THE HISTORICAL DEVELOPMENT OF THE TEXAS ACADEMY
OF MATHEMATICS AND SCIENCE 1987-1992

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF EDUCATION

By

Cindy F. Stride, B.S. Ed., M. Ed.
Denton, Texas
May, 1996
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This study is a historical analysis of the significant events that led to the creation and evolution of the Texas Academy of Mathematics and Science (TAMS), from 1987 through 1992, and a description of the key individuals contributing to the development of the program.

Included is a historical review of early college entrance and acceleration practices in the American educational system. In addition, the development of residential programs for mathematically and scientifically precocious high school-aged youths is offered.

On June 23, 1987, the Texas Academy of Mathematics and Science was established by the 70th Texas Legislature. Though fourth in a line of special programs created for mathematically and scientifically able high school-aged youths, the TAMS model significantly deviated from its predecessors. Only the accelerative TAMS model would offer a college curriculum taught by college faculty and the opportunity to concurrently complete the last two years of high school and the first two years of college.

From the inception of the program in 1987 through 1992, changes would occur. From 1987 through the summer of 1988, the development of the curriculum, student life program, and admissions process took place. From 1988 through 1989 the inaugural class was introduced to the program, and legislative funding was approved in the 71st Texas
Legislative Session. From 1989 through 1992, the program further expanded to an enrollment of 335 students who were assisted by more than thirty full and part-time staff members. The academic, admissions, and student life components further evolved to better identify, recruit, and nurture the intellectual and emotional development of these gifted adolescents.

In 1992 the TAMS program was selected for the "Texas Excellence in Higher Education Award," for outstanding contributions to higher education within the state of Texas. In addition, one nationally acclaimed authority on programs for gifted youth, Julian Stanley, hailed the TAMS model superior in approach to all other similar existing schools. From 1987 through 1992, the Texas Academy of Mathematics and Science metamorphized to become an award winning, nationally acclaimed accelerative model for mathematically and scientifically gifted high school-aged youth.
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CHAPTER I

INTRODUCTION

The Texas Academy of Mathematics and Science (TAMS), was established as a residential program for mathematically and scientifically gifted high school-aged students by the 70th Texas Legislature on June 23, 1987. Stemming from national concern centered on the failure of the American educational system to produce students who could demonstrate competitive mathematical and scientific competency (as compared to other world powers), as well as predicted nationwide shortages in the mathematics and science fields, a new educational movement was spawned (Berger, 1992; Hurley, June 16, 1987; National Commission on Excellence in Education 1983; Southern and Jones, 1991; Stanley 1987, 1991). To better prepare American youth to successfully compete in an increasingly global, technologically sophisticated society, and to attract more to careers in the mathematics and science fields, special residential programs for mathematically and scientifically precocious high school-aged youth were established as one educational solution to meet these challenges (Benbow, 1992, Berger, 1992; Stanley 1987, 1991).

This study is a historical analysis of the factors, events, and individuals that impacted the establishment and evolution of the TAMS program. Though TAMS was the fourth public, state supported, residential program to be established, the TAMS model offered a historically unique approach. Though the target population was similar, the TAMS model significantly deviated from the programs offered by its predecessors at the
North Carolina School of Science and Mathematics, the Louisiana School for Math, Science and the Arts, and the Illinois Math and Science Academy. Only TAMS would offer college course work, taught by college faculty on a college campus, and the opportunity to complete the last two years of high school and the first two years of college concurrently. The events leading to the establishment and evolution of this successful, historically unique accelerative program are of interest to historians, to individuals involved in its creation and evolution, to future TAMS participants, and to the fields of gifted and higher education.

Engels (1980) examined the task and purposes of historical study and developed a rationale for increasing such studies. In his article, "Looking Forward Via Hindsight: A Rationale for Reviewing our Ideological Roots," he urged the need for additional emphasis on historical studies in articles and dissertations. Engels noted, "... while so many significant contributors are available to reflect on their insights and contributions, the time seems entirely appropriate to continue and embellish this recent attention to our roots for the sake of a richer future" (p. 185).

This study is intended to provide useful information concerning the development of this program from its inception in 1987 through its evolution up to 1992. The events occurring after June 1992 are not the subject of this study. The information derived from historical research of the field of education enables educators "to understand the how and the why of educational movements that have appeared and . . . that continue to prevail" (Best, 1970, p. 76). This understanding can assist in the differentiation between trends which offer lasting contributions versus the short-lived fad. Information gained through
historical research can be of great benefit to current and future generations (Borg and Gall, 1983).

Other than a limited number of general articles, various TAMS publications, newspaper accounts, and one brief chronicling of the historical development of the program presented in a Convocation address (Miller, 1990), little has been written about the establishment of the TAMS model. To date, there has been no in-depth analysis of the establishment and evolution of the program. This study examines forces and individuals who were instrumental in the creation of this historically unique, accelerative program for gifted high school-aged youth.

Statement of Purposes

This study was conducted for the purposes of illustrating: 1) the development of the Texas Academy of Mathematics and Science (TAMS) program at the University of North Texas from its inception in 1987 through 1992, as an example of the development of an exemplary collegiate residential program for high school-aged youths talented in mathematics and science, and 2) identifying implications for practice and research.

More specifically this study includes the following:

1. A description of the TAMS program.

2. Other special educational programs for mathematically and scientifically precocious high school-aged students that preceded or influenced the TAMS model.

3. The chronology of major events leading to the birth of the TAMS program.

4. The steps undertaken to gain legislative support of the TAMS program.
5. The creation of the initial organizational structure of the TAMS program and how it evolved through 1992.

6. How funding for the TAMS program was generated.

7. The admissions process utilized to select initial TAMS participants and how it evolved through 1992.

8. The development of the TAMS curriculum and how it evolved through 1992.


10. The types of co-curricular learning opportunities TAMS students were afforded through 1992.

11. The kinds of support services offered to aid TAMS participants in their adjustment to college life.

12. People who have been most influential in the creation and evolution of the TAMS program.

Background and Significance of the Study

Historical studies have dealt with almost every aspect of the evolution of American education. As Best notes:

Such investigations have pointed out the important contributions of both educators and statesmen. They have examined the growth and development of colleges and universities, elementary and secondary schools, educational organizations and associations, the rise and decline of educational movements, the introduction of new teaching methods, and the issues that have persistently confronted American education. (1970, p. 96)
In gaining a historical perspective, the professional in the field of education can better evaluate what educational trends have made lasting contributions to the field, and what historical events impacted them. Understanding past educational successes and failures, in the context of the social, economic, or political events impacting them, can provide an effective conceptual framework for strategizing to meet the challenges of the future (Best, 1970).

Currently, there is a new educational movement on the rise in American education. Although accelerated programs for gifted children are nothing new in the United States and are supported by research findings spanning more than 60 years, they are not used universally and have often been met with skepticism. What is new in the realm of accelerated education is the development of residential programs targeting gifted high school-aged students in the mathematics and science fields (Benbow, 1992).

In early 1977, the vision of a newly elected governor was about to impact the North Carolina educational system. Soon after assuming office, Governor James Hunt established the North Carolina School of Science and Mathematics, the first state-funded, public residential school for academically talented 11th and 12th graders in the United States (Eilber, 1987).

Governor Hunt's stated reasons for creating the science and mathematics academy were threefold: 1) he recognized the economic well-being of the state would increasingly depend on industries whose products and services would have a technological base; 2) he saw the need to improve the science and mathematics education for academically talented
high school students; and 3) he sought to provide a source of new teaching methods, curriculum materials, and teacher training (Eilber, 1987).

The North Carolina School of Science and Mathematics quickly became a national and international model for a residential program geared toward mathematically and scientifically talented high school-aged students. Other states soon followed this lead, with Louisiana opening the Louisiana School for Mathematics, Science and the Arts in 1983 and Illinois opening the Illinois Math and Science Academy in 1986 (Berger, 1992). As Eilber notes, "Delegations of legislatures, educators, and business leaders from 35 states and 15 foreign countries have visited the [North Carolina] campus" (1987, p. 777). Many who visited had interest in and hoped to develop similar programs.

This study focuses on the development of the fourth accelerated residential program for gifted high school students in the United States—the Texas Academy of Mathematics and Science at the University of North Texas. There is no doubt the North Carolina School of Science and Mathematics will take a significant place in educational history as the first publicly supported residential school for gifted high school-aged students in the United States. However, the University of North Texas’ Texas Academy of Mathematics and Science may take an equally prestigious place alongside the North Carolina model as it was the first of its kind when established in 1987.

The brainchild of James Miller, then Dean of the College of Education, the Texas Academy of Mathematics and Science was developed to provide an opportunity for mathematically and scientifically gifted high school students in the state of Texas to concurrently complete the last two years of high school and the first two years of college.
While the North Carolina, Louisiana, and Illinois programs offered advanced high school residential programs, the Texas Academy of Mathematics and Science was the only program which allowed graduates to obtain a high school diploma while earning two years of college credit. The Texas Academy of Mathematics and Science became the first accelerated residential program in the United States in which students resided on the college campus, took advanced college course work, and earned college credit while concurrently completing their high school programs (Berger, 1992; Johnson, 1988; Ramsay & Redding, 1988; Redding, 1988; Sayler, 1993; Stanley, 1987, 1991).

Julian C. Stanley, director of the Study of Mathematically Precocious Youth and professor of psychology at The Johns Hopkins University, believes the Texas Academy of Mathematics and Science program to be the "academically sounder, less politically vulnerable, and more cost-effective version" of residential high school programs for youths talented in mathematics and science (1991, p. 771).

By examining the development of the Texas Academy of Mathematics and Science, this study provides the basis for comparison with similar programs such as the North Carolina School of Science and Mathematics, the Louisiana School for Math, Science and the Arts, the Illinois Math and Science Academy, and others. It can also help to provide a broader knowledge base from which to make predictions and draw conclusions concerning accelerated residential programs for gifted high school students. It provides an example of how one university took the concept of a two-year accelerated high school program and expanded it to contain only college instruction for which students would simultaneously receive high school credit.
The implications of this study could be of the utmost importance to the field of American education. As Stanley notes, "From across the land we are hearing cries for stronger preparation of students in mathematics, so that they can meet the quantitative demands of a world increasingly dependent on scientific and technological sophistication" (1987, p. 770). This educational movement, witnessing the development of these accelerated programs for mathematically and scientifically gifted youth, may have a profound impact on the educational history of the United States for generations to come.

Research Design

In *Methods of Research*, Good and Scates explain "the origin of the word 'history means the search for knowledge and the truth ..." (1954, p. 170). Charles notes the origin for the word research comes from the French word 'recherche' meaning to travel through or survey. The English meaning of the word is described as the "careful, systematic, patient study and investigation in some field of knowledge, undertaken to discover or establish facts or principles" (1988, p. 2).

When viewed as historical research, "history is any integrated narrative, description or analysis of past events or facts written in a spirit of critical inquiry for the whole truth" (Nevins 1962, p. 39). For historical research to avoid the charge of being an antiquated chronicling of past events, it must evidence functional use and offer possibilities for applying its data to current issues. Not only should historical research search the past for solutions, it should throw light on the present as well (Good and Scates, 1954).

Borg and Gall contend that historical research in education is important for several reasons:
The findings of historical research enable educators to learn from past discoveries and mistakes; to identify needs for educational reform; and to a certain extent, to predict future trends. (1983, p. 800)

Research in education is essential for continued development and improvement of educational teaching, learning, and administration. Educational research builds a body of knowledge that informs the practice of education (Borg and Gall, 1983).

In discussing the methodological approach used in historical research, Best contends that the activities of the historian are not so different from those of the scientist. Best clarifies by noting, "Historical research includes the delimitation of a problem, formulating hypotheses or generalizations to be tested or questions to be answered, gathering and analyzing data, and arriving at probability type conclusions . . . based upon deductive-inductive reasoning" (1970, p. 100).

Historical research applies scientific method to the description and analysis of past events. Ary, Jacobs, and Razavieh add that "the historian systematically and objectively locates, evaluates, and interprets evidence from which we can learn about the past . . . The hoped for result is increased understanding of the present and a more rational basis for making present choices" (1979, p. 312).

By utilizing careful research methodology, the study of the development and implementation of the Texas Academy of Mathematics and Science program can contribute a great deal to the knowledge of accelerated learning programs for the gifted in American education. This study will be limited to the history of one institution since this program is unique, and historical investigation requires thorough, time-consuming study to locate and evaluate primary sources.
The study of this accelerated collegiate program, emphasizing mathematics and science, can be of value as it is the first of its kind in the United States. This study can provide a basis for comparison with other accelerated education programs being offered or developed in this country. By stressing functional use of the evidence obtained, strong possibilities exist for applying its data when developing similar programs nation-wide. It can also contribute a broader knowledge base for the current educational movement toward making the United States more technologically competitive in the mathematics and science fields through the development of educational programs which emphasize these areas.

Methods and Procedures

In the spirit of critical inquiry, the historical researcher systematically and objectively locates, evaluates, and interprets evidence to learn and draw conclusions about the past. Though historians have no choice regarding what documents, relics, records, or artifacts survive the passage of time, they do have some control over what questions will be asked of sources and what measures will be applied to them (Ary, Jacobs, and Razavieh, 1979).

The three major steps Good describes in conducting historical research include: 1) the collection of data, 2) critical evaluation or criticism of the data; and 3) the presentation of factual findings of the study in readable, narrative form (1963). Through utilizing a systematic inquiry of primary and secondary sources, data for this study will be generated. These sources should provide information which can be used to determine facts related to the development and evolution of the TAMS program from the years 1987 through 1992.
John Best (1970) classifies historical data into two main categories: primary and secondary sources. Primary sources are eyewitness accounts. They are reported directly by an actual participant or observer in an event. Lancy stresses the most critical step in historical research is identifying and analyzing primary source materials. He adds, "having a good collection of primary source materials to begin one's research with is an important element in conducting historical research" (1993, p. 267).

Secondary sources of historical data include accounts of an event not actually witnessed or experienced by the reporter. The reporter may have talked with the observer or read an account by the observer, but the testimony is not that of the participant or witness. Because distortion in the transference of this information can occur, the historian only uses secondary sources when primary data is unavailable (Best, 1970).

According to Borg and Gall (1983), the most commonly used type of historical source is the document. Documents can be written, printed, published or unpublished. They can be prepared for public or private use. Documents can be intentional (prepared intentionally for use as a historical record) or unpremeditated (prepared with no thought of later being used as a historical record). Documents can take a variety of forms including: minutes of board meetings, committee reports, memos, professional periodicals, institutional files, school newspapers, legal records, bulletins, catalogs, reports of deans, department heads, yearbooks, etc. Documents were used extensively in conducting the proposed research.

Quantitative records, a separate type of historical source, can also be considered a subtype of document. Described as census records, attendance records, school budgets,
test scores, and similar compilations of numerical data, quantitative records can provide valuable factual information for the historical researcher (Borg and Gall, 1983). Quantitative records could provide objective evaluations of the general academic success or lack thereof of the TAMS program participants.

Oral testimony, the spoken account of the participant or witness, is a third type of historical source to be utilized. This primary source of evidence is usually obtained in a personal interview (which may be recorded or transcribed as the witness relates his or her observations) (Best, 1970). As most of the individuals directly involved in the creation and coordination of the TAMS program continue to work at the University of North Texas, the oral interview may prove to be the most significant primary source to be utilized in this research.

The contents of each historical source used in this study were identified as primary or secondary sources. Primary sources were used predominately. The use of secondary sources was limited to areas where no primary data could be located or where only one source of primary data could be found. Each source was examined in accordance with the principles of historical criticism. External and internal criticism were used to evaluate each source.

According to Carter Good (1963), the historian is obligated to determine both authenticity and meaning of sources examined. Writers on historical method have labeled these processes of evaluation as external and internal criticism. External criticism examines the genuineness of the document (attempting to determine if it is what it seems to be and reads true to the original). External criticism examines the form and appearance
of the document. Internal criticism, on the other hand, deals with the content of the source. It examines the meaning and trustworthiness of statements within the document. After issues of authorship, genuineness, time, place, and actual language or text of the original document have been evaluated through the process of external criticism, the questions of credibility, accuracy, and the value of the statements made within the document or oral testimony will be weighed through the process of internal criticism.

In this study, external criticism was utilized to examine issues of authorship, genuineness, dates, and actual language or text of documents considered. Whenever possible, original documents and primary sources were used to guard against errors. Through the use of internal criticism, the reliability of the source was examined. The positive aspect of internal criticism was used to attempt to discover the literal meaning of the document. The negative aspect of internal criticism was used to assess if either the competence and accuracy or the truthfulness and honesty of the observer was in question (Good, 1963; Good and Scates, 1954; Hockett, 1955).

This study determined the usefulness of historical sources examined to answer the research questions set forth. The type of primary data examined included:

1. Official records of the TAMS program
2. Bulletins, catalogues, and publications of the TAMS program
3. Minutes of the TAMS Advisory Board meetings, Curriculum Committee meetings, and Student Life Committee meetings
4. Letters of school officials
5. Student performance records
6. Photographs

7. Videos

8. Newsletters

9. Interviews with former and current TAMS administrators, faculty, staff, and advisory board members

Much of the data noted was found in the archives and files of the Texas Academy of Mathematics and Science office, the UNT College of Arts and Sciences, and the University of North Texas archives, all of which are located on the University of North Texas campus.

Interviews were conducted with primary sources who had first-hand knowledge of the creation and evolution of the TAMS program. The interviews were structured to gain as much knowledge as possible about people and events that impacted the development of the TAMS program from 1987 through 1992. General questions utilized in the interviews are included in Appendix A. Permission was gained to tape record interview sessions. Transcriptions of the tape recorded interviews were generated by the author. Some of those interviewed preferred to submit written responses. Lastly, permission was sought and granted by the TAMS Board of Directors to conduct this research.

Once collected, analyzed, evaluated, and organized, the data offered in this study is presented in the form of a narrative description.

Limitations

This study was subject to limitations associated with historical research. The historian has no choice regarding what documents or records survive the passage of time.
The availability of important individuals and documents, the genuineness or validity of
documents (external criticism), and trustworthiness of statements within documents or
sources (internal validity) greatly impact the resulting study (Ary, Jacobs, and Razavieh,
1979; Borg and Gall, 1983; Good, 1963; Gottschalk, 1950).

Some of the important individuals contributing to the formation and evolution of
TAMS were unavailable to be interviewed. Of those interviewed, some could not
remember specific events or dates. Though a significant number of important events were
chronicled in documents, many went unreported. And, though numerous documents were
archived, many materials were discovered in bulky, generalized files lacking order.

Much of this study relied on generalized recollections of individuals trying to recall
incidents some 10 years after their occurrence. In addition to the question of validity of
what was recalled, the possibility of bias and selective presentation of past events must be
considered. Gottschalk (1950) also cautions that facts of history are often derived from
personal testimony, making them subjective in nature. These generalizations, based upon
non-objective data, must be regarded as possessing limited validity.

Historical Context of the American
Acceleration Debate and Gifted Child Movement

For just over a century a great debate regarding accelerative education versus age
grade grouping has raged within the United States. Though more than sixty years of
empirical research have validated the acceleration option, many social, economic, and
political forces have impacted its widespread acceptance throughout American history.
To better understand the historical context of the acceleration concept in the American
educational system and to identify some of the significant contributors to the gifted-child movement, a brief examination of the literature will be offered.

**Early Acceptance of Acceleration**

During the early history of the United States, young entrants could often be found in American colleges. Student performance determined disposition of placement and graduation in both rural and urban districts (Brody and Stanley, 1991; Daurio, 1979; Montour, 1976; Southern and Jones, 1991). Prior to the mid-1800's, "Few educators found the association of boys of 12 with young men of 20 in academics or college anomalous" (Kett, 1974, p. 11). In fact, numerous studies would reflect a great many successful child prodigies in early American universities (Daurio, 1979; Hollingsworth, 1929; Miles, 1946; Montour, 1976, 1977; Stanley, 1985; Stanley and Benbow, 1983). Not until the early part of the twentieth century would the structure of age segregation become commonplace (Pressey, 1949; Southern and Jones, 1991).

**Massive Immigration, the Great Depression, and Educational Reform**

The tidal wave of immigration which engulfed the United States from 1890-1917 increased the school population by fifty percent (Chapman, 1988; Subotnik, Kassan, Summers, and Wasser, 1993). The transitioning of the U.S. economy toward industrialization, coupled with the rising tide of immigrants, necessitated the shift to curricular age-grade grouping. As noted by Daurio:
Age-grade grouping was well suited to the Americanization of immigrants. Moreover, the elementary schools and later the high schools provided the practical training that was necessitated by the increased specialization of industry. (1979, p. 14)

In trying to assimilate large numbers of immigrants and address problems of child labor and exploitation, social reform movements commencing in the early 20th century would culminate into extensive legislation in the 1920's and 1930's. Students would progress through the educational process with their chronological peers and would be required to stay in school until they reached a certain age. The greatest impetus for socio-economic support of the age-grade lockstep would be the Great Depression of 1929. Shrinking job markets lent credence to the argument that there was no reason for students to accelerate their educational process (Pressey, 1949; Southern and Jones, 1991).

Two additional factors contributing to a rigid grade structure would include the rise in developmental concerns expressed in educational circles and the curricular implications of schooling large numbers of students nationwide. Developmental psychologists, such as Piaget, contended children showed stable, invariant progression in cognitive and physical development. Developmental theorists implied that children of similar ages were more alike in their development than different and that it was potentially hazardous to instruct students in areas if they were developmentally unprepared. While caution was being voiced regarding acceleration, a more rigid scope on sequence of skills and knowledge was being devised at the state and national levels. As Southern and Jones would describe:

Textbook companies formalized curricula in print and disseminated the results to mass markets of schools and teachers. The curriculum became a scope and sequence for 12 years of study that was widely accepted...
Schools did not resist the use of chronological age as a guide for student placement . . . the age of a student being readily obtainable, and it provides a convenient benchmark for entry, progress, and exit. (1991, p. 7)

These historical forces all but silenced the previous practice and many advocates of academic acceleration. It would take future historic events to change the social and economic zeitgeist (Southern and Jones, 1991).

The Gifted Child Movement

Essentially, the gifted-child movement is seen as a product of the twentieth century and largely due to the monumental educational contributions of Lewis Madison Terman (Gowan, 1975). As Gowan recounted:

Although intelligence has been recognized since the time of the Romans as the first aspect of character, no one up to the beginning of the twentieth century had been able to solve the puzzle of measuring it. Even the English statistical genius, Galton, the forerunner of interest in the able, had failed to conquer this problem, despite the fact that his book entitled, *Hereditary Genius* (1869) contained an ingenious method of getting around the problem in the case of eminent men, so that he was able to predict accurately the regression toward the mean which occurs in their offspring.

It was the genius of Binet, a French psychologist assigned to produce a test which would screen out mentally retarded children from the Parisian school system, that produced the first effective developmental scale. For Binet and Simon (1905) solved this problem by finding out at which ages ordinary children complete certain tasks . . . They then arranged these in a social order by age. Then by measuring a given child on this scale one could tell the child's "mental age."

This breakthrough advance in developmental psychology was hailed around the world . . . Some . . . were willing to merely translate the scale into English and use it for testing many children. But here's where the outstanding genius of Lewis M. Terman showed itself. (1975, pp. 10 and 11)

Lewis Terman determined that what Binet and Simon had discovered was a method of measuring developmental progress in all children. The scale could be modified
not only to all children, but particularly adapted for the measurement of gifted children. The rate of intellectual developmental progress with respect to chronological age represented a ratio less than "1" for the below-average child, but greater than "1" in the above-average child. Terman multiplied this rate by 100, to avoid the use of a decimal, and named it the intelligence quotient, or IQ. This phrase became one of the most popular psychological inventions ever utilized (Gowan, 1975).

This discovery set the stage for the rest of Terman's life's work. By 1916, through research, writing, and refining, Terman would develop a new scale, the Stanford-Binet. The Stanford-Binet Individual Test of Intelligence would become the most popular, authoritative and long-lived intelligence test in existence (Gowan, 1975).

