Leadership Effectiveness. NY: Wiley.
- Friedman, Paul. et.al. (1984). Identifying the Leadership Gifted: Self, Peer or Teacher Nominations? Roeper Review. 7:2, 91-94.
- Gallager, J. J. (1975). Teaching the Gifted Child. Boston: Allyn and Bacon.
- (1979). Issues in Gifted Education. Ventura, CA: NSLTI.

- Gangel, K.(1974). Competent to Lead. Chicago: Moody Press.
- Geier, J. G. (1979). Personal Profile System. Minn.: Performax.
- Giammatteo, Michael and Dolores. (1981). Forces on Leadership. Reston, VA: NASSP.
- Gibson, Cyrus. (1980). Managing Organizational Behavior. Homewood, IL: Richard D. Irwin.
- Greenleaf, R. K. (1977). Servant Leadership. NY: Paulist Press.
- Hall, Jay. (1966). A Comparison of Decision-Making Performances, Journal of Personality and Social Psychology. 3, 214-222.
- Hersey, Paul and Blanchard, Kenneth. (1969). Life Cycle Theory of Leadership, Training and Development Journal. 23:5, 26-34.
- Hickman, Craig. & Silva, Michael. (1987). The Future 500. New American Library.
- Hunt, James and Larson, Lars. (1979). Crosscurrents in Leadership. Carbondale, IL: Southern Illinois Univ. Press.
- Isaacs, A. F. (1973). Giftedness and Leadership, Gifted Child Quarterly. 17, 102-112.
- Jackson, D. M. (1980). Curriculum Development for the Gifted. Guilford, CN: Special Learning Corp.
- Jackson, Robert. (1984). GATE Summer Academy, Roeper Review. 7:2, 109-111.
- Johnson, B. (1977). A New Generation of Leadership. Ventura, CA: NSLTI.
- Joyce, B. and Weil, M. (1986). Models of Teaching. Englewood Cliffs, NJ: Prentice-Hall.
- Karnes, Frances A. (1984). Leadership Profiles as Determined by the HSPQ of Students Identified as Intellectually Gifted, Roeper Review. 7:1, 46-48.
- Kohlberg, L. (1981). The Philosophy of Moral Development. NY: Harper and Row.
- Kolb, D. A. (1976). Learning Style Inventory. Boston: McBer.
- Kravetz, Nathan. (1982). A Discrepancy Model for Meeting the Program Needs of the Gifted and Talented, ERIC. ED 218 836.
- Laubenfels, Jean. (1977). The Gifted Student. Westport, CN: Greenwood Press.

- Lewis, David. (1979). How to be a Gifted Parent. NY: Norton.
- Lindsay, Brian. (Feb., 1981). Leadership Giftedness and Future Studies, Roeper Review. 3:3, 9-13.
- Mager, Robert and Beach, K. Jr. (1976). Developing Vocational Instruction. Palo Alto, CA: Fearon Publishers.
- Magoon, R. A. and Jellen, H. G. (1980). Leadership Development. Posquoson, VA: Human Development Press.
- Maher, Robert. (1985). Leadership Class for Students, Schools, and Community, NASSP Bulletin. 69:483, 126-128.
- Meeker, Mary. (1969). The Structure of the Intellect. Columbus, OH: Merrill Press.
- Morgan, H. J. et.al. (1980). Elementary and Secondary Level Programs for the Gifted and Talented. NY:Teachers College.
- Morris, G. Barry. (1985). A Futuristic Cognitive View of Leadership,
Educational Administration Quarterly. 21:1, 7-27.
- Morrow, L. (Aug. 6, 1979). A Cry for Leadership, TIME.
- Pasternack, M. and Silvey, L. (1969). Leadership Patterns in Gifted Peer Groups, Gifted Child Quarterly. 13, 126-128.
- Passow, A. H. (1979). The Gifted Child. Chicago: NSSE.
- Peters, Tom and Austin, Nancy. (1985). A Passion for Excellence. NY: Random House.
- Plowman, Paul. (1981). Training Extraordinary Leaders, Roeper Review. 3:3, 13-16.
- Quirk, J. P. (1978). Readings in Gifted and Talented Education. Guilford, CN: Speical Learning Corp.
- Renzulli, J. P., ed. (1976). New Directions in Creativity. NY: Harper and Row.
- Sanders, Oswald. (1967). Spiritual Leadership. Chicago: Moody Press.
- Schaller, Lyle. (1974). The Decision Makers. Nashville: Abingdon.
- Schmidt, W. H. (1961). The Leader Looks at the Leadership Dilemma. Washington: Leadership Resources.
- Shaftel, Fannie and George. (1982). Role Playing in the Curriculum. Englewood Cliffs, NJ: Prentice-Hall.

- Sisk, Dorthy. (1985). Leadership Development: Its Importance in Programs for Gifted Youth, NASSP Bulletin. 69:482, 48-54.
- Stanton, E. S. (1982). Reality Centered People Management. NY: American Management Association.
- Stodgill, Ralph. (1974). Handbook of Leadership. NY: Macmillan.
- Treffinger, Donald. (1980). Encouraging Creative Learning for the Gifted and Talented. Ventura, CA: NSLTI.
- Tuchman, B. (June 23, 1980). These are Not Times that Evoke Great Leadership, U.S. News and World Report. 48-53.
- Uris, A. (1980). The Executive Deskbook. NY: Nostrand.
- Venuto, Peter. (1979). Planning and Control for Managers. Boston: Education for Management.
- Wenrich, R.C. (1976). Leadership Development Ten Years Later, American Vocational Journal. 51:42-44.