During 1921-22, Terman would launch the first major longitudinal study of intellectually talented children. The 1,528 individuals selected for this study would be tracked over the course of their lives. This classic work, still in progress, would result in exhaustive, on-going studies, much of which is reported in numerous volumes of the Genetic Studies of Genius series (Gowan, 1975; Stanley, 1977).

The second volume of the Genetic Studies of Genius series (1926) generated by Terman's early associate, Catherine M. Cox, reviewed the biographical data concerning the early lives of 300 geniuses. This work would do much to thwart the 'early ripe, early rot' theory opponents of acceleration had oft been so quick to espouse. Though examples could be found such as the overly publicized case of William Sidis, the brilliant child prodigy ruthlessly exploited by his father, who would ultimately renounce intellectual pursuits in adult life, this case proved the exception rather than the rule. At approximately
the same time, Leta S. Hollingsworth would carry on an intensive study of the gifted (Cohn, 1979; Cox, 1926; Gowan, 1975; Hollingsworth, 1942).

Hollingsworth employed case history techniques to develop support for the creation of the historic Speyer School in New York. The intensive study of the gifted through the Speyer School would set the stage for the 1935 Board of Education policy providing special classes for the gifted. Early identification would become one of the most important factors in successfully meeting the needs of the gifted child. Hollingsworth's experiments would demonstrate the special challenges to the teachers and to the educational process in effectively meeting the needs of the high-IQ child (Subotnik, Kassan, Summers, and Wasser, 1993).

Primarily from the research of Hollingsworth and Terman, a new composite picture of high-IQ children emerged:

They were remarkable in a variety of characteristics, both physical and intellectual. Many enjoyed fine health and a diversity of interests, were personable and charming, knew how to get along with others, and were inquisitive and alert. (Subotnik, Kassan, Summers, and Wasser, 1993, p. 30)

By 1947, Lewis Terman and Melita Oden would further attack the myths surrounding acceleration for the gifted. In Volume 4 of the Genetic Studies of Genius series, they concluded:

The influence of school acceleration in causing social maladjustment has been greatly exaggerated. There is no doubt that maladjustment does result in individual cases, but our data indicate that in a majority of subjects, the maladjustment consists of a temporary feeling of inferiority which is later overcome. . . . The important thing is to consider each child as a special case.
It is our opinion that children of 135 IQ or higher should be promoted sufficiently to permit college entrance by the age of 17 at the latest, and that a majority in this group would be better off to enter at 16. Acceleration to this extent is especially desirable for those who plan to complete two or more years of graduate study in preparation for a professional career. ("The Problem of School Acceleration" reprinted in Educating the Gifted: Acceleration and Enrichment, [eds.] George, Cohn, and Stanley, 1979, pp. 116 and 121)

Further professional support, complementing the works of Terman, Hollingsworth and others, would come from the significant contributions of Sidney L. Pressey. In his classic 1949 monograph entitled Educational Acceleration: Appraisals and Basic Problems, Pressey would conclude:

In general, then, individuals who have completed an undergraduate program in less than the conventional time appear not to have suffered in regard to academic work or otherwise as compared to those who took the usual time...

... students somewhat superior in ability and preparation find more rapid programs entirely feasible and, perhaps, even more natural for them.

Academic programs appear to be paced for the average student, with the consequence that their superiors can readily and often desirably move faster. However, educational conventions put a premium on the educational lock step. Greater flexibility of programs and better guidance should then save time for both students and instructors, with even less handicap for the above young persons. (pp. 135-37)

Though the works of Terman, Hollingsworth, Pressey, and many others would provide empirical evidence clearly supporting the special needs of the gifted and the appropriateness of acceleration for them, the grip of the age-segregation lockstep would remain firm up until World War II (Daurio, 1979; Southern and Jones, 1991; Stanley, 1976).
A Social and Economic Zeitgeist: World War II

World War II would provide the catalyst for more meaningful exploration of early college entrance on a large scale:

It suddenly became desirable to increase the availability of young populations of prime draft age for induction into the armed forces and to refill the ranks of professionals that had been reduced by the draft. The climate had changed, and the new emphasis on acceleration spurred interest about the issues surrounding it. (Southern and Jones, 1991, p. 8)

The climate was ripe for Pressey's extensive studies and the Terman and Oden 1947 study previously noted. However, a few years after the war's end, the influx of veterans attending universities at older ages slowed down. Again there would be a period with little social or economic impetus for early entry or rapid college completion (Daurio, 1979; Pressey, 1949; Southern and Jones, 1991).

Sputnik and the Technological Race

Though skepticism about acceleration would continue, the threat of a technological race with the Soviet Union would have a major impact on American education. A series of studies had been accomplished and reports had been made by the National Science Foundation urging Congress to increase its operational funding. The reports had shown that American schools were declining in their ability to train students in mathematics and engineering. A crisis in public concern was triggered by the October 4, 1957 launch of the Soviet Union Sputnik satellite. The Sputnik launch came months ahead of a successful U.S. launch. Sputnik spurred Americans to find and develop
scientific talent quickly and efficiently. Talent searches and accelerative programs in science proliferated (Duschl, 1990; Southern and Jones, 1991).

Stemming from the national reaction to the Sputnik scare, Congress would approve an additional emergency budget allocation of nine million dollars in 1958 to be used for science education institutes. In 1959, the National Science Foundation would use 46 per cent of its budget for science education programs. Science education has become a national priority and over the next fifteen years, major amounts of financial and human resources would be expended to that end (Duschl, 1990).

In 1956, the first curriculum development grant was awarded to the Physical Science Study Committee. Over the next ten years, the development of new national curriculum materials grew rapidly, under the direction of practicing scientists. By 1964, the National Science Foundation supported twelve elementary, junior high, and secondary science projects. By 1968, the number had increased to twenty-six. A national science curricula has been developed and implemented in less than a decade. America was making a valiant effort to insure its supremacy in science and technology (Duschl, 1990).

At approximately the same time as the space race with the Russians, American educators began advocating early entrance to elementary school. Numerous studies conducted in the 1950s concluded that younger aged students, who were able to demonstrate academic readiness, should be admitted early to kindergarten or the first grade. Many children would be given such opportunities as this became more widely perceived (Daurio, 1979).
Like the college experience of the 1940s, public school districts had become inundated with a student population surging from the 1950s "baby boom" (Southern and Jones, 1991). As with early elementary school entrance, the concept of early college entrance would increase in prominence.

Early College Entrance Experiments

In his comprehensive review of acceleration literature, which included 182 books and articles, Daurio would highlight the extensive research examining studies of early aged college entrants. Pressey's previously noted 1949 monograph cited eleven studies of younger-aged students, seven of which reported the results of young entrants at Harvard, Columbia, Minnesota, Dartmouth, Northwestern, Columbia, Barnard, and the City College of New York. Daurio would also highlight Key's 1938 review which had examined the University of Illinois, University of Buffalo, and the University of California at Berkeley. Four years after the Second World War ended, Pressey (1949) would include a report on the study of 3,021 who had entered the Ohio State University ten years earlier. And Berg and Larsen (1945) would examine the early entrants at the University of Illinois. The consensus from these studies was a general report of success and appropriateness of acceleration. Though minor social or emotional maladjustment was experienced by some early entrants, in general this was later overcome. The general academic performance of the majority of participants was clearly a success (Daurio, 1979).

The two early entrance programs (the University of Chicago and Ford Foundation programs) which directly impacted upon the formation of the Texas Academy of Mathematics and Science will be described in greater detail.
University of Chicago Program

Four years before the United States entered World War II, the University of Chicago began an experimental curriculum (Daurio, 1979; Ward, 1950). Within five years, the University would permit awarding the bachelor's degree upon completion of a four-year program, commenced after the tenth grade of schooling (Bloom and Ward, 1952; Daurio, 1979).

The Chicago program placed emphasis on the demonstration of competence through performance on comprehensive examinations. It also introduced survey courses which eliminated compulsory class attendance after completion of the program's first two years. In 1952, the University of Chicago submitted to the testing of its baccalaureate degree recipients. The results found by Bloom and Ward (1952) and in subsequent studies evidenced the success of this program for highly able, younger learners (Daurio, 1979).

Ford Foundation Program

Although World War II made unprecedented demands on the American education system to produce educated, competent personnel, national interest regarding early entrance collegiate programs waned prior to 1951. When the U.S. involvement in the Korean conflict replicated the educational wartime demands of the 1940's, the Fund for the Advancement of Education was established by the Ford Foundation. Because the military would be drafting 18-year olds at the time they would normally be entering college, an experimental program was developed to provide scholarships enabling younger
men no older than 16 1/2 to enter college for two years prior to their military service (Cromer, 1989; Fund for the Advancement of Education 1953).

Between 1951 and 1954, 1,350 Ford Foundation scholars would attend twelve colleges and universities: Chicago, Columbia, Fisk, Goucher, Lafayette, Louisville, Oberlin, Shimer, Utah, Wisconsin, Yale, and Morehouse. The program was designed to attend to the socio-emotional adjustment of the "Fordlings" as they came to be known. The program also intentionally commenced the first large scale prospective study of acceleration. Careful records were kept on the scholars as well as comparison groups (Cromer, 1989; Daurio, 1979; Fund for the Advancement of Education 1953, 1957).

Subsequent studies of the successes of the "Fordlings," during their college experience and later in their lives, yielded considerable supportive evidence that this opportunity had been advantageous for these academically able, socially mature youths (Cromer, 1989; Daurio, 1979; Fund for the Advancement of Education 1953, 1957; Kogan, 1955; Pressey, 1967).

**College Board Advanced Placement and the Civil Rights Movement**

In the early 1950's, the Ford Foundation also funded the Program for Admission to College with Advanced Standing. This would evolve into the College Board's Advanced Placement Program (College Entrance Examination Board 1973; Daurio, 1979; Newland, 1976). Successful performance on an Advanced Placement Examination could earn a student sophomore standing prior to starting college (College Entrance Examination Board, 1974).
Though this program offered a positive acceleration opportunity and the majority of the evidence produced through college early entrance programs had been positive, a number of negative studies were published condemning early entrance for younger-in-grade children. These reports, coupled with the strains of the increased elementary school population stemming from the 1950's baby boom, caused school districts to again regard acceleration skeptically (Southern and Jones, 1991).

The move toward compensatory education further reduced the focus on individualized talent exploration. The Civil Rights era would focus on minimizing individual differences while positing the equivalent potential ability among students. With the consequent focus on the educationally disadvantaged, the 1960's and early 1970's witnessed a reduction in acceleration and focus on students who were already achieving academically (Southern and Jones, 1991). However, national attention would soon become more focused upon the educational opportunities of the gifted and talented.

Much national attention would become focused on the identification and education of the gifted because of their importance as a national resource. In 1972, U. S. Commissioner of Education, Sydney Marland, would form and direct a federal task force to study gifted education. The document produced became known as the Marland Report.

In the decade that followed, school districts began to implement gifted programs based upon the Marland Report's definition of gifted. School districts also looked to their state education agencies for help in interpreting the Marland Report definition and for funding (Eby and Smutny, 1990).
After a decade of program initiatives in response to the Marland Report, the Sid W. Richardson Foundation initiated a nationwide study to develop a national perspective of what was happening in gifted programming. The study discovered that these programs for the gifted differed considerably in structure, identification procedures, and in quality (Eby and Smutny, 1990).

In 1985, Cox, Daniel, and Boston carried out another major national survey to study the status and efficacy of gifted education. A range of program alternatives were discovered including: enriched course work, independent study, mentorships, special schools, early entrance, acceleration, College Board Advanced Placement, concurrent or dual enrollment, and others (Southern and Jones, 1991). One of the largest and best established accelerative programs was that at The Johns Hopkins University under the directorship of Julian Stanley (Robinson and Robinson, 1982).

SMPY and the Resurgence of National Concern

Regarding the American Educational System

In 1971, the resurgence of the enrichment versus acceleration debate would occur. In that year, noted educational measurement specialist, Julian C. Stanley, would found his Study of the Mathematically Precocious Youth (SMPY) at The Johns Hopkins University. With funding from the Spencer Foundation of Chicago, Stanley would strive to continue the empirical study of strategies for educating gifted youths begun by Lewis M. Terman in his Genetic Studies of Genius series and further explored by Leta S. Hollingsworth (1942) in her counseling efforts and studies at the Teachers College of Columbia University (Cohn, 1979).
Stanley and his associates would depart from the educational mood of the time by examining and illustrating the exceptional accomplishments of mathematically precocious youth who received radical accelerative opportunities. By extensive study of the identification, nurture, and educational performance of these gifted youngsters, the SMPY advocates would generate numerous books and articles. The professionals of SMPY and their former prodigies received considerable attention:

... even to the extent that several states, counties, and regional units, and localities, to say nothing of one South American country, have begun using the SMPY strategies as their model. Such projects, which replicate the continuing string of SMPY pilot studies, eventually will serve to help the public assess the value of accelerative techniques for mathematically brilliant youths, and perhaps for children with other talents as well. (Cohn, 1979, pp. 4 and 5)

The SMPY participants and professionals would produce amazing evidence supporting individual, radical acceleration, including college level course work (Daurio, 1979).

Coinciding with the results and attention being gained through the SMPY program, the United States would again be rocked by a series of reports indicating the shocking state of the American educational system (Southern and Jones, 1991).

In 1983, the National Commission on Excellence in Education generated A Nation at Risk: The Imperative for Educational Reform. Alarming results were reported:

Our nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world. . . .

. . . the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a nation and a people.
If an unfriendly foreign power had attempted to impose on American the mediocre educational performance that exists today, we might well have viewed it as an act of war. (p. 1)

Further, the report noted that in international comparisons of student achievement on 19 academic tests completed within the decade, American students were never first or second; and, when compared with other industrialized nations, would place last seven times. In addition, there had been a steady decline in science and math achievement tracked since the 1960's (National Commission on Excellence in Education, 1983).

Throughout the 1980's, reports generated by the National Commission on Excellence in Teacher Education, the American Association for the Advancement of Science (AAAS), the AAAS-sponsored National Council on Science and Technology, the Educational Testing Service, and the National Research Council would reflect the poor state of math and science teaching throughout the country (Cowen, 1989; Southern and Jones, 1991).

More than mere coincidence, the renewed research in gifted education through SMPY and elsewhere and the emergence of increasingly alarming national reforms would spawn new programs for gifted students, including acceleration opportunities at regional and national levels (Southern and Jones, 1991). It was in this period within the United States that the forerunners to the Texas Academy of Mathematics and Science would emerge. The North Carolina School of Science and Mathematics would be established in 1977, followed by the Louisiana School for Math, Science and the Arts in 1983, and the Illinois Math and Science Academy in 1986 (Berger, 1992; Eilber, 1987).
Summary

The purpose of this study was to trace the development of the Texas Academy of Mathematics and Science program of the University of North Texas from 1987 through 1992. Major events leading to the securement of legislative establishment and financial funding for the program, and descriptions of the academic component, the admissions process, the student life program, and the significant people who were involved in the creation and evolution of the program were included. External and internal criticism techniques were used to examine the data.

The following outline describes the organizational format for the study. Chapter II covers the chronological development of the program through 1992. Chapter III describes the Academic program including the curriculum requirements and additional policies, programs and support services offered. Chapter IV presents the description and evolution of the admissions and recruitment processes. Chapter V includes the description and evolution of the Student Life program. Chapter VI describes the contributions of those individuals most responsible for the creation and evolution of the TAMS program. In summation, the findings and recommendations for further research are presented in Chapter VII.
CHAPTER II

CHRONOLOGICAL DEVELOPMENT OF TAMS THROUGH 1992

From Concept to Legislative Establishment

In his speech at the TAMS convocation on September 9, 1990, James Miller reviewed the background for the creation of TAMS:

Change nearly always occurs by accretion, rarely by revolution. One has only to go through the Smithsonian Institute in Washington D.C. to understand that new ideas are generally not new but simply an adaptation of other ideas, and the Academy is no exception. Its predecessors include the University of Chicago's early admissions program, the Ford Foundation supported early admissions program, advanced placement programs, North Carolina School of Mathematics and Science, and the Louisiana School of Mathematics, Science and the Arts. (Miller, TAMS Convocation Address, September 9, 1990)

Though the concept of the Texas Academy of Mathematics and Science was not born of revolution and was modeled on aspects of numerous successful accelerative educational programs for gifted youth, it was nonetheless revolutionary in its simple, historically unique premise. The man responsible for the concept of this unique approach was Dr. James Miller, Dean of the College of Education at the University of North Texas. The career and life experiences of this exceptional, respected educator would provide the impetus for the TAMS model (Brady, 1995; Hurley, 1995; Ramsay, 1995; Redding, 1995; Stanley, 1995). Three specific periods of James Miller's life, would impact the formation of his TAMS vision (Miller, TAMS Convocation Address, September 9, 1990). Each is described below.

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During World War II, James Miller was a U.S. war veteran who served in the South Pacific, the Philippines, and ultimately in Japan itself by the war's end. In 1945, Japan was ravaged by war. As Miller would recall, "Refugees from Nagasaki and Hiroshima were sleeping on the floor of Ueno Station in Tokyo. Tokyo and Yokohama industries were flattened by American bombs; only smoke stacks were still standing" (TAMS Convocation Address, Sept. 9, 1990). At that time Japan was incredibly behind the United States in terms of technology. "When we shipped in huge earth moving machinery to aid in the clean up after the war, the Japanese people watched in absolute amazement," Miller would note (Miller, 1995). The United States had unparalleled industrial strength at that time. It still enjoyed a favorable balance of trade, and enjoyed budget surpluses in 1946, 1947, and 1948. But in forty to fifty years, the economic and technological status of these two countries would completely reverse. Japan, a nation of approximately ninety million people, populating a land mass approximate to the size of the state of California, with considerably limited natural resources, would accomplish this reversal through technological mastery and advancements. The United States had since become a debtor nation with enormous budget deficits. The U.S. educational system was apparently ineffective in preparing its youth for successful competition in a new global, technological world market (Miller, TAMS Convocation Address, 1990; Miller, 1995).

A second period in James Miller's life that would contribute to the formation of the TAMS model occurred in the years he lived and taught in Maine. Prior to his arrival in Texas in 1977, Miller taught for nine years at The University of Maine. Upon reflection of his memories of Maine, he would note:
It [Maine] is a beautiful, beautiful state but it has nineteenth-century resources going into the twenty-first century. In the last century, people in Maine made their living in the woods, building wooden ships, and selling and cutting ice they sent down to the urban areas on the east coast. They had nineteenth century resources going into the twenty-first century. Today Maine is a poor state. It holds very little promise for the future because aside from the paper making industry, and the paper mills scattered across the state, there is no other major industry...

When we came to Texas in 1977 the economy was undergoing a dramatic change. Texas had previously enjoyed a history of economic prosperity based on its natural resources of cattle, oil, and grain; but, if Texans were going to enjoy the same standard of living in the global economy of the twenty-first century, significant diversification and a technological base were going to have to be achieved. Following Japan's example, I felt the educational system would become the key to achieving this.

We had to start thinking about education as an investment rather than a consumer good. So that was from the economic perspective. From the very practical perspective, it was clear that we had not been able to attract math, physics, or chemistry teachers into public school teaching. Few young people across the country, in any state, were going into those three fields. So a very high percentage of the teachers in every state taught math, physics, or chemistry without being fully certified. They often had emergency certificates to teach these subjects. And given the prospects of teacher salaries and the public's perception of education, it was very unlikely the teacher numbers were going to increase. Many did a superb job, but most were limited in being able to deal with the very bright gifted and talented kids.

So, if Texas was going to break out of that mold, and the U.S. was to become a competitive nation in the global economy, we would have to have teachers that were qualified to challenge our children, especially the gifted. (Miller, 1995)

Thus, this knowledge of the current economic condition of the state of Maine, the state of urgency in Texas to make an effective transition towards a diversified, technological society, and his awareness of a very real national teacher shortage would cause Miller great concern (Miller, 1995).
James Miller's third personal experience contributing to the TAMS concept came through his years of teaching accelerated high school courses. For fifteen years, Miller taught accelerated politics and American government classes to gifted high school-aged adolescents. In these accelerated classes he used college textbooks. Hence, there was never any doubt in his mind that gifted adolescents could successfully do college level work (Miller, 1995).

For James Miller, the crystallization of these experiences and insights would culminate into the development of the unique TAMS concept in 1984. In the fall of that year, at North Texas State University, Chancellor Alfred Hurley had established a special committee to review the university's Honor's Program. Hurley was seeking ways to improve the existing program. In addition to James Miller, Dr. Mary Clardy, Dr. Ken Dickson, Dr. Horace Brock, Dr. Cliff Black, Dr. Max Oelschlaeger, Dr. Miles Anderson, and chairperson, Dr. Tom Preston, Dean of the College of Arts and Sciences, would comprise the committee (Miller, TAMS Convocation Address, Sept. 9, 1990).

The Honor's Program Review Committee undertook its charge by interviewing a number of UNT honor students and program participants. In the course of these interviews, Miller began to see an apparent redundancy in the courses adolescents were taking in their junior and senior years of high school and their first two years of college. Through this realization, in conjunction with his previously noted life experiences, Miller devised the initial TAMS concept. Miller subsequently shared these thoughts with chairperson Tom Preston. Preston not only concurred with Miller's findings, but felt the concept was worthy of further exploration. Preston would also share with Miller recent
information he had received about a special program for mathematically and scientifically
gifted adolescents located in North Carolina. James Miller had been completely unaware
of the North Carolina School of Science and Mathematics. Almost simultaneous to this
discovery was information provided from UNT colleague, Dr. Walter Sandefur; a second
such school existed in Louisiana. Though further research of the North Carolina and
Louisiana schools revealed these programs were residential high school enrichment
programs, and Miller was conceptualizing an accelerative collegiate residential program,
the realization that similar prototypes were in existence led Miller to believe he was on the
right track (Miller, TAMS Convocation Address, Sept. 9, 1990; Miller, 1995).

Miller would further research historically documented accelerated educational
programs. He would recall that his wife’s cousin had participated in a special accelerated
educational program at the University of Chicago in the 1930’s. In exploring this
program, he would also discover a number of accelerated and early admissions programs
sponsored by the Ford Foundation in the 1950’s. Virtually all research findings affirmed
the potential for success of his concept. Further, Miller was aware through personal
experience that gifted adolescents could do the work academically; however, he did
question if these younger students could socially acclimate to the university environment.
He also wondered how the students would feel about giving up part of their high school
experience. Once armed with the knowledge that these early admissions predecessors
were in fact successful, he felt confident in bringing the concept before the entire Honor’s
Program Review Committee. When the committee enthusiastically affirmed the concept,
James Miller was convinced this program needed to be established at North Texas (Miller, 1995).

With the support of Dean Preston, Miller prepared a concept paper, to be included in the committee's report on the Honor's Program to Chancellor Hurley. Preston and Miller would meet separately with Hurley, who heartily endorsed the idea (Miller, 1995). Within three months of this meeting, Hurley would bring the TAMS concept to one of the individuals who would play the greatest role in the establishment and evolution of the program:

... through my role as a Director of the North Texas Commission, I brought this idea to the attention of its chairman, Mr. E. L. Langley (who was also President of GTE Southwest). He spurred the private fundraising effort and played a key role in enlisting legislative support, primarily from Speaker Gib Lewis. (Hurley's typed response to Questionnaire by Koenig, Merkley, Williams, 1990)

Hurley had been present at a Dallas Chamber of Commerce meeting in which E. L. "Buddy" Langley had been the guest speaker. Langley was directly involved in helping to establish the North Carolina school. He strongly believed a similar school should be established in the North Texas region. Hurley was quick to approach Langley with the newly budding TAMS proposal. Langley immediately supported the proposal. As Hurley reflected, "He [Langley] was enthusiastic. He picked up on it immediately and began to mobilize support in the region" (Hurley, 1995).

Through the fall of 1986, and into early spring 1987, Hurley and Deans Preston and Miller would rally support and involvement from numerous individuals across the UNT campus. Miller would lead the effort in generating an executive summary on the Academy, distributed to inform North Texas business and community leaders, as well as
Texas legislators about the proposal. As Miller explained in a letter written to Orbrey Holden, Executive Director of the Texas Association of School Boards, on February 10, 1987:

I have written an executive summary on the Academy of Mathematics and Science and reworked the concept paper into a proposal... Copies are attached for your perusal and information. Provost David Golden and I are meeting with Harden Wiedemann, President, North Texas Commission, to discuss legislative and financial support from the Dallas/Fort Worth business and industrial community. We have also discussed the proposal with Richard Swain, Associate Commissioner of Education, and his staff is currently reviewing it. A sub-committee of the NTSU Board of Regents has reviewed the proposal and it is on the Board's agenda for its next meeting on February 26 and 27.

In addition to the sources listed above, the proposal was disseminated to the Coordinating Board, and the Texas Education Agency. Holden was also very helpful in the preparation of the proposal ("Suggested Remarks for Chancellor Hurley, for Senate Education Committee," April 22, 1987).

As Miller would submit each executive summary draft to campus and business leaders and legislators for input, further drafts would become warranted. During this flurry of revisions, Miller would be capably assisted by Ms. Jana Dean, his administrative assistant. Miller would credit Dean as his co-author of both the concept paper and the proposal. As Miller would describe:

We hammered out each document, word by word, line by line, and paragraph by paragraph. I will cite one example of the level of detail work involved in developing the concept paper, the naming of "The Texas Academy of Mathematics and Science." "The" was included to limit the number to one. "Texas" was included to denote that students would be recruited from across the state. "Academy" rather than school was selected because it implies special courses will be taught above the high school level. "Mathematics" preceded "Science" because mathematics are
fundamental to science. (Miller, TAMS Convocation Address Speech, Sept. 9, 1990)

Simultaneous to the approval of the concept by the NTSU Board of Regents and this period of on-going revision to the executive summary, networking efforts with business leaders and key legislators continued. Chancellor Hurley would call on Walter Parker, NTSU Vice President for External Affairs, to secure the involvement of Senator Bob Glasgow and Representative Jim Horn to introduce the necessary legislation (Hurley typed response to Koenig, Merkley, Williams Questionnaire, 1990). Assisted by Langley, who was also a personal friend of the Texas Speaker of the House, Gibson D. Lewis, Parker prepared a great deal behind the scenes and provided careful guidance in orchestrating the legislative establishment of the Academy. As Miller would recall:

Mr. Parker's role in the establishment of the Academy was indispensable. Without his guidance and careful homework, it is doubtful that the Academy would have become a reality. He worked daily with key members in both houses of the Texas Legislature, especially Lt. Governor Bill Hobby, Speaker Lewis, Senator Bob Glasgow and Senator Carlos Truan, and Representatives Jim Horn and Wilhemina Delco. (Miller TAMS Convocation Address, Sept. 9, 1990)

Parker would outline the arduous journey the TAMS bill would undertake from late 1986 through June of 1987 to become law:

North Texas provided the structural concept for the bill but Speaker of the House, Gibson Lewis, would initiate the process to introduce it. Lewis took his own ideas, as well as input from Langley and the North Texas proposal and asked the Texas legislative council to draft the bill. The council, comprised of a group of lawyers responsible for drafting almost all bills to the Texas Legislature, was headed by Bob Kelly ... As the bill was being written, Jim Rudd, chairman of appropriations, strongly recommended that we not ask for funding in the bill. Due to the financial status of the state, he urged that we focus on establishing the program in this legislative session and making plans to raise private funding
for the academy's first year... the theory being, get the program established now and hopefully funding will be available at a later time...

So the bill was drafted and introduced. To be introduced the bill must have a sponsor in the House of Representatives and the Senate. Our Representative, Jim Horn, and Senator Bob Glasgow would sponsor the bill.

Once sponsorship was established, and the legislative council developed the statute to be introduced, Representative Horn and Senator Glasgow introduced the bill... Prior to commencement of the Legislative meetings in January, the sponsors attempt to go to the clerks of the house or senate to get a number assignment (preferably a lower number assignment). Though bills are not always addressed in sequential order, your chance of getting your bill passed is much better with a lower number assignment. We had a lower number assignment, and we had the endorsement of the Speaker of the House, and these were both vital to the legislative process.

Once the bill is introduced in the House, it goes through the following process: it is read one day, then goes to the speaker's office. He assigns it to an appropriate committee for review (ours was the Higher Education committee). This committee holds a public hearing in which anyone can testify for or against the bill. Afterwards the committee votes to determine if the bill is 'voted out.' In this case they voted it out, and then the bill went to the calendar committee. Once placed on the calendar, it comes up for a second hearing. On a second hearing in the House, all 150 members of the House hold a debate on that bill. It has to be passed on a majority vote. If passed, it is placed on the calendar again for a third reading. The representatives of the House vote on it again before it is officially passed in the House.

Once the bill has passed the House, it then goes to the Senate and follows a very similar process all over again. If it passes through the Senate, it is automatically forwarded to the governor. A date is set for the Governor to officially sign the bill into law. It becomes a law ninety days after the governor signs it. (Parker, interview with author, 1995)

Though a lengthy, cumbersome process, the academy bill fairly sailed through the legislative process. As Hurley would note:

It is the only piece of legislation that I have been associated with in my fifteen years at NT that representatives stopped me in the hallway of the
capitol to volunteer to put their names on. They all could see the potential. It was amazing how many people I only slightly knew who would indicate they would like to be a co-sponsor. Of course the custom is to start with your own representative, so Jim Horn was listed as a principal on it and Bob Glasgow was listed as our Senator. The legislation sailed right through. (Hurley, interview with author, 1995)

Concurrent to the TAMS' bill journey through the legislative labyrinth in the spring of 1987, Langley was spearheading a campaign seeking support for the program in the Dallas and Fort Worth business communities, as well as within the Texas legislative ranks. Langley was a close friend of Speaker Gibson Lewis, as well as prominent Dallas businessman Trammel Crow. Langley and Crow determined there was a need for a site visit to the North Carolina school. Thus, in late April 1987, Langley arranged for Hurley, Lewis, and the Texas Commissioner of Education, Bill Kirby, to accompany him for a tour the North Carolina School of Science and Mathematics which he had helped to establish. GTE would provide the air transportation. Crow would meet the group in North Carolina for the tour. The trip would provide additional insight for all; not only did they believe the TAMS program would be vital for the state of Texas, they also believed the TAMS model would prove a superior alternative. Hurley would recall:

"It was very clear to me that this [North Carolina] was primarily a high school enrichment program. It was not what we had in mind but it had been a starting point . . ."

"House Speaker Gib Lewis was clearly impressed by this concept. He would remark coming back on the plane that day that this was something Texas must do; the state had put so much effort into public education but had not seen the results it should have . . ."

"Clearly Lewis could see the significance of the plan. He was encouraging from the beginning, as was Texas Commissioner of Education Bill Kirby. Kirby's cooperation would be vital. Because we would be dealing with high school students and they would not fall under the"
jurisdiction of the secondary school system. After the North Carolina trip Commissioner Kirby promised to do whatever he could to help. (Hurley, interview with author, 1995)

The North Carolina visit not only cemented the determination of these visionary men, but convinced all that the TAMS model would prove superior. As Hurley would write to Lewis upon the return from this momentous trip on May 7, 1987:

I feel very fortunate to have traveled with you to North Carolina last week. Like you, I was impressed by the good work underway at the North Carolina School of Science and Mathematics, but I am fully confident that we will do an even better job here because of our faculty and facilities. Also, we think that the young people in our proposed Academy will get more out of their learning experience on a university campus than through the North Carolina approach.

By May 29, 1987, the TAMS bill had been passed in both the House and the Senate and forwarded to Texas Governor William P. Clements (Miller to Dr. Richard Brown, May 29, 1987). On June 23, 1987, Governor Clements signed House Bill 2079 into law, thus establishing the Texas Academy of Mathematics and Science. The ceremony took place at 2:00 p.m., in the Governor's Reception Room at 200 Capitol Building, Austin, Texas. Earlier that same day, a luncheon was hosted by Alfred Hurley and his wife, Joanna, in the Rio Barbo Room of the Metropolitan Club in Austin. Before commencing the bill signing ceremony, key individuals involved in creating TAMS would privately celebrate their historic act of educational entrepreneurship (Hurley to Miller, June 16, 1987).

Evolution of Program Through 1992

Although the official legislative establishment of the TAMS was cause for deserved celebration, much additional work and cooperation from a great many people
would be required before the program could evolve from concept to reality. As Julian Stanley would recall of this enterprise:

I was greatly privileged to help with some of the planning and then to serve on the Advisory Board of the Academy. Thus, I saw the unparalleled cooperation of many persons, within and without the university, as they moved toward the Fall of 1988, when the first students arrived. Without the continued strong support of Chancellor Hurley, this could not have been done. (Stanley, Convocation address, 1989)

Prior to the legislative establishment of TAMS, Deans Miller and Preston had already begun initial efforts to generate both a curriculum and student life committee. In May of 1987, Frank Kemerer was recruited to direct the Student Life subcommittee, and Jean Schaake agreed to chair the Curriculum Committee (Miller to Hurley, May 4, 1987). When legislative approval for the program appeared likely, both subcommittees started to work in earnest during the month of June. All realized the importance of soliciting advice from officials involved in nationally recognized programs and from consultants in the field of gifted, accelerative education. Information would be gathered from North Carolina and Northwest Louisiana. A site visit would be arranged for Richard Brown from the North West Louisiana School in the summer of 1987. Julian Stanley was also contacted and expressed a willingness to visit North Texas to consult with the program creators.

While the Student Life and Curriculum Committees mapped out their missions, staffing needs for the budding program were addressed. In a letter to Jim Muro on June 18, 1987, Richard Sims expressed his views concerning the staffing needs for the program:

To provide minimum staffing requirements for the Academy during the planning year, I believe we must provide a director and one other professional staff member. If the second person were the Dean of Students, he/she could double as assistant director handling myriad duties, running the gamut from student affairs to administrative matters. Many
details will have to be resolved during the planning year with regard to such things as state-wide recruiting, curricular matters, housing, food service, discipline procedures, extracurricular programs, fiscal matters, parental and family issues, health care, and counseling. In addition, the director will be traveling and dealing with external constituencies a considerable part of the time. Thus, at a minimum, a professional staff of two must be provided during the planning year.

In considering the criteria for a director, Miller would recall three points of discussion:

1) We believed the program would never be successful if it was housed in the College of Education. Because then it would be perceived as a high school, and I wanted it to be perceived as an early college admissions program.

2) We felt the director’s position could not be associated with that of a headmaster. A former principal should not be sought, but rather someone with an academic background from the sciences or math... someone from an academic field who also had administrative experience would have more credibility with the math and science departments in the university as well as outside corporations. This would be important as we envisioned building cooperative educational research programs with outside corporations.

3) We were also opposed to making this position a deanship. Nor did we want this director to have his or her own faculty or staff. Establishing a deanship separate from the College of Arts and Sciences would have set up a built-in conflict. Instead, we gave the director’s position clout. The director would be a member of the Council of Deans, would have direct reporting responsibility to the president, and could offer some financial assistance to the dean of the College of Arts and Sciences. (Miller, Interview with Author, 1995)

In keeping with this plan, Rogers Redding was recruited for the TAMS director position. Redding was the chair of the NTSU Physics Department at the time and had been serving as a member of the TAMS curriculum subcommittee. Redding was officially approved for the appointment by the NTSU Board of Regents on August 21, 1987. He agreed to hold the post for a two year period at the end of which a national search would
take place for a long term director. In addition to Redding, Annetta Ramsay was selected for the Associate Director for Student Life position (Guest, August 14, 1987; Redding, 1995).

Concurrent to the efforts of the new director and those of the Student Life and Curriculum Committees, James Miller and Richard Rafes, NTSU Legal Counsel, would meet with representatives of the Texas Education Association in July and August to review a number of important issues which would impact upon the efforts of the subcommittees. Rafes and Miller presented the premise that the purpose of the TAMS legislation "was to establish an early admissions program to college" rather than a "public high school for gifted and talented students" (Rafes, Aug. 4, 1987 letter to Hurley).

Texas Education Agency representatives, Cathy Peaver, Tom Patton, and David Thompson, viewed the legislation to create TAMS as giving NTSU great flexibility in authority, with minimal restrictions to establish the Academy. Other points agreed upon in these meetings included:

1. Funding:

a. The University would be entitled to allotments from the foundation school program. The specific amount to be provided to NTSU will be determined after the TEA reviews its funding especially regarding Denton Independent School District. The Academy would be required to file a limited number of documents with the TEA in order to receive the funding.

b. NTSU may also seek State college funding on a FTE basis.

c. It would be permissible to charge room and board; however, it would be questionable whether we would have the right to charge tuition. Also, there are equal opportunity concerns regarding charging for admission unless NTSU can provide scholarships to minorities.
2. Curriculum:

a. NTSU may offer its own curriculum to the students. There can be liberal substitution between the courses required to obtain a high school degree and the college courses. However, it is strongly recommended that the University contact the high school of each student and have the courses approved for an "advanced high school diploma." This is important especially because of the possibility that students may drop out of the academy and return to their high school to complete their degree.

b. NTSU can have large classes of 200 provided there is at least one teacher's aide or graduate assistant for each break out group of 30 or more students.

3. Admissions:

It is recommended that we work with Ms. Evelyn Hiatt of the TEA (gifted and talented students program) to establish reasonable admissions requirements. TEA did have some concern with the SAT scores since those tests are geared as entrance requirements for normal aged students, age 18, not 15- or 16-year-olds. I suggest that while the SAT may be a component for admissions, it should not be the only or most significant criteria.

4. Extracurricular Activities:

It is permissible for students to participate in college and UIL sanctioned activities, provided that the students who participate in the UIL activities follow UIL rules. Switching back and forth from college to high school extracurricular activities did not appear to be a problem. I suggest the students be limited to college activities to protect the identity as an early admissions program.

5. Residency Requirements:

North Texas State University may use existing Texas college residency requirements for admission to the Academy including requiring a student to attend a high school in Texas for at least one year prior to being admitted.
6. Discipline and Student Conduct:

North Texas State University may establish its own Code of Student Conduct.

7. Regulations and Reporting to TEA

a. The extensive reports required by the TEA will not be applicable to the Academy.

b. TEA public school regulations do not pertain to the Academy including the number of class days, time requirements for courses, filing requirements other than specified above, and other laws and regulations specified in the Texas Education Code and the TEA regulations (Rafes, August 4, 1987).

Rafes and Miller were elated with the support from the Texas Education Agency.

It was clear the agency desired to help North Texas in any way possible. As Rafes would recall:

They clearly were not going to be obstructionists. We went in, laid out our questions and thoughts, and had to do very little convincing. . . . We were expecting a long meeting but got through all the points rather quickly.

In addition to the funding issues, in which we would be eligible to receive the allotments per student to which all public schools were entitled, as well as FTE (full time equivalent) funding allotted for all full time college students, we also were given another major concession . . . The Texas Education Agency requires a plethora of paperwork and reports from public schools throughout each academic year. The TEA determined the TAMS program would be exempted from completing these reports. This was a major concession. (Rafes, Interview with author, 1995)

By September, 1987, with the clarifications and support offered by the Texas Education Agency and the work achieved by the Curriculum and Student Life Committee members, a review of all efforts would take place. Julian Stanley, renowned national expert on educational opportunities for the gifted and talented, agreed to consult with all
program creators during a visit on September 15, 1987. Stanley had fifty years of experience as an educator, fifteen years experience as founder and director of the Study of Mathematically Precocious Youth (SMPY) at The Johns Hopkins University, and years of experience serving as a consultant for a number of similar residential high school programs (i.e., North Carolina, Louisiana, and later Illinois and Indiana). He became the external validator for all aspects of the program developed to that point (Hurley, 1995; Jungjohan, 1994; Miller, TAMS Convocation Speech, 1990; Redding, 1995; Schaake, 1995).

Julian Stanley would enthusiastically commend the TAMS concept and all aspects of the program upon which he was briefed during the September, 1987 visit. As Stanley would write to President Al Hurley:

It was, indeed, my great pleasure to visit your university on September 14-16 and confer at some length with you and others about the TAMS. I admire the remarkable, novel concept on which it is based. Truly, you have the "makings" of a world-class educational innovation. The interest and involvement of key members of your faculty and administration seem unique, also. Too often, such enterprises are politically motivated, usually by a state governor, and therefore do not engender the support from educators that they need to prosper.

If you . . . need me further I should feel honored to consult with you ad hoc or as a member of a planning or overseeing board, by telephone, correspondence, or in person at no cost to you except for my expenses. Also, I would be pleased to write letters of endorsement to foundations, legislators, and other possibly interested persons. I'd dearly love to see the Academy prosper and "clone" itself elsewhere. As a token of my esteem for the potentiality of this educational innovation, I enclose a contribution of $1,000 to the Academy fund. (September 16, 1987)

The affirmation, support, and subsequent endorsements from this respected authority on programs for the gifted brought instant credibility and national visibility to the program. From this encounter with Stanley, an important friend and advocate had been
found. For Stanley would go on to become the only non-Texan appointed to the TAMS Advisory Board (Hurley, 1995; Miller to Yeckel, Oct. 8, 1987; Redding, 1995; Schaake, 1995).

In addition to the planning and coordination of the Curriculum and Student Life components and Academy participant recruitment efforts headed by Rogers Redding, a strategy and campaign to fund the Academy for its first two years of existence was devised. In a memorandum to President Hurley, James Muro recommended the following:

The key to funding our Math/Science Academy will rest in our ability to enlist prominent leadership to head our campaign. In my opinion, an approach to large foundations may not be our best effort in that most of them have meeting times that extend well into the fall and beyond. Richard Simms tells me that we need to start recruiting in about two months if we are to be able to recruit a "class" for fall of 1988.

I suggest the following process:

1. You (or your designated representative) approach Mr. Harden Eiedemann, Mr. Trammel Crow or Buddy Langley and ask that they accept co-leadership of a special campaign to provide funding for the first two years of operation.

2. Mr. Crow and Mr. Langley would also be asked to form a committee of about sixteen to twenty individuals who would act as a campaign advisory committee. These individuals should be persons who (1) have personal wealth; (2) have influence with foundations or corporations; and (3) are leaders who could direct me or other university personnel (James Miller, Simms, etc.) to individuals and firms who might contribute. The individuals should be selected by Mr. Langley or Mr. Crow.

3. Mr. Crow and Mr. Langley would be asked to provide lead gifts—either through their companies or from personal sources.

4. The committee would be asked by Mr. Crow/Langley to provide lead gifts.
5. Each committee member would be asked to make personal calls on at least five individuals who could make a gift.

6. The remainder of the funds would be solicited by my office from leads provided to us by the committee. Committee members could be asked to help us make key appointments.

7. In addition, two proposals would be prepared. The first would be sent to selected Texas foundations, both private and corporate. The second would be an individual proposal that could be funded by a smaller firm. This could be our "clean up" aspect of the campaign and could be done through an approach to the various Chambers of Commerce. (June 18, 1987)

This plan, laid out by James Muro, was in fact followed. As hoped, Langley and Crow would ambitiously spearhead the fund raising campaign. Through the Fall semester, Langley, and personnel at GTE would coordinate efforts to solicit corporate monies. Muro began speaking to service clubs and chambers of commerce. He anticipated making at least 100 presentations in the upcoming year. Trammel Crow and members of the NTSU Board of Regents produced very early financial support to get the program off the ground (TAMS Advisory Board Minutes, December 7, 1987).

With curriculum, admissions requirements, and student life development in the works, and the fund raising campaign having begun, the last major program component launched during the Fall 1987 semester included recruitment activities and selection of the first TAMS Advisory Board (Redding, 1995).

After Redding and the Curriculum Committee had established the admission criteria and selection process, informational literature and nomination forms were sent to counselors, mathematics and science chairpersons in every high school in the State of Texas. Redding made contact with organizations such as the Texas Science Teachers
Association, the Gifted Students Institute and the Texas Pre-freshman Engineering Preparation (TexPrep) program officials. A widespread publicity campaign targeting town newspapers and radio stations was undertaken. Redding would spend a great deal of personal time traveling throughout the state speaking at community functions and in high schools (Redding to Hurley, June 22, 1988; TAMS Advisory Board Minutes, December 7, 1987).

During this same hectic period in 1987, the on-going process of appointing members of the first TAMS Advisory Board was occurring. By October, five of the nine seats were filled (Johnson, Oct. 2, 1987). On December 7, 1987, the first meeting of the newly appointed TAMS Advisory Board took place. Eight of the nine positions were filled at the time. Board members in attendance included State Representative Wilhelmina Delco, Chair of the House Education Committee; John Horn, Superintendent, Mesquite Independent School District; Bertie Kingore, Director, Threshold Program for Gifted Youth at Hardin-Simmons University; William Kirby, Texas Commissioner of Education; E. L. "Buddy" Langley, President of General Telephone Company of the Southwest; Julian Stanley, Director of the Study of Mathematically Precocious Youth at the The Johns Hopkins University; State Senator Carlos Truan, Vice Chair of the Senate Education Committee; and Linus Wright, Under Secretary-Nominee, U.S. Department of Education (TAMS Advisory Board Minutes, December 7, 1987).

All plans and preparations discussed prior to the legislative establishment of TAMS and brought to fruition after the program was signed into law were reviewed in the December meeting. The presentations reviewing admissions, curriculum, and student life
programs, and updates on funding and other relevant issues provided a fitting culmination to the diligent but successful efforts of many individuals and groups. The Spring 1988 semester would prove to be equally demanding (TAMS Advisory Board Minutes, December 7, 1987 and April 16, 1988).

In early 1988, a very important event, "Preview Day," signaled the potential success of the fledgling program. All publicity and recruitment efforts were put to the test on January 30, 1988, when 300 to 400 parents and prospective students examined campus facilities and interacted with academy directors and committee coordinators (Delafield and Scherer, 1988). Until the preview day took place, academy coordinators had no idea what level interest existed for the program, nor had they any idea how many would attend the preview day. The staggering response assured and encouraged all. Rogers Redding would note, "We breathed a huge sigh of relief at the turnout. We now believed we could achieve the recruitment of 100 qualified students for the inaugural class" (Redding, Interview with author, 1995).

In tandem with promotion and recruitment efforts was the on-going fund raising campaign. James Muro, NTSU Vice President for Development, indicated, "the academy projected budget for the 1988-89 school year will be $917,488. Of that amount, $297,156 will come from state funding and $212,000 from pledged grants. The rest of the money will hopefully come from private donations" (Kukis, April 28, 1988, p. 1).

Muro's fund raising strategy became reality during the Spring when E. L. Langley and Trammel Crow accepted major roles in directing corporate fund raising. Under their leadership, one of the most significant events for the financial future of the program would

Langley and Crow organized a major fund-raising kickoff breakfast which was held March 28, 1988. They persuaded Texas Governor Bill Clements to deliver the keynote address to the "TAMS Fund Raising kickoff Program." The event was hosted by Langley, Crow, and General Telephone Company of the Southwest. It was held in Dallas at the Info Mart. The breakfast ceremony brought together more than 120 chief executive officers and political leaders throughout the region and state (Hurley to Trammel Crow, January 20, 1988; TAMS Advisory Board Minutes, April 16, 1988).

During the fund raiser, E. L. Langley served as master of ceremonies. During his keynote address, Governor Clements highlighted reasons the legislature had established but could not fund the Academy. Clements also offered supporting statements for the need of this program in the State of Texas:

You may not know this, but we spend 10 times more on lower-end achievers than on high end achievers. It is good that we identify and help the right achievers . . . We want the brightest and best minds to stay in the state . . . The Texas Education Agency has said that the number of certified math and science teachers is decreasing. The demand in the Metroplex for electrical engineers will exceed all the graduates from Texas schools.

We're perfectly aware that it's (TAMS) a front-end project. There are too few such students to educate now. We're creating an environment to motivate the brightest such students. We'll motivate them not only with their course load, but also with mentors and contacts with top researchers. (Reid, March 29, 1988, p. 1)

Clements stressed the importance of the Academy not only for the State of Texas but from a national and international standpoint as well, and challenged all present to financially support the program. Trammel Crow, Alfred Hurley, and E. L. Langley also
offered program highlights and issued challenges for support. At the conclusion of the breakfast presentation, a press conference was headed by Governor Clements. Assisting Clements in the question and answer session were E L. Langley, Chancellor Hurley, Rogers Redding, and James Miller ("Fund raising Kickoff Program Outline", March 28, 1988; Miller, 1995; Reid, March 29, 1988).

The fund raiser was deemed a major success. By April, the prestigious Sid Richardson Foundation had donated $100,000 to TAMS. This became the first measure of support on that scale from a private foundation. GTE of the Southwest, Trammel Crow, Texas Instruments, E-Systems, Texas Utilities, EDS and the Southland Corporation also made sizeable contributions. By June, $250,000 had been solicited as a direct result of the fund raiser kickoff program (Kukis, April 28, 1988, p. 1).

In addition to the breakfast fund raiser and GTE of the Southwest's sponsorship, Nat Irwin, NTSU Director of Corporate and Foundations Relations, developed requests totaling more than $750,000 from major corporations (Massengale, July 7, 1988, p. 1). Fund raising efforts continued on a steady, successful course, ultimately peaking in December when more than $500,000 in funding had been achieved (Hurley to Trammel Crow, December 23, 1988).

Based upon the successful recruitment and fund raising campaigns during the Spring 1988 semester, academy officials determined eighty plus students could be admitted for the first class. Ultimately a total of 235 applicants would seek candidacy in the program. Ninety-five students would be extended invitations and eighty-nine students
would accept membership in the inaugural TAMS class ("Update on Math/Science Academy", TAMS, 1988).

During the summer of 1988, final preparations were made to ready the UNT campus for the arrival of the first TAMS class. A special briefing presentation was scheduled to review all arrangements with all departments which would impact the TAMS program. On July 5, 1988, Rogers Redding and Annetta Ramsay met with representatives and departmental directors from recreational sports, the libraries, Financial Aid, the Registrar's Office, the Police Department, the Dean of Student’s Office, the Chancellor's Office, Dining Services, the Housing Department, Health Services, Telecommunications, Admissions Office, Office of the Controller, the College of Arts and Sciences, the Public Affairs Office, and the University Union to offer a final overview of the program and to confirm all preparations needed from staff members in these areas (Redding, June 14, 1988).

During the same time frame, Walter Parker, Vice President for External Affairs made preparations to insure TAMS students would be eligible for financial aid. In writing to Fred Sellers, Chief of the Policy Section of the PELL Grant Branch in the U.S. Department of Education, Parker conveyed the following:

Our position is that the Academy is an eligible program based upon the fact that TAMS students are enrolled as university students, take university courses, with other students who have matriculated in the usual way, taught by university faculty for college credit . . . The legislation creating the Academy makes clear that these students are identified as university students with the same access to campus facilities and courses as other students . . . Upon completion of the program, these students will have two years of credit towards their bachelors' degrees . . . (June 22, 1988)
Based upon the description provided, Parker contended that the Academy was an eligible program for financial aid fully satisfying the criteria set forth in the Federal Register of Tuesday, December 1, 1987 (Letter from Parker to Sellers, June 22, 1988). After further telephone and written communications, Sellers confirmed that TAMS students would be eligible for financial aid assistance. He noted:

They (TAMS students) are regular students, as defined in the Student Assistance General Provisions Regulations (34 CFR 600.2). The institution can document each student's intention to complete the two-year transfer program . . . the Texas Education Agency has permitted your institution to offer its post secondary courses as a substitute for high school courses, and the Academy . . . will grant the students a high school diploma upon completion of the program. (Letter from Sellers to Parker, July 13, 1988)

Securing financial aid eligibility for TAMS participants was of the utmost importance. Though tuition and fees would be waived for the students, the first attendees would still have to pay approximately $4,000 a year for room, board and books (Julie Gilberto, August 24, 1988). In the years to come, the TAMS participants would average paying $3,500 per year (books would no longer be purchased by the students), and up to 40% of the students would qualify for some form of financial assistance (TAMS Informational Brochure, 1995).

On August 22, 1988, the TAMS dream became reality. The 89 young scholars selected to comprise the first academy class arrived at the newly re-named University of North Texas (the university having officially changed its name on May 15, 1988). The students participated in seven days of intense campus orientation, and within the first week, one student had to leave the program for family reasons leaving 88 students to begin the academic year. The TAMS class was comprised of 54 males and 34 females.
Ten were Asian American, six were African American, four Hispanic, and 68 Caucasian.

The average SAT scores for the class were 652 Math and 1195 Math/Verbal with the national average for high school seniors being 906 and the Texas average for high school seniors being 877. Geographically, 51 students were from towns 50 miles away, 29 from towns 150-300 miles away, and three from towns more than 300 miles away. Students ranged in age from 15 to 17 (TAMS Advisory Board Minutes, September 21, 1988).

The TAMS staff immediately set about aiding the students in their adjustment to the campus. Students received extensive orientation to such areas as the University Union, Health Center, student support services, library, etc. Students also had individual meetings with academic advisors to facilitate an academic plan for the first semester ("Update on Math/Science Academy," 1988; TAMS Advisory Board Minutes, September 21, 1988).

To augment the adjustment to campus life and the rigors of the academic program, the Associate Director for Student Life, McConnell Hall Director, and four resident assistants immediately began structuring social events and a high level of interaction with the students. Friday afternoon discussion groups were devised to assist the students with study skill development, conflict resolution, and other topics meant to foster personal adjustments and aid in the development of a supportive community. To monitor the progress of each student, mid-semester reports, including Academy and student life adjustments, were mailed to the parents. The students also sought membership in the Texas Association of Student Councils, elected officers for the UNT Hall Association, and
selected a representative for the UNT Student Association (TAMS Advisory Board Minutes, September 21, 1988).

During the first semester, TAMS students would take the following combination of courses: biology, biology seminar, chemistry, chemistry lab, English (through the Classic Learning Core), and mathematics (pre-calculus). They would also usually take one elective such as foreign language, computer science, psychology or philosophy. Most TAMS students would take a seventeen semester hour course load during their first semester (TAMS Advisory Board Minutes, April 6, 1988 and September 21, 1988).

By the end of the Fall semester, the overall grade point average for TAMS students was 2.86 on an average seventeen hour course load. Three-fourths of the class (64 students) had grade point averages above 2.5. Just under half the students (42) had GPA's above 3.0, and three students earned a perfect 4.0 GPA (Redding to Hurley, December 22, 1988).

Four students would not return for the Spring semester. One student had moved with her family, and three others felt they would be more comfortable and successful returning to high school. By the end of the Spring term, seven students achieved a perfect 4.0 GPA. Forty percent of the students had a 3.0 or higher GPA, and the overall cumulative GPA for the class was 2.84 on an average yearly course load of 34 semester hours (Redding to Meyer, May 29, 1989).

The overall academic performance of the group was deemed a success although some concern arose over the attrition rate of the class. Only 73 would return for the Fall 1989 semester. Further, many believed a higher grade point average should have been
attained by a group of this caliber (Brady, 1995; Stanley, 1995; "Update of the TAMS, January, 1990"). Still, the initial class had shown that they could make a successful transition to college life and college work. The year concluded with the first annual TAMS Awards Brunch, honoring students and staff members, and the first TAMS Prom, held in the University Union (Denton Record-Chronicle, May 4, 1989; Ramsay, 1994).

To determine the factors that positively or negatively impacted the first TAMS class, the TAMS administration contracted with the UNT College of Education's Center for Collaborative Research to conduct an evaluative study of the first class. As noted in the summary of the report generated from this study:

The TAMS enrolled its first cadre of students in the Fall semester of 1988. These students were leaving their high schools, friends, and families and becoming college students two years before their peers. The staff of the Academy and the evaluators felt that it was crucial to find out their reaction to the academic and social life of their new environments. ("TAMS Evaluative Study", UNT Center for Collaborative Research, 1988, p. 1)

The Center for Collaborative Research constructed a questionnaire given to the entire group of first year Academy students. In general, the students felt the most significant ways they had metamorphisized through the Academy experience included becoming more mature, increasing their independence, enhancing socialization skills, and in developing more positive self-concepts. Though challenging, the general consensus was that the course work was reasonable and rewarding. Though there were some complaints concerning both the academic and student life areas, the general assessment was positive ("TAMS Evaluative Study", UNT Center for Collaborative Research, 1988). Based upon the results of the evaluative study, modifications would be made to improve the academic
and student life programs. In-depth descriptions are to be found in the Academic and Student Life Chapters of this study.

Other important developments for the TAMS program were also occurring:

1. The TAMS Advisory Board determined a chairperson was needed to coordinate the efforts of the group, and E L. "Buddy" Langley was unanimously selected for the post. Bertie Kingore and Linus Wright had to resign, and Laura Allard, Executive Director of the Texas Association for Gifted and Talented Education, and Arthur Porter, President, Houston Area Research Center, were added to the board. Term limits of the original board were set at two, four, and six year terms. Advisory Board members were appointed to the staggered terms by drawing lots. No limits for reappointments were made.

2. A search for a long-term director for the Academy was coordinated. When named the first Academy director, Rogers Redding had made clear his intention to serve for only two years. A year long selection process ensued; however, the selection committee and university administration could not reach agreement to make a job offer to one of the three finalists. In the end, William Brady, UNT Regents Professor in Chemistry, agreed to take the post until a long-term director could be selected.

3. Recruitment efforts for the second academy class would take place throughout the year. To aid in these efforts, Hurley would implore all presidents of universities throughout the state to name a TAMS liaison person with whom Academy Director, Redding, could work directly. This would aid in recruitment efforts, as well as in efforts toward the placement of Academy graduates in other Texas institutions.
4. Redding participated in the organization of the National Consortium of Specialized Schools in Science, Mathematics and Engineering. Through affiliation with this program, excellent networking opportunities were formed with similar schools throughout the United States.

5. Though financial security for the initial year had been attained in December when the financial goal of $500,000 was exceeded, efforts began early in the year to prepare for the 71st legislative session. Funding for the TAMS program would be requested from the Texas legislature for the 1989-1991 biennium. Serious planning preparations and on-going communications between the TAMS administration, UNT officials, TAMS Advisory Board members, and Texas legislators continued throughout the 1988 academic year, building toward the 1989, 71st legislative session (TAMS Advisory Board Minutes, April 6, 1988, September 21, 1988, December 22, 1988, May 29, 1989, and October 4, 1989).

Funding Efforts, A Second Director, and the Second TAMS Class:

Summer 1989 - Summer 1990

As the 1988-89 academic year came to a close, the first year of the TAMS program was deemed a success. This result was crucial as final activities leading to the 71st legislative session were undertaken. The University of North Texas had submitted a line item budget request for $2.9 million dollars in state funds for the 1989-1991 biennium. Purposely, the request for funding was left out when the initial bill to establish TAMS was brought before the Texas legislature in 1987. North Texas officials had been
cautioned not to request funding. Money within the state was extremely limited and a request in funding could result in debate. James Miller noted:

The rationale for following this process (not initially requesting funding) is that this is a new program and that bringing the funding issue to the floor would result in a debate on all new programs. According to this plan, the Speaker of the House, Gib Lewis, can then introduce funding legislation in the next session without acrimonious debate since it will be a program which is already in place. (Miller to Brody, May 12, 1987)

Bill Haley, Chair of the Public Education Committee, had cautioned University officials that they could not get funding in 1987 (Hurley to Crow, May 7, 1987). However, the University of North Texas met the challenge by raising more than $500,000 in donations from individuals, corporations, and foundations to fund the charter class. The university put forth additional monies and also obtained the standard Texas Education Association per-student allotment for high school students to fund the TAMS program. University officials knew they had been successful in funding the first year; however, the future of the program hinged on securing long-term legislative funding (Hurley, 1995; "Texas Academy of Mathematics and Science: The University of North Texas," TAMS, 1989).

During the 71st legislative session, the efforts of Vice President Walter Parker, TAMS Advisory Board members, UNT Board of Regents members, and administrators would again be rewarded. The TAMS program received legislative approval of $2.1 million dollars for the 1989-1991 biennium. And, as Hurley would note, through 1992, UNT had the good fortune of having legislative backers such as Gibson Lewis, Bob Glasgow, and Carlos Truan to fight for the financial livelihood of TAMS (Hemby, June 8, 1989; Hurley, 1995).
In the Fall of 1989, the seventy-three continuing students from the charter class were joined by the second class of ninety juniors. This beginning Class of 1989 would have an average SAT math/verbal test score of 1205, with an average math score of 652. Like the charter class, this group of talented sophomores would score well above the Texas average of 879 and national average of 904 for high school seniors. Two of the students in the new junior class would score a perfect 800 on the mathematics portion of the SAT (TAMS Advisory Board Minutes, October 4, 1989).

The entire Academy class of 1989 was comprised of approximately 40% women. Forty percent of the TAMS population was from the North Texas area. The remainder of the class had been selected from all over the state. The 163 TAMS students came from 110 different high schools representing private, small rural, and large urban school districts (TAM Advisory Board Minutes, October 4, 1989).

With the addition of 10 Asian-Americans, two African-Americans, and 12 Mexican-Americans, the overall ethnic profile of the TAMS class of 1989 would include 19 Asian-Americans, seven African-Americans, 15 Mexican-Americans, one native-American, and 121 Caucasian students (Advisory Board Minutes, October 4, 1989; "TAMS Class Profile: 1988-1990," TAMS, 1990).

During the 1989 academic year, refinements to the existing program and implementation of new traditions and events would occur. On September 10, 1989, the first annual TAMS Convocation would take place. Julian Stanley would serve as the keynote speaker. In the convocation program, the academic accomplishments of TAMS participants would be highlighted. The cumulative grade point average for the first year of
the charter class was just under 3.0, with two students having attained perfect 4.0 grade point averages and thirteen students having been named to the Dean's list for achieving 3.5 or higher grade point averages (TAMS Advisory Board Minutes, October 4, 1989).

Also honored during the convocation were National Merit Semifinalists. Sixty-seven students in the charter class had taken the PSAT the previous October. Twenty from the group were named semifinalists and 10 would ultimately be named finalists. Twenty-three students also received commendations though not named semifinalists. Three students were named National Achievement Scholars (a scholastic program for outstanding African-American students), and one student was honored for selection as a National Hispanic Scholar (TAMS Advisory Board Minutes, October 4, 1989 and March 9, 1990).

With the charter class anticipating graduation in May 1990, new efforts would be coordinated to aid these seniors in their college placement pursuits. Following Julian Stanley's convocation address, he participated in a special program to offer advice to any student pursuing out-of-state transfer placement. Stanley committed himself to aid these individuals as well as the TAMS program in general by helping to develop a link with premier universities throughout the country to accept TAMS graduate transfers (TAMS Advisory Board Minutes, October 4, 1989).

To assist with general college placement efforts, the first College Day was held on September 21, 1989. Approximately twenty-five schools from across the United States would send recruiters to UNT to provide TAMS scholars with information about their schools and to discuss scholarship and financial assistance opportunities. On October 6,
another mini-recruitment program was held affording academic deans and chairpersons from selected Texas institutions the opportunity to recruit the first TAMS graduates. As a result of these activities and on-going efforts throughout the year, the TAMS charter class was actively and successfully recruited. All TAMS graduates were offered scholarships. The majority of the graduates would stay within Texas, going to Texas A&M University, the University of Texas at Austin, or staying at the University of North Texas. Many of the graduates pursued opportunities to transfer to Ivy League and West Coast institutions (TAMS Advisory Board Minutes, October 4, 1989 and March 9, 1990).

A plethora of recreational, social, and educational programs and activities were offered throughout the year (with more than seventy programs offered during the fall semester alone). A new tradition, the Blue Moon Saloon social, would become the fall equivalent of the Spring Prom. Students did not appear to be missing their home high schools as they were actively involved in homecoming activities, selecting their senior rings, and having senior pictures taken (TAMS Advisory Board Minutes, October 4, 1989).

The Peer Facilitator Program was another new addition to the TAMS Student Life Program. Fifteen students were selected and trained to become peer counselors and campus resource contacts for fellow TAMS residents. The Student Council, National Honor Society, and the Academy Men's Club would also be added to the existing list of honorary societies, organizations, and clubs in which the TAMS students could now participate. Throughout the year, the TAMS students would also participate in athletic activities through the Denton Parks and Recreation Department and the UNT intramural
sports program. The year would build toward the second annual Spring Awards Banquet, the Academy Prom, and the first TAMS graduation (TAMS Advisory Board Minutes, October 4, 1989 and March 9, 1990).

The 1989-1990 academic year culminated with the graduation of the charter class on May 12, 1990. This important event coincided with the celebration of the University of North Texas' centennial year. The TAMS commencement exercises, held in conjunction with the UNT graduation ceremonies, featured the Honorable Gibson Lewis, Texas Speaker of the House, as keynote speaker. The special, decentralized TAMS graduation service followed the general university service earlier in the day. Following the awarding of diplomas and the presentation of a special video developed by the senior class, the graduation festivities concluded with a special reception (TAMS Advisory Board Minutes, March 9, 1990; Hurley to Lewis, February 28, 1990; Lewis to Hurley, August 14, 1989).

During the 1989 academic year, several TAMS staffing changes and program refinements had occurred. Tom Brady, NT Regents Professor, had taken over directorship of the program after official confirmation by the UNT Board of Regents on August 25th. Brady replaced Rogers Redding, who left to pursue a one year sabbatical at the Air Force Academy in Colorado. In addition to the change in directors, Manus Donahue began his first full year as the Associate Director for Academic Programs. The Student Life staff was expanded by adding an assistant hall director, a part-time psychologist, two full-time desk clerks, and three resident assistants (bringing the total to seven). The part-time recreational manager position was also reclassified to that of a full time position. The program also enjoyed tremendous contributions from an individual
new to the UNT campus. Ann Lupkowski, post doctoral teaching fellow from The Johns Hopkins University, joined UNT as a part-time faculty member in the Educational Foundations Department of the College of Education (TAMS Advisory Board Minutes, October 4, 1989 and March 9, 1990; Gentry, July 13, 1989).

The increased human resources were needed to orchestrate another year of fast paced changes in the ever evolving TAMS program. Based upon the results of the evaluative study conducted by the Center for Collaborative Research, changes would take place in the academic and student life programs. To bolster the academic success of TAMS participants, the number of hours taken by incoming juniors would be restricted, and the ability to take an elective would be based on a minimum grade point average of 3.0. To take two electives, a student would have to attain a 3.5 grade point average. The math course progression would also be altered. Rather than completing 10 semester hours of math during the first academic year, the math requirements would be spread over three semesters. Within the Student Life Program, curfew hours would be extended, and co-ed visitation in residence hall rooms would be permitted during certain daytime hours on the weekends. However, one policy would be more strictly enforced. Students would only be allowed (and in fact would be required) to go home on closed weekends. It was believed that students who left the TAMS community every weekend never achieved feeling a part of it (TAMS Advisory Board Minutes, October 4, 1989).

As Brady assumed the academy directorship, his top priority became recruitment with a goal of 200 new students for the upcoming academic year. Brady dedicated the majority of his time to recruitment trips which included making presentations throughout
the state. His personal efforts were augmented by new strategies in recruitment. The TAMS administration began to participate in the College Board's PSAT and SAT Search Services. By purchasing mailing labels of high school freshmen and sophomores who scored within fifty points of the TAMS minimum requirement, the program would no longer have to rely on schools to name qualified, prospective students. Gifted and talented coordinators in the Educational Service Centers and school districts would also be contacted by the TAMS staff. A short video would be developed by the University Center for Instructional Services to be used for recruitment trips. And, the program would move to a rolling admissions process in which applications would be accepted into the summers. Candidates who scored within 50 points of the TAMS minima (550 math, 1000 math and verbal on the SAT) would be invited to campus for interviews, then given the opportunity to retake the SAT. Applicants who had not completed geometry or Algebra II prior to admission to the program could now be provisionally accepted to TAMS as long as they completed the course work prior to the commencement of the academic year.

With all of these changes and serious dedication to recruitment, over 400 applications were received by January, 1990 (TAMS Advisory Board Minutes, March 9, 1990).

As previously mentioned, Ann Lupkowski's affiliation with TAMS and UNT would greatly benefit both. During 1989-1990, Lupkowski established a branch of Julian Stanley's Study of the Mathematically Precocious Youth Program at UNT to help identify gifted seventh and eighth graders and apprise them of available educational opportunities. Lupkowski would also initiate the Julian C. Stanley Mentor Program (a mentoring program designed to link elementary school students with UNT Math Department
graduate students). Her final contribution, in June of 1990, was coordinating the Summer Mathematics Enrichment for Minority Students (SMEMS) program. This successful endeavor offered mathematically talented minority seventh and eighth graders the opportunity to participate in an intensive summer mathematics camp (TAMS Advisory Board Minutes, October 4, 1989 and March 9, 1990).

Also in the Summer of 1990, Donahue and Brady helped to organize a Summer Research Scholarship Program. Having completed their first year of the program, selected Academy students could compete for scholarships of approximately $2,000 and gain the opportunity to conduct research with faculty members in the science and mathematics departments of UNT. This program would provide further broadening of the TAMS educational experience. Scholarship students would be required to submit their research projects to the Westinghouse Talent Search (TAMS Advisory Board Minutes, March 9, 1990; "Texas Academy of Mathematics and Science: The University of North Texas," TAMS, 1989; "Update on the Texas Academy of Mathematics and Science: January, 1990," TAMS, 1990).

As the 1989 academic year came to an end with the success of its first graduating class and new summer program and research opportunities, major efforts were undertaken to bring the approved three million dollar McConnell Hall facility expansion to fruition. These efforts intensified during the summer of 1990 to ready the facility for the 1990 academic year.
Fall 1990 through Summer 1991

By August 1, 1990, the new wing of McConnell Hall would be completed and the old McConnell Hall sign would be replaced with one including the wording, "The Texas Academy of Mathematics and Science." McConnell would now house only TAMS participants, and the expansion would enable the facility to accommodate up to 400 TAMS scholars. This would enable the program to expand to full capacity by 1991 (Advisory Board Minutes, October 4, 1989 and March 9, 1990).

With the arrival of the 190 students who would comprise the junior class of 1990-91, the program gained its first full incoming class. There were 66 females and 124 males. The ethnic breakdown included 27 Asian-Americans, four African Americans, 16 Hispanic students, and 143 Caucasians. The group averaged 1170 on the math/verbal sections of the SAT with a 630 average on the math portion. The 190 juniors joined 85 returning students for a total enrollment of 275 individuals (TAMS Newsletter October, 1990; "Texas Academy of Mathematics and Science: Class Profile, 1988-1990," TAMS, 1990).

During the 1990 academic year, new activities continued to be added to traditional events for TAMS participants. The second annual Academy Convocation, held on September 10th, featured keynote speaker, James Miller, who shared the historical development of the program with approximately 500 students, parents, and administrators in attendance. Among those honored were 22 National Merit Semifinalists (of which 18 would become finalists), 28 Commended Scholars, nine National Scholarship Award Semifinalists, and one Achievement Scholarship semifinalist (TAMS Newsletters, October, 1990 and March, 1991).
On September 28, the second annual College Day program was held with officials from 32 colleges and universities present. With the reputation of the Academy and success of its graduates more widely known, talk at College Day centered much more on the amount of the scholarships which could be offered to TAMS graduates rather than around obtaining general information from university representatives (TAMS Newsletter, October, 1990).

Lupkowski’s "Texas Honors Group" continued to flourish. An outgrowth of the Johns Hopkins' Study of Mathematically Precocious Youth begun at UNT, the project targeted students scoring at least 500 on the math portion of the College Board's SAT exam by age 13. The project not only benefited its participants, aiding them in discovering their abilities and in learning of educational opportunities nationwide, it would also serve as an excellent feeder for TAMS recruitment efforts (TAMS Newsletter, October, 1990).

Two new programs offered by the Academic and Admissions divisions of the program included a Career Fair and the Academy Ambassadors. At the Career Fair, held in March, professionals from careers in science and mathematics visited with Academy participants. Professionals from such areas as genetics, robotics, engineering, surgery, law and systems analysis were present to educate and interest TAMS students in the range of career possibilities available to them (TAMS Newsletters, March, 1991 and May, 1991).

The Academy Ambassadors was a new organization of carefully selected and trained Academy students who would aid in hosting all official Academy functions. Anytime TAMS student participation or input was needed for major events (i.e., Preview Day, Open Houses, Advisory Board meetings, etc.), this group would be available to offer
candid, direct input from current TAMS participants (TAMS Newsletters, October, 1990 and May, 1991).

In the Student Life area, many new events and organizations were added to the programs previously offered including:

1) Peer Facilitator programs - A special core group of TAMS students trained to assist the general TAMS population with a wide range of problems or needs.

2) Judicial Board - Three student administrators, nine seniors and six juniors, were selected to aid in resolving disciplinary matters.

3) Teacher Appreciation Dinner - Coordinated by the Director’s office, a new TAMS tradition, the first Teacher Appreciation Dinner, was held to recognize the most inspirational teachers from the TAMS students' hometowns who had contributed to these scholars selection for TAMS.

4) Academy Players - The new drama club organization offered TAMS students the opportunity to participate or star in a theatrical production offered once each long academic semester.

5) Hall Improvement Program (HIP) - This organization was designed to encourage active student involvement in hall pride and in improving and maintaining the McConnell facility and its grounds.

6) Beta Phi Epsilon - A new service based organization was created to help TAMS students focus on the needs of the community and world in which they lived. Community service projects were organized throughout the year (TAMS Newsletters, October, 1990, December, 1990, and May, 1991).
Adding to these new programs and groups, the "Moonlight Masquerade" Senior Prom was held off-campus for the first time in the Denton Civic Center. And, the graduation of the second TAMS class took place on the evening of May 10, 1991. For the first time, the TAMS senior class would select two of their own to speak at the graduation ceremony, Trupti Sarang and Fred Bogs (TAMS Newsletters, October, 1990, December, 1990, and May, 1991).

Further staff expansion took place in 1990. An academic advisor position was added to Donahue's team to aid TAMS students in all phases of the college application process. Assisting students with the transfer process to other institutions, completing applications, applying for scholarships, grants, and financial aid, this position would serve as an important link between the TAMS scholars and their parents and UNT and other institutions of higher education (TAMS Newsletter, October, 1990).

Other important improvements implemented during the 1990 school year included the coordination of TAMS alumni events and the establishment of a TAMS Newsletter. In an effort to begin tracking the whereabouts, pursuits, and accomplishments of TAMS graduates, the TAMS charter class elected alumni officers. These individuals began planning reunion events for UNT Homecoming each year. A newsletter was also established and sent to TAMS graduates, parents, and friends of the academy. A database was also established to track the endeavors of TAMS graduates (Brady to Brownell, August, 14, 1990).

In the Summer of 1991, SMPY at UNT would sponsor the Intensive Mathematics Institute. Talented seventh, eighth and ninth graders who participated would be exposed
to a variety of math courses and opportunities during the three week program. Individuals would have to pay to participate unless they received competitive, financial assistance (TAMS Newsletter, May, 1991).

Another new program, Summer Opportunities for the Academically Ready (SOAR) would also be offered. The SOAR three week math program, geared toward minority students talented in mathematics, offered accelerated, individualized Algebra II instruction to its participants. Fifty students, who had scored at the 95th percentile or higher on the math portion of nationally standardized achievement tests, participated in the program free of charge. The program was organized by Michael Sayler of UNT who would become an important consultant of gifted and talented education for the TAMS organization (TAMS Newsletters, March, 1991 and May, 1991).

As had been the case with the initial class, TAMS students would again be afforded the opportunity to receive stipends and conduct research with UNT faculty. Twenty TAMS students were selected for Summer Research Scholarships. In addition to the UNT research opportunities, eight academy seniors would be invited to participate in research labs at the Houston Advanced Research Center (HARC), the University of Houston, Rice, and Baylor Medical Center. Each student would receive a $2,500 stipend while conducting research during the summer months (TAMS Newsletters, October, 1991, December, 1991, and March, 1992).
Reaching Program Capacity:

Academic Year 1991-1992

With a junior class of 189 students and a returning senior population of 146, the 1991 TAMS enrollment of 335 students represented the first full class in the program's history. These students represented over 197 hometowns throughout Texas (TAMS Newsletter, October, 1991).

On September 16, 1991, at the third annual convocation, 31 National Merit Semifinalists, 11 National Hispanic Scholar semifinalists, and 44 commended scholars were recognized. And, for the first time, the TAMS National Honor Society would induct 64 members. Further, 10 students would be named to the 1991 Director's Honor Roll, having achieved a 4.0 grade point average, and 35 would be called for the Dean's List, having achieved a 3.5 or higher GPA (TAMS Newsletter, October, 1991).

Through the College Day and college application process, many TAMS graduates would be selected for transfer to numerous prestigious schools including MIT, Johns Hopkins, Harvard, Rice, Emory, Duke, Cornell, the University of Pennsylvania, etc. (TAMS Newsletter, May, 1992).

In the student life area, four new ceremonies or societies were formed: 1) the first Annual Ring Presentation Ceremony was held in November. Juniors were escorted by seniors of their choice and received their senior rings at the ceremony; 2) academy students chartered their own chapter of the Key Club, which was sponsored by the Denton Breakfast Kiwanis Club; 3) the Rose Cutting Ceremony, a new program honoring the graduating senior class, was instituted; and 4) the Dull Roar Music Society was formed to

Building on efforts to organize and track alumni of the program from 1990, an Alumni Directory was published in 1992. To monitor TAMS graduates as they continued in their educational pursuits and to assist all graduates in maintaining contact, the TAMS Alumni Directory would be published and distributed annually to all alumni (TAMS Newsletter, March, 1992).

Again the TAMS staff underwent change. Richard Stream, from the UNT Department of Speech and Hearing Science, was named Director of Admissions. As this position would assume responsibility for the coordination of recruitment, selection, and admission efforts for the Academy, the pressures of the TAMS Director position would be diminished significantly. In addition to the new Director of Admissions, two more full time desk clerks were also added to provide double coverage of the front desk from 8:00 a.m. to 5:00 p.m. and from midnight until 8:00 a.m. The additional coverage would not only afford service for students, it would also make it easier to handle emergencies and maintain security at the front entrance to the building (TAMS Newsletter, December, 1991).

A significant loss to the program occurred with the departure of Ann Lupkowski in December, 1991. Due to her impending marriage, Lupkowski relocated to Pittsburgh, Pennsylvania to work with mathematically talented students at Carnegie Mellon University. Fortunately for the TAMS program, Michael Sayler would continue to
provide expert insights into working with gifted and talented adolescents in Lupkowski's absence (Brady, 1995; TAMS Newsletter, December, 1991).

In the Summer of 1992, the UNT Summer Research Scholarship opportunity continued to increase with 31 TAMS students receiving summer research scholarships. A new research opportunity, the Houston Advanced Resource Center (HARC) Summer Internship program was implemented, and twelve TAMS students from the Houston area were selected as HARC interns. This internship opportunity afforded the students an opportunity to work in research labs while living at home. The participants also received stipends for their participation (Brady, 1995).

In June of 1992, the Academy hosted one of the Texas Talent Identification Ceremonies as part of the 12th annual Duke University Talent Identification Program. This nationally based program is dedicated to the identification of gifted and talented youth and to making them aware of all national educational opportunities available to them. The ceremony would recognize and honor the students, determined through the Duke TIP process, who achieved the highest SAT and ACT scores throughout Texas. Involvement by TAMS afforded an opportunity to orient the population about the existence and opportunities afforded through the TAMS experience and represented an important coup for the program (TAMS Newsletter, May, 1992).

Probably the greatest highlight and achievement during the 1991-1992 academic year was the selection of the Texas Academy of Mathematics and Science for the 1992 "Excellence in Higher Education Award" by the Association of Texas Colleges and Universities. The TAMS program was selected from among twenty-nine entries for its
outstanding contribution to higher education in the State of Texas (TAMS Newsletter, May, 1992).

Thus, from mere concept to award-winning stature, the Texas Academy of Mathematics and Science metamorphized from legislative approval and establishment in 1987 to national recognition and attainment of full class capacity in 1992.

While this chapter attempted to highlight important general events leading to the growth and evolution of the program, more detailed treatment of the Academic, Admissions and Recruitment, and Student Life components will be found in the following chapters.
CHAPTER III

TAMS ACADEMIC PROGRAM

Creation of Academic Program

Central to the reputation and lure of the Texas Academy of Math and Science concept would be the curriculum and enrichment opportunities offered. Clearly, the curriculum to be offered, the faculty, and the research opportunities afforded would comprise the reputational backbone of the program.

Prior to the legislative establishment of the Academy in the summer of 1987, Jean Schaake, Associate Dean of the College of Arts and Sciences, had several conversations about the TAMS concept with Tom Preston, Dean of the College of Arts and Sciences. In May of 1987, Preston requested that Schaake serve as the chairperson for the TAMS Curriculum Committee. Her first priority in establishing the committee was recruitment of appropriate individuals to comprise it. She noted:

The curriculum committee would include the chairs of all of the science divisions on campus, the director of the Classic Learning Core, faculty from secondary education in the College of Education, a physics teacher from the Denton Independent School District, and individuals from the curriculum committee of the Denton Independent School District. (Schaake, Interview with author, 1995)

The individuals named to the committee included: Alan Moore, College of Education; John Ed Allen, Department of Mathematics; Gerry O'Donovan, Department of Biological Sciences; Rogers Redding, Department of Physics; Walter Sandefur, College of
This broad based committee had only the very general description included in House Bill 2079 from which to work:

... 105.95. Establishment: Scope . . . to provide a rigorous academic program emphasizing mathematics and science, but also including a strong and varied humanities curriculum. (p. 309)

... Faculty members of the university shall teach all academic classes at the academy . . . (p. 310)

... 105.97. Program and Operation

(a) The academy shall operate on the same fall and spring semester basis as the university. Full time students of the academy must be enrolled for both the fall and spring semesters.

(b) In addition to academic classes, the academy may offer short courses, workshops, seminars, weekend instructional programs, summer programs, and other innovative programs.

(c) The pupil-teacher ratio in all regular academic classes at the academy may not exceed 30 students per classroom teacher, except that the pupil-teacher ratio may exceed that limit in programs provided under Subsection (b) of this section, in physical education courses, or in special enrichment courses. (pp. 311 & 312)

From this highly generalized description, a curriculum framework had to be hammered out. To develop the curricular component for the inaugural class of 1988, the
committee would have a vast amount to accomplish in a short period of time (Schaake, 1995).

To commence work on their charge, Schaake and other committee members realized immediately that it would be imperative to solicit guidance and input from individuals involved in similar existing programs. Officials of both the North Carolina School of Science and Mathematics and the Louisiana School of Math, Science, and the Arts would provide important contacts and suggestions for the Curriculum and Student Life Committees (Schaake, 1995).

James Miller would also suggest that Schaake make contact with internationally acclaimed Julian Stanley, founder and director of the Study of Mathematically Precocious Youth at the Johns Hopkins University. In taking Miller's advice, Schaake promptly called Julian Stanley. Of that first phone conversation, she would recall:

There was an immediate reaction that—wow, here we have a great resource and a very friendly, helpful person as well. Our first conversation lasted forty-five minutes . . . Stanley indicated he would be happy to serve as a consultant to our program and was happy to come to NTSU for a site visit. Julian Stanley became an instrumental, guiding force in the development of the program. (Schaake, Interview w/author, 1995)

On June 23, 1987, the TAMS Curriculum and Student Life Committees met with Richard Brown, Director of the Louisiana School of Math, Science, and the Arts. Brown would spend the day at the North Texas campus and present a comprehensive overview of the Louisiana school including problematic areas he and his school had encountered (Kemerer, Memo to Student Life Committee, 1987).

On September 15, 1987, Julian Stanley joined the program creators at the North Texas campus to review all progress made to that point. Stanley would give the
committee glowing reviews. His validation of their work shored the confidence of all involved. His recommendations and insights further aided the group's efforts in detailing and structuring curricular components of the program (Hurley, 1995; Jungjohan, Memo to Student Life Committee, 1987; Miller, 1995; Schaake, 1995).

During the first three months of the Curriculum Committee's existence, the TAMS program had had no director. Fortunately, the individual ultimately appointed to the position was a member of the original Curriculum Committee with a good working knowledge of the program's status. Rogers Redding resigned his post as Director of the Department of Physics to become the first TAMS director. As Redding continued to work closely with Schaake and the Curriculum Committee, the admissions process and curriculum development would demand maximum effort (Miller, 1995; Redding, 1995; Schaake, 1995).

At the September 24th Curriculum Committee meeting, Redding and committee members reviewed the nomination and selection criteria, math level testing, computer science components, enrichment activities, and a guest speaker program (Memorandum to Curriculum Committee members, 1987).

By the February 9th meeting, the Curriculum Committee and Redding had developed most of the criteria, the structure, and the paperwork to be utilized in the selection process for the first class. They had planned the following time line to be used in the admissions process:

1) March 7 - Review Teams (receive, review applications)

2) March 23 - Teams make recommendations of individuals invited for interviews.
3) March 30 - Deadline for the committee to compile the final slate of applicants

4) April 23 - Interviews/math testing of applicants

5) April 29 - Deadline for committee to make final selections.

In addition to the proposed selection process, the second agenda items for review would be the proposed academic standards to be maintained (Memorandum to Curriculum Committee, February, 1988).

Thus, as the final preparations for the inaugural class took place through the end of the Spring 1988 semester and well into that summer, Redding, Schaake, and Curriculum Committee members would be equally engrossed in finalizing the curriculum and in selecting the first class. Throughout the first year and well into the second year of the program, Redding and the Curriculum Committee bore the added responsibility of also functioning as the Admissions Committee. Two complete selection processes would take place before the establishment of a separate Admissions Committee. Not until the 1990-1991 Academic year would the TAMS Director for Admissions position be established finally providing relief of the admissions responsibility to both the TAMS Director and the Curriculum Committee (Brady, 1995; Schaake, 1995; Stream, 1995).

As the early work of Redding, new Associate Director, Annetta Ramsay, and the Curriculum and Student Life Committees neared culmination in early summer 1988, a final meeting was scheduled for July 5th for all who would be involved in assisting the first TAMS class. Held in the University Board Room, representatives and departmental directors from Recreational Sports, the libraries, Financial Aid, the Registrar's Office, the Police Department, the Dean of Students' Office, the Chancellor's Office, Dining Services,
the Housing Department, Health Services, Telecommunications, Admissions Office, Office of the Controller, the College of Arts and Sciences, the Public Affairs Office, and the University Union would attend. All aspects of the program, including plans for the students' registration and orientation week activities would be presented for final revision and review (Redding, Memo to Special Meeting Attendees, June, 1988).

As a follow-up to this meeting, all departments involved would make final preparations for their portion of the first TAMS Orientation Week, and the official kick-off of the program in August of 1988 (Student Life Committee (SLC) Minutes, July, 1988).

The Curriculum

The primary goals of the framers of the TAMS curriculum were to capture the interest of the bright, gifted high school adolescents while presenting them with academic challenges as well. While emphasizing studies in mathematics and the physical and natural sciences, a strong and varied humanities and social sciences curriculum would also be afforded. In addition to the entry level courses for science majors, in the disciplines of biology, chemistry, physics, and mathematics, UNT would include innovative course work in humanities, offered through its relatively new Classic Learning Core (CLC) program (O'Donovan, 1995; Schake, 1995; Stevens, 1995; TAMS Informational Brochure, 1989).

The CLC featured a special, coordinated way of taking the arts, humanities, and social science courses required in the College of Arts and Sciences curriculum. Course work in the CLC was taken sequentially in order for courses to build upon and reinforce each other. All CLC courses would center on a thematic focus of reason, virtue, and
civility. And, more than 25 classic books would be included in the reading list for these courses. By offering this strong liberal arts approach, students would be challenged to think critically, creatively, and analytically (Schaake, 1995; Spectrum, 1989; Stevens, 1995).

The University of North Texas Classic Learning Core had received recognition as "an exemplary model in a National Endowment for the Humanities report on core curricula" (Spectrum, Fall 1989, p. 1). In the report, "50 Hours: A Core Curriculum for College Students," the National Endowment for the Humanities Chairwoman, Lynn V. Chaney, emphasized the importance of coherence in the college curriculum:

To increase coherence, . . . core programs often stress recurring themes. Reason, virtue, and civility are emphasized in the 'classic learning core' at the University of North Texas. In sophomore English, students might consider these themes as they read Shakespeare; in American history, discuss ways in which reason, virtue, and civility relate to the experience in republican government. (Spectrum, "College Programs Cited by NEH, Chronicle," Fall 1989, p. 1)

In the report, the University of North Texas' CLC joined Columbia University and St. Johns as the only senior institutions whose reading programs were featured as national models (Spectrum, "College Programs Cited by NEH, Chronicle," Fall 1989, p. 1).

The Director of the UNT Biology Department, Gerry O'Donovan, stressed the importance of the addition of the Classic Learning Core classes:

The CLC is what sold the legislators and the parents on the program. This was not just going to be another math and science program. Any place can offer a combination of math and science courses, but you can end up with semi-literates who are wonderful in mathematics and science but who cannot write. So, to offer the humanities component through the Classic Learning Core was integral to the TAMS academic proposal. (O'Donovan, interview with author, 1995)
In addition to the CLC courses, the Department of Math faculty would devise a new course for the TAMS students. The course would combine trigonometry, pre-calculus, and calculus. The five semester hour course was intended to prepare TAMS students to take calculus-based physics during their second year in the program. The mathematics course work would also be divided into three different divisions. As TAMS applicants appeared for campus interviews in the Spring of 1988, a local mathematics test would be administered. Based upon their performance on this examination, the students were placed accordingly. Five students in the first class would be offered the opportunity to move into upper level mathematics courses based on their performance (TAMS Advisory Board Minutes, April 6, 1988; TAMS Advisory Board Minutes, September 21, 1988).

Through the Biology Department, another unique class would be offered to the first TAMS class. For several years, Manus Donahue and others in the Biology Department were becoming concerned about the course work being offered to the biology majors. It was felt the course work offered too much classical biology and not enough in the areas of cell and molecular biology and genetics (although nationally, these were the areas of growing interest in the field). Though a change had been proposed for several years, a true window of opportunity arose with the advent of the TAMS program to explore, then implement a new course (Donahue, 1995; O'Donovan, 1995).

The new course featured cell biology, genetics, and molecular biology sections. Though the course was team taught by several experienced, full-time faculty members, it was coordinated by Manus Donahue. In addition to teaching portions of the class,
Donahue attended all lectures, as well as generating and administering the tests. Through this experience, Donahue established an instant rapport with the TAMS students. He would earn the reputation for being demanding but fair—and a true student advocate (O'Donovan, 1995).

After more than a year's work in developing the guidelines and framework for the Academy's curriculum, the initial proposed curriculum for the first TAMS class included the following:

<table>
<thead>
<tr>
<th></th>
<th>First Year</th>
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<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Sem. Hours</td>
<td>Spring</td>
</tr>
<tr>
<td>English Composition</td>
<td>3 sh</td>
<td>English Composition</td>
<td>3 sh</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4 sh</td>
<td>Mathematics</td>
<td>6 sh</td>
</tr>
<tr>
<td>Chemistry I w/lab)</td>
<td>4 sh</td>
<td>Chemistry II (w/lab)</td>
<td>4 sh</td>
</tr>
<tr>
<td>Biology</td>
<td>4 sh</td>
<td>Biology</td>
<td>4 sh</td>
</tr>
<tr>
<td>Elective</td>
<td>3 sh</td>
<td>Elective</td>
<td>3 sh</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>15-18 sh</strong></td>
<td><strong>Total:</strong></td>
<td><strong>17 - 20 sh</strong></td>
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<table>
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<tr>
<th></th>
<th>Second Year</th>
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<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Sem. Hours</td>
<td>Spring</td>
</tr>
<tr>
<td>Physics I (w/lab)</td>
<td>4 sh</td>
<td>Physics II (w/lab)</td>
<td>4 sh</td>
</tr>
<tr>
<td>English Literature</td>
<td>3 sh</td>
<td>English Literature</td>
<td>3 sh</td>
</tr>
<tr>
<td>History</td>
<td>3 sh</td>
<td>History</td>
<td>3 sh</td>
</tr>
<tr>
<td>Political Science</td>
<td>3 sh</td>
<td>Political Science</td>
<td>3 sh</td>
</tr>
<tr>
<td>Elective</td>
<td>3 sh</td>
<td>Elective</td>
<td>3 sh</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>15 -19 sh</strong></td>
<td><strong>Total</strong></td>
<td><strong>15 -19 sh</strong></td>
</tr>
</tbody>
</table>


To help guide and assist each Academy student, a faculty academic advisor was assigned to provide general guidance and to offer assistance with course selection.
A great deal would be learned through the challenges met and overcome by the first TAMS class. Eighty-nine students began the program in August, 1988; however, one student left within the first week to move with her family. By the end of the Fall 1988 semester, the report on the overall class performance was favorable. As Rogers Redding summarized in a memorandum to President Hurley:

Three students earned a perfect 4.0 grade point average, forty-two had 3.0 plus averages, and sixty-four maintained a 2.5 or higher grade point average. These grades were maintained on an average 17 semester hour course load. Three students were asked not to return for the Spring semester because of grades. (December 12, 1988)

By the end of the 1988 academic year, the results were deemed a general success.

As Redding would convey in an interview with Fort-Worth Star Telegram reporter, Julie Gilberto:

The first class has been a success, even with a few difficulties . . . Two students finished the year with perfect 4.0 grade point averages. The class GPA was 2.84—a low "B." Most group averages across the nation are in the "C" range . . .

We didn't have any huge, major surprises . . . The thing that was most surprising was the fact that the students really didn't know how to study. We've discovered they didn't have to in high school. They were just sliding along getting "A's" while reading their books while walking to class . . .

These students have never been pushed . . . By virtue of never having been pushed, they don't know how to respond. One of the triumphs of the year was seeing students at mid-terms in serious trouble make a comeback. It was a very maturing process. (Gilberto, Fort Worth Star-Telegram, May 29, 1989)
By Fall 1989, only 73 students from the charter class would return. Though this still fell within the national retention rate average for similar programs (five to 20 percent), it still caused concern for the program's administrators. In the "Texas Academy of Mathematics and Sciences Summary of First Year" report, a variety of reasons were noted regarding the 15 students who did not return to the program:

Four students were asked to leave because of behavioral problems, some returned to high school or community colleges because of poor grades, some students opted to attend another university, and some left the academy because their parents moved out of the state. (1989, p. 1)

To better understand the charter class participants' impressions and reactions to the academic and social demands of the TAMS experience, the TAMS administration contracted with the UNT Center for Collaborative Research in the College of Education to do an evaluative study of the first class. From the results of the questionnaire completed by the entire Academy group, modifications would be made for the entire program. The findings pertaining to the academic program are described in the following paragraph:

Though some of the TAMS students felt the course work was too difficult and few found it too easy, the vast majority found it challenging but reasonable. The math courses were perceived to be the most difficult but also had the highest interest level rating. The quality of math teaching was rated quite high. The biology course work was rated as very interesting and well taught. The chemistry courses scored the lowest of the sciences. It was rated as less interesting and less well taught. The scores for the Classic Learning Core would reflect the greatest variety. The students rated CLC course work as the easiest; however, less agreement among the evaluators was found concerning how challenging, interesting, or well taught these courses were ("TAMS Evaluative Study," UNT Center for Collaborative Research, 1989).
Modifications made to the academic program were noted in the "Texas Academy of Mathematics and Sciences Summary of First Year" report:

In the first semester of the Academy, many of the students were permitted to take an elective in addition to the required courses of math (five hours), chemistry, biology, and English. The beginning class this year will not be permitted to take an elective until the spring semester and then only if the GPA for the fall semester is 3.0 or higher.

Last year, students completed 10 hours of mathematics in two semesters, i.e., Pre-Calculus, Calculus I, and Calculus II. While many of the students had no difficulty with this intense approach to the mathematics requirement, a significant number had some problems. Therefore, the required math will be spread over three semesters for most of our students this coming year. (1989, p. 1)

As Redding had reflected, many students had great difficulty adjusting to the excessive course loads and the intensive approach to mathematics due to their lack of study skills. To alleviate the problem, much more would be done to afford TAMS students with needed tutorial services. Adjustment to their college course work might begin a bit slowly, but with additional coaching and tutorial help, the TAMS students would usually acclimate and develop study skills with the need for tutoring naturally tapering off (O'Donovan, 1995).

To direct the needed changes in curriculum and to help develop the vision for the future of the TAMS academic program, Manus Donahue was selected as the TAMS Associate Director for the Academic Program during the Spring of 1989 (Brady, 1995). Together, Donahue, Schaake, and other members of the Curriculum Committee would continue to refine curricular requirements through 1992 (Brady, 1995; Donahue, 1995).

Another Evaluation Report on TAMS took place at the end of the 1989-1990 school year. Faculty members were also given the opportunity to participate in that
evaluation. In the Curriculum Committee meeting of September 26, 1990, the following adjustments were recommended:

One criticism brought up in the evaluation by the faculty was the grading policy and the non-distinction of honors courses for TAMS students. Also discussed was the fact that the courses were taught as honors courses—more difficult than regular courses taken by university students. Recommendation for this would be: 1) write letters to universities/colleges along with the letter of recommendation regarding GPA and the curriculum; 2) have a Council for TAMS Faculty where faculty who teach TAMS students can get together with the Academy and discuss course curriculum expectations and actual results.

Another criticism by the students in the evaluation was the large block in the second year for the humanities courses. Currently, the students take nine hours of humanities in the second year, and this does not allow any flexibility for elective courses. After a long discussion, recommendations were: 1) break the CLC block and have History in the first year and drop Political Science from required curriculum; 2) place the Physics labs during the first year (which will prepare the students for the Summer Research Program) and leave the Physics lecture in the second year; 3) the required mathematics courses will be up to Calculus I; 4) allow for two science or math elective courses in the second year. (Curriculum Committee Minutes, September 26, 1990)

With these changes in the academic program, the curriculum schedule would be modified to reflect the following schedule:

<table>
<thead>
<tr>
<th></th>
<th>1st Semester</th>
<th>Sem. Hours</th>
<th>2nd Semester</th>
<th>Sem. Hours</th>
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</thead>
<tbody>
<tr>
<td>History</td>
<td>3 sh</td>
<td>History</td>
<td>3 sh</td>
<td></td>
</tr>
<tr>
<td>Chemistry + lab</td>
<td>4 sh</td>
<td>Chemistry + lab</td>
<td>4 sh</td>
<td></td>
</tr>
<tr>
<td>Pre-Calculus</td>
<td>5 sh</td>
<td>Calculus I</td>
<td>4 sh</td>
<td></td>
</tr>
<tr>
<td>English Composition</td>
<td>3 sh</td>
<td>English Composition</td>
<td>3 sh</td>
<td></td>
</tr>
<tr>
<td>Physics lab (mechanics)</td>
<td>1 sh</td>
<td>Physics lab (elect.)</td>
<td>1 sh</td>
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<tr>
<td>Total:</td>
<td>16 sh</td>
<td>Total:</td>
<td>15 sh</td>
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<tr>
<th></th>
<th>1st Semester</th>
<th>Sem. Hours</th>
<th>2nd Semester</th>
<th>Sem. Hours</th>
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<tbody>
<tr>
<td>Physics lecture</td>
<td>3 sh</td>
<td>Physics lecture</td>
<td>3 sh</td>
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</table>

With these changes in the academic program, the curriculum schedule would be modified to reflect the following schedule:
The program further evolved to allow for some differentiation based upon the students' future vocational aspirations. Allowing for more electives enabled students to tailor their programs to better prepare for expected future careers. If the students were headed toward engineering, they would take additional math courses; if they were more interested in careers in the life or health sciences, they might opt for organic chemistry, etc. (Schaake, 1995). The typical electives selected by Academy scholars often included such course work as organic chemistry, calculus III, differential equations, linear algebra, psychology, philosophy, foreign language, and microbiology (Brady, "The TAMS: An Alternative for Gifted and Talented High School Students," 1990, TAMS Archives).

Final revision to the curriculum schedule allowed for differentiation of the "Math/Physics/Engineering" Schedule I or the "Health Science/Biological Sciences" Schedule II:

<table>
<thead>
<tr>
<th>Schedule I (Math/Physics/Engineering)</th>
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<tbody>
<tr>
<td>First Semester</td>
</tr>
<tr>
<td>Chemistry</td>
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<tr>
<td>Chemistry lab</td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Math/Pre-Calculus</td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td>Math/Calculus I</td>
</tr>
<tr>
<td>World History</td>
</tr>
<tr>
<td>Physics lab</td>
</tr>
<tr>
<td>Total:</td>
</tr>
</tbody>
</table>
The curriculum schedules not only accommodated the students' interests, they were also designed to assure students reached appropriate competency levels in mathematics. Students coming to the Academy unprepared to take calculus would first
take Pre-calculus, then Calculus I and Calculus II. Such students would end up taking five semester hours of pre-calculus, four semester hours of calculus I and three hours of calculus II. Students coming into the program already proficient in calculus would only be taking calculus I and II as required courses but might move on to other math course electives after requirements were met (Donahue, 1995).

Fifty-six hours with a 2.5 grade point average would be required to complete the Academy diploma certification program; however, most Academy students would graduate with more than seventy hours completed through the program (Donahue, 1995).

In general, both Academy students and traditional UNT students benefited by being in classes together. The TAMS students matured more quickly through exposure to the serious approach to course work and more mature classroom behavior of the Science majors and Classic Learning Core participants. Conversely, the Academy students often inspired the traditional UNT student as well. As Lewell Stevens would recall:

Hearing Academy students talk about competing for transfer to elite schools throughout the United States would lead to a realization by traditional UNT students that they too could consider such possibilities. If the traditional students knew they were performing on an equal or better level than TAMS students in the same class, they too could certainly successfully compete for admission to nationally acclaimed schools. (Stevens, interview with author, 1995)

The traditional student population of North Texas also benefited from the experimental biology course and the revision resulting in the five hour pre-calculus course devised because of TAMS. Both courses would eventually be opened to both traditional UNT students and TAMS students (Donahue, 1995; O'Donovan, 1995; Stevens, 1995).
One problem causing serious concern, which would not be worked out for some time, was the dilemma caused by grading on a curve. Many traditional UNT students would not want to take a course predominately comprised of TAMS students. With a large population of TAMS students in a class, the average score distribution in the class would rise ten to twenty points. This could be quite disillusioning to traditional students. Grading on a curve in a class composed mainly of TAMS students could be quite unfair to those individuals as well. If they were spread randomly throughout classes, they would tend to be in the "A" range. But if placed in a group, many of these exceptional students would make much lower grades, though their class average would be far greater than a regular class comprised of the majors within the departments (O'Donovan, 1995).

One solution worked out by the Biology Department, was to begin scoring classes required of all Biology majors as if there were no TAMS students in the class. The traditional grade curve could then be established. Academy students in the classes would be scored by the same standards; however, their scores would be added to the continuum established, and many would receive deserved "A's" this way. This solution penalized neither the traditionally aged majors nor the gifted TAMS students but still allowed a curve to be utilized (O'Donovan, 1995).

TAMS Faculty and Research Opportunities

Critical to meeting the needs of gifted, superb learners would be the intellectual and academic caliber of the teaching staff. The abilities of the staff had to match or exceed that of the student body. Stanley would describe the special training needed:
Every teacher must know his subject thoroughly, at least at the level of a strong master's degree in it. Many teachers do not have that amount of training. Many of them have graduated from teachers colleges with slight preparation in the subject matter itself. The usual bachelor's degrees in the teaching of mathematics or science are not equivalent in breadth or depth to a baccalaureate in mathematics, biology, chemistry, physics, or computer science. With this insufficient underpinning, few teachers go on to take an academic master's degree in their subject. ("Testimony in Annapolis," 1988, p. 3)

The strength of the TAMS curriculum would depend not only on its strong liberal arts orientation, but upon the battery of Ph.D.'s possessed by its faculty (Donahue, 1995; Miller, 1995). The academy would seek the most seasoned instructors. Those with solid teaching experience and the ability "to draw the best out of students by coaxing them in class," were found (Donahue, Interview with Author, 1995). TAMS would also seek those teachers knowledgeable about research. With current research experience, these professors could help TAMS students explore modern concepts in their fields of study (Donahue, 1995).

The research opportunities afforded through the TAMS approach would be another special benefit for the program. James Miller believed that the UNT faculty and research opportunities made the TAMS model superior to other residential programs:

UNT has a vast range of mathematical course work to offer in this college setting. The extremely precocious student could literally jump right into Master's or Ph. D. work very early on. And we have the faculty that can handle this.

We also offer the highly important research component. If we are going to hook kids in science, it has to take place in a real working laboratory. Many lab courses turn adolescents off; everything is too structured. The key is to hook kids on science by working on a science project with a professor who is an expert in the field. And this is the beauty of TAMS . . . it offers just that. (Miller, Interview with Author, 1995)
Specific research opportunities afforded to TAMS participants is described more thoroughly later in this chapter.

Academic Policies and Requirements

In addition to the actual TAMS curriculum, which has evolved since the program's inception, certain academic policies and requirements were needed to augment the curriculum component. These policies and requirements were alphabetically listed in the Student Handbook (1990, pp. 30-33):

ACADEMIC PROBATION AND DISMISSAL Academic probation is an emphatic warning that the quality of the student's work is placing the student at risk of being dismissed from the Academy. A student receiving a grade of "F" in a required course is subject to dismissal from the Academy. A student receiving a course grade of "D" in any required course will be placed on academic probation. To be removed from academic probation, the student must complete the following long semester in good standing.

ACADEMIC STANDING To remain in good standing, Academy students must receive a course grade of at least a "C" in every required course.

CLASS ATTENDANCE Regular and punctual class attendance is expected. Although in general students are graded on intellectual effort and performance rather than attendance, absences may lower the student's grade when class attendance and class participation are deemed essential by the faculty member. Any instructor who informs students in writing about the necessity of class attendance may request of the registrar that a student be dropped from a course with a grade of "WF" upon the accumulation of the stated number of absences. Departments and similar academic units have the authority to establish a department-wide or course-wide policy, so long as the policy is in accord with the above stipulations.

If the instructor-initiated drop action falls within the time that the student is eligible to drop with instructor consent and without penalty, the registrar's office notifies the student that a "WF" will be recorded unless the student initiates the drop procedure in which case a "WP" will be assigned. DROP POLICY Academy students will not be allowed to drop required courses. If a student does drop a required course, he/she may be dismissed from the Academy. Elective courses may be dropped only with the
approval of the instructor, the academic advisor, and the associate director for academic programs.

GRADE POINT AVERAGE The grade point average is calculated by dividing the number of grade points by the total number of semester hours attempted.

In calculating grade points, grades count as follows: A, four points per semester hour; B, three points; C, two points; D, one point; and E, F, WF, WX and Y, zero points.

The cumulative grade point average (CGPA) refers to the grade point average for all work completed at the University of North Texas.

GRADE REPORTS A grade report for each student is mailed to the permanent address at the close of each semester. It includes a statement of current academic status. If the grade report or the academic status is believed to be in error, the student should contact the Registrar's Office within 30 days.

GRADING SYSTEM UNT's grading system uses the letters A, B, C, D, F, P, NP, I, PR, W and WF. The letter Z is used to indicate that a grade was not properly received and/or recorded for a course.

A - excellent work, four grade points for each semester hour.
B - good work, three grade points for each semester hour.
C - fair work, two grade points for each semester hour.
D - passing work, one grade point for each semester hour.
F - failure. Given when a student 1) has failed the course while still officially enrolled at the end of the semester; 2) is failing in a course and misses the final examination without satisfactory explanation; or 3) stops attending class without processing an official drop or withdrawal.
P - passed; a credit grade 1) on pass/no pass option, 2) on student teaching, and 3) in selected undergraduate and graduate individual problems and research courses.
NP - not passed; a failing grade on the pass/no pass option; nonpunitive.
I - incomplete; a nonpunitive grade given only during the last one-fourth of a semester and only if a student is 1) passing the course; 2) has justifiable reason why the work cannot be completed on schedule; and 3) arranges with the instructor to finish the course at a later date by completing specific requirements that the instructor must list on the
grade sheet. All work in the course must be completed within the specified time (not to exceed one year after taking the course).

W - drop or withdrawal without penalty. Given when a student drops or withdraws from the university prior to the end of the sixth week of classes (summer term, eight class sessions). See regulations for dropping and withdrawing in the general catalog.

WF - drop or withdrawal with a failing grade. May be assigned after the sixth week of classes (summer term, eight class sessions). See regulations for dropping and withdrawing.

PROGRESS REPORTS Parents and students will receive progress reports on the student's academic performance in each course at about mid-semester of each semester.

REQUIREMENTS FOR GRADUATION FROM THE ACADEMY

1. Must be in good academic standing and have completed the following courses:
   a. Math 1710 and 1720 or higher
   b. Chem 1410, 1420, 1430, and 1440
   c. Biol 2980
   d. Phys 1710, 1730, 2220, and 2240
   e. Engl 1310, 1320
   f. Engl 2211, 2221
   g. Psci 2040, 2050
   h. Hist 2610 and 2620

2. Minimum GPA to graduate: 2.5

3. Must have a minimum of 55 credit hours.

4. If a student has not yet completed all of the above required courses by the end of the second year, he/she may still receive a diploma from the Academy if the following requirements are met.
   a. Required courses are completed at UNT.
   b. Required courses are completed within two long semesters of the time his/her class graduates from the Academy (maximum of one calendar year).

5. When a student's class has graduated from the Academy, the student is no longer an Academy student, and the student is responsible for his/her own room, board, books, tuition, and
fees. Academically, he/she is no longer a TAMS student. This condition may be waived if the student has both a documented medical problem and is in good standing at the time he/she leaves the Academy.

WITHDRAWAL FROM THE ACADEMY Students who leave the Academy of their own volition prior to completion of the program may be required to compensate the Academy for tuition, scholarship and fees.

Additional Activities and Components

In addition to providing a stimulating environment of research and instruction for TAMS students, "The Academy also provides a variety of activities to enhance the formal academic studies, including a study skills program, independent study, mentor-guided research, field trips, visiting lecturers and a recreational program." (Texas Academy of Math and Science Informational Brochure, UNT, 1990-91). Descriptions of support services, traditional events, and enrichment opportunities encouraged and coordinated through the academic program are listed alphabetically as follows:

Academic Advising: Each Academy participant is assigned an academic advisor at the beginning of each year. Faculty participants are selected based upon their interest and support of TAMS, as well as their expertise in advising students. The academic advisor meets with each student each semester and as needed, to assist in planning for future course work and to offer counsel about academic progress. The aim of the academic advisor assignment is to ensure a smooth progression through the Academy curriculum component (TAMS Student Handbook, UNT, 1989).

Alpha Lambda Delta: One of the two freshman honor societies for which TAMS students are eligible is Alpha Lambda Delta. For membership consideration, freshman
women must complete 12 or more academic hours and earn a minimum 3.5 grade point average. Membership in the Alpha Lambda Delta freshman honor society distinguishes those students who do well academically in the first year of their college experience (TAMS Student Handbook, UNT, 1989).

College Day. An annual Fall Academy program, first held on September 21, 1989, College Day offers recruiters the opportunity to provide TAMS students with general information about their schools and about scholarship opportunities their schools may afford for graduates. In the first year of this program, a separate mini-conference was held for Texas universities. In following years, only one College Day was offered, with officials from in-state and out-of-state universities attending. The number and range of universities opting to participate grew significantly between 1989 and 1991. For the 1991 program, more than thirty universities were represented. Included were: the University of Texas at Austin, the University of Texas at Dallas, Texas A and M, the University of North Texas, Rice, Baylor, Trinity, Austin College, TCU, Texas Tech, SMU, Princeton, Washington University in St. Louis, the University of Southern California, Emory, the University of Miami, the University of Michigan, the University of Pennsylvania, the U.S. Naval and Air Force Academies, MIT, Johns Hopkins, the University of Mississippi, Franklin and Marshall, American University, William Jewell, the University of Chicago, Louisiana State University, the University of Oklahoma, Reed College, and Le Tourneau (TAMS Advisory Board Minutes, Oct. 4, 1989; TAMS Newsletters, October 1991 and December 1991).
**College Admissions Assistance.** Initial efforts to educate university admissions officers throughout Texas and beyond were headed by Julian Stanley, Rogers Redding, and Manus Donahue. As Stanley predicted during his convocation address, September 10, 1989:

Some admission officers are virtually certain to get confused by the dual nature of TAMS, because it is a truly unique blend . . . of high school and college. A careful statement by TAMS, plus the college transcript of courses and grades, should convince all but the most stubborn of them that the TAMS graduates' course credits are truly honors college ones. . . . I would be glad to help Rogers Redding do a systematic survey of many colleges and universities to alert them to applications from you that may be coming in the fall of 1989 . . . and to inquire about the usual number of vacancies for transferring into their institutions. (p. 2)

An extension of College Day activities included more individualized efforts to assist all TAMS graduates in determining transfer requirements and admissions guidelines and deadlines for any universities to which they might seek admission. As the demands of this aspect of the program grew, a full time position was established. During the 1991 academic year, a project was initiated to determine the transfer policies at the most sought after universities within Texas and throughout the United States (*TAMS Newsletter*, December 1991 and May 1992).

**Commencement.** Undeniably the culminating event of the Academy experience, the TAMS commencement exercises are either held on Friday evening prior to the UNT ceremonies or in a decentralized ceremony on the same day as the UNT general ceremony.
Held on May 12, 1989, the first TAMS graduation featured a speech by the Honorable Gibson D. Lewis, Texas Speaker of the House, and coincided with UNT's centennial year. In addition to the keynote address, the initial graduation ceremony included the awarding of diplomas and a recessional.

By 1990, the senior class would select two TAMS graduating seniors to deliver a graduation address at the service. After the formal ceremony, UNT faculty and staff joined TAMS graduates and their families in a private reception on the UNT campus (Letter from Lewis to Hurley, August 14, 1989; Letter from Hurley to Lewis, February 28, 1990; TAMS Newsletter, December 1990, March 1991, and May 1991).

Convocation. The first major traditional event, heralding the beginning of each academic year, the TAMS Convocation was initially held on September 10, 1989 and featured guest speaker, Julian Stanley. As the program evolved through the first three convocations, categories of academic distinction highlighted during the ceremony would expand. During the service, a Convocation Address, delivered by a distinguished guest speaker, would be followed by the announcement of the National Merit Semifinalists, National Hispanic Scholar Semifinalists, National Achievement Scholar Semifinalists, and Commended Students (from the National Merit Scholarship competition). Also recognized during the service were TAMS students named to the Director's Honor Roll and the Dean's Honor List. Names of students who had been selected for the National Honor Society were also announced (Stanley, TAMS Convocation Address, September 10, 1989; TAMS Newsletter, October 1991).
**Dean's List.** Students attaining a minimum grade point average of 3.5 on at least 15 hours of course work would be placed on the Dean's List. (TAMS Student Handbook, UNT, 1989)

**Director's Honor Roll.** Academy students who achieved a 4.0 grade-point average on a minimum of 15 semester hours of course work were placed on the Director's Honor Roll. (TAMS Student Handbook, UNT, 1989)

**Houston Advanced Research Center (HARC) Summer Internships.** Funded by HARC and the Houston Livestock Show and Rodeo, competitive summer research internships were awarded to selected TAMS participants who lived in the Houston area. The HARC internship awards provide a $2,500 stipend for full-time laboratory research conducted over a two and one half month period. Participants were first-year Academy students from the Houston area who lived at home during their internship experience. Selection for HARC internships was based on a letter of intent from the students and their fall semester grades. Upon completion of the program, the HARC interns were required to deliver oral and written reports at the HARC research site, as well as the Texas Academy of Math and Science the following fall semester (TAMS Newsletter, October 1991, December 1991, March 1992, and, May 1992).

**Intensive Mathematics Institute.** Ann Lupkowski, coordinator of The Study of Mathematically Precocious Youth (SMPY) at UNT, established a unique summer program for mathematically talented seventh through ninth grade students. To be eligible, students had to score a minimum of 500 on the math section of the SAT and 930 on the math/verbal sections of the SAT prior to age 13. The cost of the program, $1,500,
included tuition, books, room and board, and recreation. Partial and full scholarships were made available based upon financial need.

Students attending the summer program spent three weeks on the UNT campus and had the option of studying one or more of the following: Algebra I and II, Geometry, Trigonometry, Analytic Geometry, and Calculus. Students were individually assessed at the beginning of the program to determine their skill levels. Students would also receive individualized instruction and assistance so that they could move through the program at their own pace. The goal of the accelerative program was to allow each student to complete at least one course in mathematics, although some students completed up to four courses (TAMS News-letters, March 1991, May 1991, and October 1991).

**National Honor Society.** Students who have attended the Academy at least one semester and attained a 3.0 or better grade point average are eligible to seek membership in the TAMS' chapter of the National Honor Society. Based on an evaluation of their service, leadership, and character, a selection committee determines the membership each year. In the first year the NHS was established at TAMS, 64 students were inducted at the fall Convocation ceremonies (TAMS Newsletter, October 1991).

**National Merit Scholarship Program.** Each year, the National Merit Scholarship Corporation hosts the National Merit Scholarship Program. Approximately 15,000 high school students nationwide become National Merit Semifinalists. To enter the contest, students take the Preliminary Scholastic Aptitude Test (PSAT) during the fall semester. TAMS students take the PSAT in October of their first year. The PSAT is the gateway to National Merit Scholarships. National Merit Semifinalists are also selected through the
PSAT. Depending upon each state's percentage of the national total of high school students taking the test, the National Merit Scholarship Corporation designates semifinalists on a state allocation basis. Thus, there is a variation of the qualifying score for semifinalist standing in each state (TAMS Newsletter, October 1990).

Commended students are National Merit Scholarship finalists who attain scores at the 95th percentile rank or higher, but score below the qualifying selection index of semifinalists in the state. These honorees receive a letter of commendation from the program, but they do not continue in the competition for merit scholarships (TAMS Newsletter, October 1990, October 1991).

Two additional scholarship programs also utilize student PSAT/NMSQT scores for their selection criteria. The National Achievement Scholarship Program provides recognition for academically promising African-American high school students. Students seeking to compete in the Achievement Scholarship Program request consideration at the time they take the PSAT/NMSQT. The National Hispanic Scholar Awards Program is sponsored through a grant from the Andrew W. Mellon Foundation. Through this program, the College Board awards $1,500 non-renewable college scholarships to 500 high school seniors of Hispanic descent. Semifinalists, 3,500 each year, are chosen based upon their PSAT/NMSQT performance.

At the annual TAMS Convocation Ceremony, National Merit Semifinalists, Commended Scholars, National Achievement Semifinalists, and National Hispanic Semifinalists are recognized. During the spring semester of the same academic year,
finalists in these national competitions are notified (TAMS Advisory Board Minutes, March 9, 1990; TAMS Newsletter, October 1990, October 1991, and May 1992).

**Phi Eta Sigma.** Like its sister organization, Alpha Lambda Delta, membership in Phi Eta Sigma, a freshman honorary organization for male freshmen completing 12 or more hours with a minimum 3.5 grade point average, is open to TAMS students. Like Alpha Lambda Delta, membership in Phi Eta Sigma is voluntary, but serves to distinguish college freshmen who do well academically in their first semester of college (TAMS Student Handbook, 1989).

**Research Science Institute.** The national, annual Research Science Institute (RSI), hosted by the Center for Excellence in Education of McLean, Virginia, takes place each year in the Washington, D.C. area. Students are selected from an international competition seeking outstanding high school students after completion of the eleventh grade. TAMS students have competed and been selected for the six-week, no-cost program.

The highly selective RSI seldom admits anyone with SAT math scores less than 700 or SAT verbal scores less than 600. A combination of high grade point averages and SAT scores are utilized in selecting participants for this special internationally acclaimed program (Letter from Stanley to Donahue, June 13, 1989).

**SMPY at UNT, "The Texas Honors Group."** Ann Lupkowski, postdoctoral fellow from Julian Stanley's Study of Mathematically Precocious Youth program, joined the UNT Educational Foundations Department, College of Education, in 1989. Lupkowski established a branch of the SMPY program from The Johns Hopkins
University, SMPY at UNT. The students selected to participate in this program would be called the "Texas Honors Group." Students who scored at least 500 on the SAT math section before age 13 would be solicited. These students would be provided with information regarding the opportunities available to them, including TAMS. The program would become a feeder for future TAMS classes (TAMS Advisory Board Minutes, October 4, 1989, and March 9, 1990).

Summer Opportunities for the Academically Ready (SOAR). In July, 1991, this three week accelerated mathematics program for Hispanic and African-American high school freshmen was implemented at UNT. Sponsored by the TAMS program, SOAR assisted participants to gain a head start on the content of Algebra II. In addition to daily, intensive mathematics instruction, the students also participated in special social and recreational activities (including trips to Six Flags Over Texas and the Omni Theater) and learned about the opportunities afforded by the TAMS program.

To be selected for SOAR, students were required to score at least the 95th percentile on the math portion of a nationally standardized achievement test. The SOAR program was made available at no charge to qualified minority Texas students and became a successful outreach component of the TAMS program (TAMS Newsletter, March 1991, May 1991, and October 1991).

Summer Enrichment for Minority Students (SMEMS). The forerunner to the IMI and SOAR summer programs, SMEMS was the first intensive summer program TAMS offered for mathematically talented seventh through ninth graders from Texas. Primarily targeting minority students, those selected for the program would live temporarily on the
UNT campus while studying Algebra I and II and participating in further mathematics enrichment activities. Social, educational, and recreational activities were also included for the gifted participants (TAMS Newsletter, October 1990).

**Summer Research Scholarships at UNT.** Believing laboratory research opportunities to be an integral aspect of the TAMS experience, the Summer Research Scholarship program was initiated to enable selected Academy students to pursue an independent research project under the supervision of a UNT faculty member in industrial technology, computer science, math, physics, chemistry, or biology. Awarded $3,000 scholarships, the students would contribute at least forty hours a week during both summer academic sessions. Oral and written summaries of their research projects would be presented during the following fall semester, and the students would also be strongly encouraged to enter the research in the Westinghouse Talent Search during their senior years (TAMS Newsletters, May 1991 and March 1992; Brady, 1995; Donahue, 1995).

**Texas Association for the Gifted and Talented (TAGT).** In November, 1991, the TAGT annual state conference was held in Dallas. The TAMS program was highly visible with TAMS staff and students participating in a number of ways. The Academy was one of five highlighted project visitation sites. Participants in the TAGT conference were given the opportunity to tour the campus and hear presentations from Brady and several Academy Ambassadors. During the conference, Brady delivered a presentation entitled, "Texas Academy of Mathematics and Science: An Alternative." TAMS also hosted a booth in the exhibit hall during the conference in which staff members answered questions about the program and provided informational brochures.
The TAGT conference provides an opportunity for educators and parents to learn about Texas' gifted and talented programs. At the fall 1991 conference, TAGT enjoyed the largest conference attendance in the association's history, with over 3,700 educators and parents present (TAMS Newsletter, December 1991).

**Talent Identification Program (TIP).** The Talent Identification Program, hosted by Duke University, is a non-profit, national educational organization dedicated to the cultivation and education of talented youth. The Talent Search Program is one aspect of the TIP program utilized in the State of Texas. Using nationally standardized test measures, talented Texas seventh graders are identified. These students are informed about their potential and about how to develop that potential. They are also educated about regional and national programs in which they may be interested to further their academic talent. In addition to these general goals, TIP also sponsors recognition ceremonies in sixteen participating states, including Texas. The University of North Texas is one of four sites in Texas where TIP honorees are recognized. Academy officials take advantage of these ceremonies by making presentations on the TAMS program at all Texas sites (Duke Talent Identification Program, 1995; Stream, 1995; TAMS Newsletter, May 1992).

**TAMS Literacy Program.** In conjunction with the Denton Literacy Program, the TAMS Academic Office recruits and trains TAMS students interested in aiding the Denton community by providing help with basic reading, math, and science skills. Academy students who participate in this program tutor Denton high school students weekly in the UNT Student Union (TAMS Newsletter, May 1992).
U.S.A./International Olympiads. Additional competitions in which TAMS students compete or seek selection include the International Mathematical Olympiad, the International Chemistry Olympiad, and the International Physics Olympiad.

To qualify for the U.S.A. Mathematical Olympiad, TAMS students, along with 400,000 others, take the American High School Mathematics Examination (AHSME) in the Spring. The 3,000 highest scorers then take the American Invitational Mathematics examination. The top 100 scorers on this instrument take the U.S.A. Mathematical Olympiad Examination. From this final examination, the 24 best students will comprise the training team for the International Mathematical Olympiad held each summer at various international locations. Each country is represented by a team of six students. (Stanley to Donahue, June 13, 1989)

Like the International Mathematical Olympiad process, similar selection processes exist for the International Chemistry and Physics Olympiads. Ruth Ann Thomas of UNT helps students prepare for and compete in these Olympiads. (Donahue, 1995)

Evolution of Academic Program

From 1988 through 1992 the integrity and strength of the TAMS academic program would become well known throughout the state of Texas. It would also gain wide recognition from prestigious universities on the east and west coasts. Officials from schools accepting TAMS graduates (such as Harvard, M.I.T., Johns Hopkins, Stanford, etc.) came to appreciate the quality of the Classic Learning Core courses. It was also deemed very important that TAMS students were taking heavy math course loads,
calculus based physics, as well as intensive study in chemistry and biology (Donahue, 1995).

As the TAMS graduates began to be fiercely recruited by prestigious state and national institutions with serious amounts of scholarship monies being offered to graduating seniors (over $500,000 offered to members of the first graduating class alone), the demands on the staff members coordinating the academic program grew.

When Manus Donahue accepted the Associate Director position in 1989, the TAMS position was expected to comprise only 33% of his work load. However, these responsibilities quickly grew to 50%, then 66% or more. Although Donahue would retain teaching and research responsibilities in the Biology Department, the Academy placed increasingly greater demands upon his time. As Gerry O'Donovan, Director of the Biology Department, would comment:

The Academy Associate Director position truly needs an academician who has the skills to teach and assist the students while networking with the campus community, with outside enterprises to coordinate research opportunities, and with colleges and universities throughout the United States. Manus Donahue has been the perfect person for this job. Though we would love to have him back in the Biology Department full-time, I believe he is where he needs to be. He loves it and does an outstanding job. (Interview with author, 1995)

As Donahue's responsibilities grew, so too would the staff he supervised. When he first came on board, Donahue shared an assistant with Annetta Ramsay. By the end of his first full year in the program, both he and Ramsay would have their own assistants. As the TAMS classes began to graduate and activities were coordinated to assist in their applications to other universities, an academic counselor was added. And, when the first UNT computer lab to be opened within a residence hall was established in McConnell
Hall, a part-time computer person was recruited to keep the facility running smoothly around the clock (Donahue, 1995).

The TAMS program's rigorous but exciting curriculum has provided its gifted participants a refreshing alternative to the repetition most would have experienced while taking the course work typically offered during the junior and senior high school years and the traditional college freshman and sophomore years. In an article by Katherine Mangan, featuring the TAMS program in The Chronicle of Higher Education, Julian Stanley would refer to another benefit—the opportunity for participants to be with exceptional peers. He noted: "The common factor is the exhilaration these students have being with each other...They're not called nerds or wimps any more. They can be academic and be appreciated for it" (Mangan, 1989, p. A 39).

The excitement of the curriculum challenge, the exhilaration of working and living with other exceptional students, the exposure to a full-time faculty with a battery of Ph.D.'s, and the unique research opportunities presented to participants provide the backbone of the TAMS program, and it is on this that the acclaimed program's reputation is based (Donahue, 1995; Hurley, 1995; Miller, 1995; O'Donovan, 1995; Stanley, 1995).
CHAPTER IV

TAMS ADMISSIONS CRITERIA AND RECRUITMENT EFFORTS

In May of 1987, numerous individuals were simultaneously working on crucial components of the TAMS program. Dean James Miller, College of Education, and others in the UNT administration were networking with E. L. Langley, Speaker of the House, Gibson Lewis, and other key legislators to secure legislative support for the program. The latter was gained by mid-summer of 1987. Dean Miller was also working in tandem with Tom Preston, Dean of the College of Arts and Science, to create the Curriculum Committee as well as the Student Life Committee for TAMS (Miller, 1995; Preston, 1987; Redding, 1995).

Associate Dean Jean Schaake was asked to chair the Curriculum Committee. Others invited to serve included John Ed Allen, Department of Mathematics; Frank Kemerer, College of Education; Gerry O'Donovan, Department of Biological Sciences; Rogers Redding, Department of Physics; Walter Sandefur, College of Education; Bob Stevens, Department of English; and Lee Theriot, Department of Chemistry. In addition, the Assistant Superintendent for Curriculum and Instruction from the Denton Independent School District, a UNT freshman, and two senior high school students who had high scores on their Scholastic Aptitude Test (SAT) would also be invited to participate to lend the student perspective to the committee membership (Preston, 1987).
The Curriculum Committee began to function in earnest during the Summer of 1987. The committee would work for several months before the first director of the TAMS program, Rogers Redding, was selected. Fortunately, Redding already served on the TAMS Curriculum Committee and was therefore directly involved and fully aware of all works in progress (Miller, 1995; Redding, 1995; Schaake, 1995).

As the new director, Redding would be heavily involved in university efforts to solicit funding for the State approved program during the Fall of 1987. At the same time, he would be working with the Curriculum Committee. As Jean Schaake would recall:

Redding worked with the Curriculum Committee to develop criteria for admission, to create the application for admission, to determine the procedures for admission and the interview process, and to determine how the interviews would actually be conducted. In fact, for the selection of the first class, the Curriculum Committee would also serve as the Admissions Committee. In addition, we were joined by many faculty members in the process, which would continue for two years. Two complete selection processes would take place before a separate Admissions Committee was founded.

So this Curriculum Committee did a great deal of work on the admissions process. I remember designing the first application form and the first sheet on which interviewers would reflect comments about the candidates. The new suite of offices, home to the College of Arts and Sciences, was used from which to conduct interviews.

Even after the inaugural class of eighty-eight students arrived, the members of the Curriculum Committee would be involved in helping with orientation efforts for the first class. As soon as the TAMS administrative officials and full-time staff came on board, the Curriculum Committee finally became more focused on just looking at the academic standards and curriculum (Schaake, Interview with author, 1995).

Based upon the research of Redding, Schaake, the Curriculum Committee, and input from consultant, Julian Stanley, of The Johns Hopkins University, the selection criteria for the admissions process was determined. It would be based on high Scholastic
Aptitude Test (SAT) scores (a minimum of 1000 with 550 points on the mathematics section), recommendations from teachers, academic performance (as reflected on transcripts from the seventh through tenth grades), and an essay written by the student. Once the criteria and admission forms were generated, Redding would embark on an industrious public relations campaign to do the bulk of the work in recruiting the first participants (Brady, 1995; Jones, 1988; Redding, 1995).

Recruitment efforts were begun for the inaugural TAMS class by sending information packets about the Academy to math and science teachers and school counselors in every high school in the state of Texas (Jones, 1988). The goal of the recruitment strategy effort was to bring one hundred students from throughout the state into the program. As Redding would describe the campaign:

The primary recruitment strategy was to insure a diverse population and geographic representation . . . There was a great deal of targeted recruiting in predominately minority schools . . . I swung through the Texas Valley area, to Brownsville, McAllen, Corpus Christi, etc., and made contacts with leaders of the Texas Preparation for Pre-Engineering Program throughout the state. You could say this was front-loaded affirmative action. Through a concerted effort of achieving geographical as well as ethnic diversity, the TAMS administration avoided the pressure of having numerical quotas for minority representation (Redding, 1995).

From the public relations drive and recruitment campaign, the Academy received approximately 235 applications. After analyzing applicant SAT scores, transcripts, recommendation letters, and personal essays, the group under consideration was pared to 130. Individuals in this group underwent campus interviews and were given a special math test. After this process, 95 students were offered positions in the TAMS charter
class. Seven individuals declined the opportunity, but 88 students from across the state agreed to participate in this historical educational adventure (Jones, 1988).

The young scholars comprising the first Academy class scored an average of 1,178 out of a possible score of 1,600 on the SAT. At that time the national average for high school seniors was 906. The average for Texas seniors was 877. And, as Redding would be quick to note, these adolescents were just sophomores when they achieved these scores. The students' scores should have been even higher if testing when they are high school seniors (Scherer, 1988; Spectrum, UNT College of Arts and Sciences, Fall 1988).

The first class of 54 boys and 33 girls included 10 Asian students, six African Americans, and four Hispanics (Scherer, 1988; Spectrum, UNT Arts and Sciences). There was also a wide geographic distribution of students. From the eastern border town of Texarkana, from as far west as Amarillo and San Angelo, as far south as McAllen and Laredo, and as far north as Denison, students made the pilgrimage to this special educational opportunity (Redding to Hurley, June 22, 1988).

Thus, the first selection process was deemed a success. And, the second selection would change very little. In terms of the selection criteria, the structure of the selection process, and the philosophical approach to recruitment and selection, not much would change within the first two years of the program (Redding, 1995). However, a vital key player in the process and the program would be replaced at this time.

When Redding agreed to take the Academy directorship, he did so with the understanding that his would be a two year term. Redding left the program in the summer of 1989 to pursue a one-year sabbatical at the U.S. Air Force Academy. When a
nationwide search for a new director failed to produce a finalist from outside the UNT campus on whom the administration could reach an agreement, Tom Brady was asked by President Hurley to fill the post. With his agreement to serve in an interim capacity, Brady was officially appointed as Director at the beginning of the summer of 1988, and Redding left for the Air Force Academy shortly thereafter. And, although the two had enjoyed a long term friendship, there was little time for cross training, briefing, and preparation for Brady's transition. The second group of Academy students had already been selected and would be making their journey to UNT in less than two months (Brady, 1995).

As his predecessor had noted, the public speaking engagements and recruitment demands placed upon the first two directors were monumental. Brady reflected on these challenges and this experience:

> When I came to the Academy, I would not have believed I would have ended up doing what I did. With my personality and background, I would never have believed I would become a public relations spokesperson. There was a tremendous amount of that; there was a great deal of public speaking, often speaking to large groups about the Academy. That was something, in the beginning, that I would not be comfortable doing. Yet, after you did it a few times, it would become second nature to get up in front of a hundred parents or more. I think I achieved the ability in communicating with parents, to perhaps put them at ease, and to convince them this was a great opportunity for their children (Brady, 1995).

This ability to assure and convince parents to allow their children to participate in this special program was paramount to its success or failure. As Brady continued:

> The Academy would have never been the success it was without the ability of the key people involved to convince parents, from as far away as El Paso, Laredo, Corpus Christi, Houston, etc., to let their 15 year old sons or daughters come here. We had to raise parental comfort by assuring their
students were coming to a structured, well run program which offered good security, support services, etc. Key to the whole thing was the ability to convince parents of two things: 1) this was an exceptional opportunity for their gifted and talented child; and 2) their children were not going to be corrupted on a college campus, and this was the fear they first had. Parents from across the state made it very clear. Their greatest concern was sending their young adolescent 200 to 600 miles from home, to a college campus where liberal thinking was the norm. From the beginning of the program, the TAMS administrators did a good job selling the program to the parents, and this was the key to recruiting good students (Brady, Interview with author, 1995).

In Brady’s second year as the TAMS Director, the decision was made to finally fill the Director for Admissions position. During the course of one of many recruiting trips and a special visit to the North Carolina School, chance would place Brady and Richard Stream at the Raleigh-Durham Airport for a layover. Brady and Stream had been friends for a long time and had served together previously on a pre-medical, pre-professional advisory committee. During that informal visit, Brady mentioned the Academy would soon be undergoing a selection process for the Director of Admissions position. Since he was at a point in his career where he was looking for new challenges, Stream indicated his interest in the position (Brady, 1995).

As an outgrowth of this networking opportunity, Stream would apply and ultimately be selected by the selection committee for the position. Brady would describe Stream’s outgoing, friendly personality and love for travel as making him a natural for the position. Brady also indicated Stream was a wonderful person with whom to work. With the hiring of a Director for Admissions, an administrative assistant, an admissions clerk, and an admissions specialist to round out his staff, the vast selection and recruitment demands previously placed on the TAMS administration was greatly reduced. This
allowed the Director more time to focus more universally on all dimensions and needs of the program. The selection process would also enjoy the attention and fine tuning that a staff focused solely on that component could give it (Brady, 1995).

**Nomination Factors and Selection Criteria.** The goal of the TAMS selection process, as related by Admissions Director Stream is to solicit "students who are Texas residents who have demonstrated excellent academic performance and show particular interest and promise in science and mathematics at an early age" (Stream, 1995; "TAMS Informational letter," TAMS Admissions Office, 1995).

Potential TAMS students could be nominated by the students themselves, parents, school personnel, or community representatives. As outlined by the Texas Academy of Mathematics and Science in its "Nomination and Selection of Students" draft, nominations should consider the following criteria:

* Students nominated should be currently enrolled in the tenth grade. A student who repeats tenth grade for the purpose of being nominated will not be considered for admission.

* Parents and students must be legal residents of the State of Texas. Residency established solely for the purpose of nomination to the Academy will disqualify the student for admission.

* Nominees should be outstanding students as evidenced by high scores on achievement and aptitude tests, scholastic record, and academic performance—particularly in science and mathematics courses.

* Students to be nominated should have demonstrated an interest in mathematics and science involvement in such areas as mathematical games, electronic projects, problem/puzzle solving, model building, independent tinkering, etc.
* Nominees should show evidence of intellectual curiosity, analytical thinking, maturity, and motivation. (TAMS Departmental Archives, 1988, p. 1)

In this same document, the selection criteria to be utilized through 1992 would be outlined:

* Academic performance. Transcripts should be submitted for 7th grade through the first semester of the 10th grade. The 10th grade transcript should show rank in class, if available.

* Standardized test scores. Nominees with scores below 550 (math) or 1000 (math + verbal) on the SAT will not be considered for admission.

* Recommendations. Nominees should request three teachers who have taught them within the past two years to send letters of recommendation directly to the Academy.

* Student essay. Nominees should submit essays of 250-500 words reflecting why they are interested in attending the Texas Academy of Mathematics and Science.

* Extracurricular activities. Nominees should describe their involvement in school community activities.

* Nominees should provide additional evidence of interest in science and math, such as individual projects, science fairs, additional reading, etc.

* Family statement. The nominee's parent(s) or guardian should submit a written statement to indicate the family's commitment to the student's becoming an Academy participant. (TAMS Departmental Archives, 1988, pp. 2 and 3)

From the transcripts, SAT results, student essay, parental statement, and recommendations collected for each student portfolio, Stream and interview committee participants are looking for multi-dimensional, multi-talented students. The Academy makes the distinction it is seeking high-achievers, not over-achievers. Though over-achievers who work ceaselessly to attain high grades are to be commended, the high-
achievers sought by the Academy "have natural academic ability, with time left over in
their lives to assist others and to be involved in other things besides studying and
academics. We say these (Academy) students have the potential to be future Nobel prize
winners" (Stream, Interview with author, 1995).

The admissions evaluators seek to determine whether the candidates have
participated in available honors courses, if they were primarily "A" and "B" students, and
if they have completed or will have completed algebra I, plane geometry, and algebra II
prior to the tenth grade. The listing of math and science activities in the nominations
would assist in establishing the student's sincere interest and curiosity in the math and
science fields. And, the listing of leadership and community service projects would
provide evidence of the desire and maturity to be interactive with others--from the local
community to citizens of the world (Stream, 1995).

In addition to the TAMS application sections, the students were asked to furnish
250-500 word essays explaining their interest in the program. The students are
encouraged to be original in their response and to refrain from asking parents or others to
assist in the writing. It was believed the students' high level of personal desire to attend
the Academy was critical. If they were pressured by parents or were using the program as
an escape from personal problems at home, failure was likely. However, parents were
asked to provide a short statement of support as well. Program administrators found that
without strong, earnest support from the parents, TAMS students would often flounder
(Jungjohan, 1994; Sinclair, 1995; Stream, 1995).
Selection Process. Once all student portfolios were completed, they would be given to Stream for the initial screening procedure. If portfolios reflected potential, the students would be invited for personal interviews for which they could be accompanied by their parents. The Interview Days would take place one day each month, from December through May. The interview process was designed to evaluate non-cognitive factors, such as maturity and motivation. Students' interpersonal skills and reasoning for joining the Academy were appraised. Approximately sixty students would be interviewed each Interview Day (Schnacke, 1993).

On the mornings of an Interview Day, the potential candidates would be separated from their parents, and a math achievement test (covering subjects such as Algebra I and II) was administered to them. John Ed Allen, UNT Mathematics Department, always administered the test and was responsible for getting scores back to Stream. At the time the students were separated from their parents, they would also be briefed on financial aid opportunities. Approximately forty percent of the TAMS population received some form of financial aid since many families would be burdened by this accelerated need to pay for college fees two years early. While the students were being tested, parents would participate in an orientation on the program and interface with a Parent Panel comprised of former or current parents of Academy scholars. The students and parents would be reunited for lunch in a residence hall and a tour of the UNT campus and McConnell Hall, the Academy residence hall (Stream, 1995).

In the afternoons of the Interview Day, the students would be interviewed. The interviewers participating in the selection process were personally selected by Stream
(who made a concerted effort to have all departments represented). Stream would note they were "not only educating prospective students but were educating UNT faculty and staff as well" (Interview with author, 1995). During a special luncheon held prior to the Interview Day, interviewers would also be trained on how to ask probing questions and would learn about the abilities and traits the program was seeking in prospective students (Stream, 1995).

Ten simultaneous, twenty minute interviews would take place from 1:30 p.m. to 4:00 p.m. on Interview Day. Each interview team, comprised of one faculty member and one staff member, was responsible for interviewing no more than six students. Prior to the commencement of the first interview at 1:30 p.m., applicant files would be made available for a final review at 12:45 p.m. (Stream, 1995).

In a letter to participating interviewer, James Miller, Linda Schnacke, administrative assistant to Stream, would outline the next selection process step, in which the portfolios were taken to another selection committee comprised of a different set of faculty members:

Approximately one week following each Interview Day, the TAMS Selection Committee is convened to review and evaluate the total information available on each student and to make a recommendation concerning these students to Dr. Richard Stream, Director of Admissions . . .

The Director of Admissions conducts a preliminary evaluation of these folders prior to this meeting. In the interest of efficiency, the Director of Admissions identifies those student files which clearly indicate high qualifications for the program, thus receiving an unqualified recommendation for admission. However, in every interview set there are applicants who may be considered borderline or even unacceptable for admission. The Selection Committee is requested to focus efforts on evaluating this latter set of files. Normally, each of these files is evaluated
on a nine-point scale by two committee members in a blind review. If there is more than a two-point difference between two recommendations, a third member is requested to review the file (Schnacke, 1993).

From the blind reviews, additional recommendations would be forwarded back to Stream. After another review of interviewer scoring, Stream would forward the files to an executive committee comprised of the director and two assistant directors of the program. From their tabulations and in conjunction with Stream, all applicants would be placed into three categories: 1) students to be offered immediate, unconditional acceptance (who would receive an immediate invitation to join the Academy); 2) deferred acceptance (a second tier in candidate ranking). These individuals were very good, and the Academy was quite interested, but actual invitations would not be offered until the total number of slots available could be determined by knowing how many students in the program would graduate and a deduction of immediate acceptance invitations calculated at the end of the six month interviewing period; and 3) the denial category, in which candidates received immediate notification that they were not being considered for the Academy (Stream, 1995).

Once all interviews had been completed and graduation exercises had taken place, all applicants left in the deferred acceptance category would be reviewed and ranked in order. Based upon the numbers of positions available and the number of candidates deemed qualified, final invitations would be offered to deferred applicants (Stream, 1995).

Recruitment. With the establishment of the Admissions Office within the Academy, recruitment and public relations efforts would expand greatly and become a vigorous, year-round program. The primary goals of recruitment efforts would be three-fold:
1) increase the TAMS enrollment until the cap of 400 students is maintained; 2) increase an awareness of the program throughout Texas and the United States; and 3) insure there is ethnic diversity, representative of the Texas population, and strive to have all districts within the state represented in TAMS enrollments (Stream, 1995).

When Stream first became Director of Admissions, the sole goal of recruitment efforts lay in trying to reach and solicit Academy students from among current tenth graders. Thus, the initial focus was targeting those students who were immediately eligible for the program. After a year with the program, Stream realized the TAMS program would need to get to those students much younger, especially minority students, to help them better prepare and become seriously competitive candidates by the time they reached the 10th grade. Students who had had less academic opportunities or exposure to their full potential needed to be identified by the eighth and ninth grades. Many of the students coming from socio-economically deprived backgrounds would need guidance and encouragement to develop strategies for harvesting their academic potential. The result of changing the recruitment focus to target younger students would result in the doubling of previous minority applications. There would also be a steady increase in the number of students from socio-economically disadvantaged environments. The quest to increase ethnic, cultural diversity and to enable financially disadvantaged students to attend would continue through 1992 (Stream, 1995).

From the contributions of Rogers Redding, Tom Brady, and Richard Stream, the TAMS recruitment and public relations program would develop six components to accomplish its mission including outreach programs, preview days, field trips, Tex-Prep
program participation, analysis of recruitment strategies, and establishment of the TAMS Newsletter (Stream, 1995).

Outreach Programs. Serving as the general recruitment officers for the program, the first two directors and subsequently Stream would spend an enormous amount of time traveling by car and plane to attend state, regional, and national conferences and conventions, to hold town meetings, and to visit Texas high schools, Texas educational service centers, and similar schools in other states (Stream, 1995). Prior to many of the town visits within the state, the Admissions Office would work with the UNT Public Affairs and Information Services Office to prepare radio, television, and newspaper media releases to coincide with any planned presentations. A special effort would also be made to contact legislators from those districts to encourage their participation and/or attendance as well (Stream, 1995).

A critical resource for the TAMS outreach program consisted of obtaining information about the activities and publications of the Duke University Talent Identification Program (TIP) (Stream, 1995). This non-profit educational organization, founded in 1980, is dedicated to the cultivation and education of talented youth. The basic goals of TIP are to help identify and serve academically talented youth, to inform them of their abilities and academic options, to work with school systems and parents to meet the needs of the talented, to sponsor educational programs and research on academic talent, and to provide information resources that are available throughout the United States (Duke University Talented Identification Program, 1995).
One of the many programs offered through TIP, the Talent Search Program is utilized by the State of Texas. Through the Talent Search, TIP identifies talented seventh grade students across a sixteen state region. Utilizing standardized test measures such as the American College Testing Program's (ACT) assessment and the College Board's Scholastic Aptitude Test (SAT), students excelling in verbal, mathematical, and general reasoning abilities could be identified. In addition to providing these students with information about their abilities and opportunities, TIP also sponsors recognition ceremonies in each of the sixteen participating states honoring the students. The University of North Texas is one of four sites in Texas where TIP honorees are recognized and prizes distributed each year. The Academy takes advantage of these ceremonies by making short presentations on the TAMS program at the ceremony (Duke Talent Identification Program, 1995; Stream, 1995).

The TAMS program also benefits from two other products published by the Duke University TIP organization. A mailing list of its Talent Program participants is developed by TIP, and UNT purchases the list each year. Individuals on the list are sent letters informing them about the Academy. A 300-page book, The Educational Opportunity Guide (EOG) is also published by TIP. The EOG is a unique directory which lists national and international educational opportunities available for students including:

- Academic year and summer programs
- College-credit programs
- Intensive drama, music, and arts programs
- Internships in science, math, and computers
- International travel and study programs
- State governor's schools and residential high schools
- Outdoor campus and wilderness adventures (Duke University TIP, 1995, p. 1)

The EOG lists summer offerings as well as academic year programs for elementary through high school-aged students. The University of North Texas TAMS program and special accelerated summer programs are included in this book. Many TAMS participants initially learned of the program through this important resource guide (Duke University TIP, 1995; Stream, 1995).

**Preview Days.** From September through April, one day each month, the Academy hosts a Preview Day, similar to an open house. Parents and students interested in the TAMS program spend from 11:00 a.m. until 3:00 p.m. learning about the Academy. The visitors view a professionally developed recruitment tape and listen to short presentations given by the TAMS Director, Associate Directors, and Director of Admissions among others. The Student Life and Curriculum programs are reviewed and the criteria for admissions is outlined. Specially selected TAMS Ambassadors, comprised of current TAMS participants, host small groups of approximately 10 people each. These small groups of visitors tour the campus, eat in a residence hall cafeteria, and see McConnell Residence Hall. A TAMS Ambassador Panel and a Parent Panel answer questions and share realistic insights with the visitors (Stream, 1995).

**Field Trips.** The TAMS department also coordinates field trips for local junior high school students from Denton and the Dallas/Fort Worth metroplex. Sixth, seventh, and
eighth graders are treated to similar schedules offered on Preview Days. The students hear brief presentations on the program and are escorted through McConnell Hall, around the UNT campus, and are treated to lunch in a residence hall (Stream, 1995).

The Tex-Prep Program. Each summer, twenty-two sites are selected at state universities where a Texas Pre-Engineering Preparation Program (Tex-Prep) will be offered. Students from the ninth and tenth grade from schools whose populations consist predominately of minority students typically participate. They study math and engineering courses for five or six weeks in the hope that their interest can be stimulated and that they can learn more about how to pursue careers in these fields. Stream worked very closely with the Tex-Prep director to arrange for TAMS presentations to be given at the various sites in the summers. As Stream would add, "TAMS is very fortunate to have that organization and these activities to utilize in reaching minority students with a math and science predisposition or interest from throughout the state" (Stream, Interview with author, 1995).

Marketing Analysis. During Stream's tenure, the Admissions Office began to survey previous and current TAMS participants as well as those seeking information about the program to determine how they learned about TAMS. Stream believed it vital to understand what his organization was doing right in terms of marketing. It was found that utilization of the Duke University TIP program and publications was providing the greatest exposure for TAMS, while word-of-mouth publicity provided by current and
previous TAMS participants proved to be an extremely effective marketing tool (Stream, 1995).

Providing TAMS presentations at TIP’s recognition ceremonies, soliciting TIP’s participant listings and forwarding informational letters on TAMS to individuals listed, and having the TAMS program included in the Duke University Educational Opportunity Guide all proved to be invaluable to the marketing campaign. In terms of minority recruitment, tapping into the Tex-Prep organization and its summer programs, along with visiting high schools heavily populated by minorities were also deemed critical to the TAMS recruitment effort. Thus, marketing analysis became an annual project for the Admissions program, and results helped forge public relations strategies for each new academic year (Stream, 1995).

**TAMS Newsletter.** After the 1989 academic year, the TAMS administration would begin a concerted effort to track TAMS graduates. Though the Academy enjoyed a strong, supportive advisory board, this group would often ask the challenging questions sure to come from legislators, financial backers, TAMS parents and participants, and citizens of the State of Texas: 1) Is the program truly benefitting the participants? 2) Are these students actually embarking on careers in mathematics, engineering, and related fields upon graduation? and, 3) How many of these graduates actually stay in or return to the State of Texas after completion of all advanced degrees? Knowing there would need to be substantiated answers to these questions in the next five to ten years, an effort at maintaining contact with graduates, through an informational newsletter, was begun. Through the newsletter publications, a historical chronicling of important yearly events
would be maintained. Periodically, information about the special achievements of current participants or former graduates would be highlighted as well (Brady, 1995). The Newsletter would become a link to the current TAMS program and its activities, as well as a bridge for historical studies and chronicling in years to come.

Evolution of the Program Through 1992

From the establishment of the criteria and selection process in 1987, through the appointment of a Director of Admissions, and the selection of the first four Academy classes, the Admissions program of TAMS would see many changes. A summary of the major changes follows:

Admissions Process Changes. During the first three years of the program, three teacher recommendations would be required for each TAMS applicant. One math teacher recommendation and one science teacher recommendation could be accompanied by a third teacher reference from any academic discipline. However, Stream and other program administrators would come to realize that a critical factor impacting upon the success or failure of a TAMS student in college would be a good command of the English language. So the third teacher recommendation, to accompany the math and science references, was to become a reference from an English teacher. These references had to be supplied by teachers who had taught the student in the ninth or tenth grade to insure the evaluations were based upon relatively current information (Stream, 1995).

In addition to the actual reference sheet provided for a teacher to complete, a fact sheet about the Academy was added for the individual completing the form. Because the program was so new, teachers were being asked to complete references, but they did not
know or understand what the Academy program was. In supplying a two-sided informational sheet to the teachers, another opportunity to educate the public, and to augment future recruitment efforts was achieved (Stream, 1995).

The final area of note in the admissions process would include a revision in the Interview Day requirements for TAMS candidates. In assessing the achievements of the first class and the ability of the students to adjust to a college curriculum, it was found that a better determination of the students' actual mathematical achievement level needed to be ascertained as they entered the program. Though the students might have the required mathematical aptitude for the program and might have completed the required credit of algebra I, plane geometry, and algebra II prior to entering, the actual math knowledge level differences of these students could be vast. The varying requirements for successful completion of these math levels at different high schools throughout the state could lead to major disparity in candidate knowledge levels. To better determine the actual mastery level, TAMS candidates would complete a short math assessment test during their actual Interview Day visit. The test, devised and administered by John Ed Allen of the UNT Math Department would greatly assist program directors in helping students selected for the program. If remedial work were needed prior to commencement of the academic year, summer course work could be arranged for the student. The math assessment instrument would also help determine what course work was appropriate for each TAMS student once he/she began participating in the Academy (Brady, 1995; Donahue, 1995; Schaake, 1995; Stream, 1995).
Recruitment and Public Relations. As previously noted in this chapter, Stream would implement a philosophical change in the recruitment strategy by shifting the target population from tenth grade students to eighth and ninth graders. For a myriad of reasons which might have had a negative impact on student preparedness for the program by the tenth grade year (even when a strong aptitude for math and science had been evidenced), it was deemed critical to reach students sooner. The goals were to encourage and nurture student potential and to give adequate time for additional assistance in completing academic program requirements by the tenth grade year. Once special recruitment efforts were implemented for targeting this younger age group, more students from socioeconomically disadvantaged backgrounds began seeking and gaining candidacy into the program (Stream, 1995).

Several new recruitment tools and resources would emerge in the first five years of the program. A professionally created TAMS video tape was made which could be utilized in a plethora of recruitment and public relations enterprises. Human resources were developed in the form of the TAMS Ambassadors and TAMS Parents' Panel, both of which were utilized for TAMS Preview Day efforts. The TAMS Ambassadors were specially selected TAMS students, who served as student hosts to potential TAMS students and their parents on Preview Days. Also a part of the Preview Day experience, selected TAMS parents would be invited to form and participate in a Parents' Panel. Initially, only a TAMS Student Panel was offered; however, with the addition of the Parents' Panel, knowledgeable parents were better able to alleviate fears of visiting parents by offering frank insights and answering general questions (Stream, 1995).
In addition to recruitment efforts involving the mailing of informational packets to every high school within the state and focusing recruitment travels to areas of Texas with heavy minority representation, the program also began to tap into the Tex Prep program and Duke University TIP program. Identified TIP participants would begin receiving personalized letters, with 2000 to 3000 being mailed out each year. The TAMS program would further increase national exposure through its becoming listed in the Duke University Educational Opportunity Guide, a publication which identified gifted and talented programs and opportunities for students throughout the United States (Stream, 1995).

The final significant additions to admissions and public relations operations would be the initiation of the TAMS Newsletter publication and the routine surveying of anyone seeking information about the program. The TAMS Newsletter would become the first attempt of TAMS officials to track the accomplishments of current students and TAMS graduates. It would also begin a historical documentation trail of the yearly events and evolution of the program which would be maintained in the TAMS Departmental Archives. The survey questionnaire solicited from individuals attending Preview Days and other recruitment related programs would assist the admissions staff in analyzing and developing more effective marketing and recruitment strategies (Brady, 1995).
CHAPTER V

CREATION OF STUDENT LIFE PROGRAM

Though the initial focus of any proposed accelerative, residential program for gifted adolescents would likely center on the curriculum or educational facilities to be offered, almost simultaneously the student life program and support services to be offered would demand attention. The curriculum might well be described as the backbone of such a program, but clearly, the residential component would be at the heart.

When individuals were first approached about the TAMS concept, the reaction, while generally positive, would usually include two primary concerns: 1) could young adolescents make a positive transition to the unstructured college environment; and 2) even if they could make the transition, could the parents be convinced to send their children so far away at such young ages (Hurley, 1995; Miller 1995; Ramsay, 1994)? To succeed, the TAMS program would have to offer a student life program which would assure a safe, structured residential environment. It would be necessary for the residential community and support services offered to augment the challenges of the college curriculum and research opportunities while helping students develop during the difficult adolescent years.

As the first program in the nation to develop a residential, enriched program for mathematically and scientifically gifted adolescents, officials at The North Carolina School
of Science and Mathematics would describe the challenges of the residential program in this way:

At any residential school, some of the most important learning takes place in the residential setting. The students are away from home, probably for the first time, and they need to adapt to a community that is at once more structured and restrictive than most homes and yet more encouraging of independent decision making. How to manage time, what new friendships to initiate and develop, how to accommodate the needs of a roommate and the expectations of a dormitory community, and how to assume responsibility for some of the ordinary tasks of daily life that parents may have done for them previously are all important learning experiences for our students. (Eilber, 1987, p. 776)

Such challenges, to offer the structured kind of nurturing environment TAMS students would need, would become the nucleus around which the student life program would be developed.

During the Spring and Summer of 1987, intense work and preparations were underway at the University of North Texas in developing the TAMS blueprint and seeking legislative approval for the program. James Miller, Dean of the College of Education, Alfred Hurley, President and Chancellor, Walt Parker, Vice President for External Affairs, Dallas and Fort Worth businessmen, Trammel Crow and E. L. Langley, and key Texas legislators worked tirelessly to hammer out the TAMS proposal and gain legislative support for it in June 1987 (Hurley, 1995; Miller, 1995; Parker, 1995, Rafes 1995).

When legislative approval appeared certain, Hurley and Deans Miller and Preston began recruiting individuals to chair a curriculum committee and student life committee. In May 1987, Jean Schaaake, Associate Dean of the College of Arts and Science, was asked to chair the Curriculum Committee. Frank Kemerer, Associate Dean of the
College of Education, was recruited to chair the Student Life Committee (Preston, May 4, 1987).

Student Life Committees

After Kemerer was asked to chair the Student Life Committee (SLC), he was also asked to recruit a subcommittee to develop guidelines for student life at the Academy. The concerns to be explored by this committee ranged from issues concerning student discipline to student life in a multifaceted college environment. Kemerer selected several individuals from the UNT community based upon their backgrounds and expertise in matters relating to student life. Committee members included Julia Dunn, Assistant Professor of Recreation, Barbara Jungjohan, Associate Dean of Students, Peter Lane, Assistant to the Chancellor, Elisabeth Warren, Director of Housing, Byron Medler, Professor of Education (Counseling), Bruce Meeks, Associate Professor of Education (Administration), and, to be added at a later time, selected high school students and parents (Kemerer, June 1 & June 2, 1987).

Prior to the first meeting of the committee on June 10, 1987, Kemerer sought to identify major issues and problems related to student life at schools with similar programs. He contacted officials at the North Carolina School of Mathematics and Science and Simon's Rock School of Bard College for copies of their policies relating to student life rules and discipline procedures. Having previous experience as a private headmaster and still being associated with leading boarding schools in the country, Kemerer would draw from his own experience, other professional contacts, and the schools previously
mentioned to gather additional information to be utilized by the committee (Kemerer, June 8, 1987).

During the months of June through August, this initial committee began sculpting the student life program that numerous individuals would ultimately take years to complete. The committee first determined it was of the utmost importance that the university select an able director of the academy. In light of the desire to begin operations in the Fall of 1988, a director was needed to facilitate the efforts of the student life and curriculum committees, to spur the attainment of financial funding for the program, and to assist in formulating the admissions process. In addition to this recommendation, the committee would also generate the various topics and categories which should be explored in the student life program. This initial listing of student life components would be utilized by all subsequent phases of the evolving Student Life Committee (Kemerer, June 15, June 17, June 22, & August 11, 1987).

On June 23, 1987, the TAMS committees and program creators met with Richard Brown, Director of the Louisiana School of Math, Science, and the Arts. Brown spent the day at the North Texas campus and presented an in depth overview, including problematic areas his school had experienced (Kemerer, Handwritten Notes, Summer 1987).

By early August, Rogers Redding had been selected as the first Academy director, and the Student Life Committee entered into its second phase. Frank Kemerer passed on the committee chair position to Barbara Jungjohan, Associate Dean of Students. As Kemerer explained in a memo to committee members, "I have turned over the
chairmanship of the committee to Barbara Jungjohan, who is more centrally involved in student affairs matters and more knowledgeable regarding people on the campus who can assist the committee in carrying out its responsibilities. I will continue as a member of the committee" (August 11, 1987).

On September 4, 1987, at the next meeting, Jungjohan assumed leadership of a much expanded committee. The original committee members were joined by June Casey Powell, Administrative Assistant from the School Of Community Services; Tom Overton, Director of the Counseling and Testing Center; Lucy Brakefield, Director of McConnell Hall; Carolyn Bray, Assistant Director of Placement; Deborah Arnold, Financial Aid Administration; Mary Yates, Director of the Student Union; Charles Foster, Assistant Professor of Finance, Real Estate, and Law; Patricia Rektorik-Sprinkle, Denton High School teacher; and Sharon Morris, Director of the Marshall School (Jungjohan, Fall 1987).

By the end of September, this expanded committee had completed a multitude of tasks including preparation of a report presented to the newly appointed TAMS Advisory Board on October 1, 1987. The committee's work was also incorporated into several academy publications such as the informational pamphlet, Parent Handbook, and the Student Handbook.

In addition to generating information for these publications, the committee members subdivided into teams to accomplish work on the following tasks:

1. Prepare admissions criteria and determine concerns pertaining to the social adjustment of prospective students.
2. Develop a proposed list of weekly activities, as well as weekend activities to be offered through the union, housing, and recreation departments.

3. Plan the parents' weekend schedules and activities for the first semester.

4. Review the University Student Code of Conduct and the ABC's of Residence Hall Life and develop suggested curfew hours and particular areas where parental permission might be needed.

5. Determine which information would be needed by parents and students (such as financial aid, health care, and other standard student services).

6. Suggest a plan to implement an "Academy Preview" program for recruitment of prospective students (patterned after the preview provided by the NT40 organization at UNT).

7. Determine the areas beyond classroom activities where the university could become liable based on the age of TAMS participants. Develop precautionary measures, such as parental permission forms, to reduce the risk of liability.

8. Devise an "Orientation Week" program for new students, including a one-day parent orientation day.

9. Generate ways that student progress reports can be shared with parents. Also determine how to coordinate course work, etc. with Texas high schools so that TAMS participants could receive credit toward their high school diplomas in the event that they do not stay the full two years at the academy (Jungjohan, September 1987).
On September 15, 1987, the committee members attended a meeting with internationally acclaimed Julian Stanley, founder of The Study of Mathematically Precocious Youth (SMPY) at The Johns Hopkins University. Stanley would serve as a consultant to the University and the TAMS program and meet with the Student Life and Curriculum Committees to aid in the development of each (Jungjohan, 1987).

By the end of September, when the subcommittee tasks had been outlined and work initiated, the extended committee was largely disbanded, and a few members were asked to serve on a smaller committee which would continue the work begun by the expanded group until such time as a TAMS Associate Director for Student Life was selected (Jungjohan, September 1987 and 1994).

After the expanded Student Life Committee completed its initial tasks and was disbanded, Barbara Jungjohan recruited Carolyn Bray and Patricia Rektorik-Sprinkle to complete a downsized Student Life Ad Hoc Committee. Bray, Associate Director of the UNT Career Planning and Placement Department, had numerous years of experience as the former dean of students at Hardin Simmons University. Rektorik-Sprinkle, a noted high school teacher for the Denton Independent School District, had much experience working with the adolescent age group and with adolescent children of her own (Jungjohan, 1994).

The first major task of the committee was to expand and further review student life programs and literature. In addition to what Kemerer had initially provided, what Brown and Stanley had supplied on their visits, and what the North Carolina School of Science and Mathematics and the Slippery Rock of Bard College officials had shared, the
committee members obtained and compared information from: Austin College (a private, four year liberal arts institution); the Denton Selwyn School (a private school serving kindergarten through twelfth grade students); the McKinney Job Corps program (a residential facility for high school students through the age of twenty-one); the University of North Texas Student Code of Conduct; and the University of North Texas Housing Department's ABC's for Residential Living Handbook (Jungjohan, 1994; TAMS Student Handbook, 1989).

As the subcommittee began to assess this information, the members tried to imagine themselves in the role of TAMS students' parents. If their own children were living away from home and participating in TAMS, what structure and services would the students and parents need from this program? Using these questions as evaluation criteria, the members began to formulate their concept of a viable TAMS Student Life program.

At the heart of the residential component of the program was the need to define the relationship the university administration would provide for TAMS students. Though the in loco parentis concept was all but eradicated from state higher education institutions during the 1970's, dealing with students ranging in age from fifteen to eighteen would necessitate some realistic adaptation of this relationship with TAMS participants. As Jungjohan (1994) noted:

In comparison to our own UNT Student Code of Conduct and the ABC's for Residential Living guidelines, there was an additional concern for increased liability with this age group. Rafes (the UNT legal counsel) was very concerned with how the school would describe and structure the level of care to be provided to these students. UNT would have to offer a form of in loco parentis relationship, but there would have to be a realistic balance. These students should not be treated as children but as young adults; however, UNT would have to satisfy legal requirements as well.
As the ramifications of an in loco parentis relationship were considered, the subcommittee simultaneously tackled a myriad of issues in four broad categories:

(1) Involvement in campus community - what kind of relationship would TAMS students have with the rest of the campus? To what extent would they be isolated from or participate with traditional college-aged students? In what campus activities would they be allowed to participate and from which would they be excluded?

(2) Student developmental growth - How would the TAMS program foster and enhance the participants' socialization skills? How could TAMS assist in producing well-rounded citizens? What support services should be provided to encourage communication and coping skills during adolescent years?

(3) Health care - What health care services would UNT be required to offer this age group by law? How would UNT insure students would have proper insurance and immunization records? How would UNT balance the offering of health services and educational programs which might be in conflict with parental wishes of some?

(4) Residential environment - What kinds of policies would be needed to provide a structured community environment without too much restriction? To what types of activities and organizations should the students have access? What security efforts would be needed? What kind of staffing ratio would be required to care for the students within the residence halls? How much freedom would students have on campus or in Denton (i.e., can they have cars) (Bray, 1994)?

The committee began to develop the initial draft of a TAMS Student Handbook along with permission and liability forms. The ideas and questions generated by this
A subcommittee would form the nucleus for the work of a final, expanded Student Life Committee (Jungjohan, 1994; SLC Minutes, February 3, 1988).

Early in the Fall 1987 semester, Annetta Ramsay, Associate Director of Housing, was offered and accepted the position, TAMS Associate Director for Student Life. She would become the only administrator within TAMS to occupy a key position from the program's beginning through the first five years of operation. The continuity this provided proved to be invaluable.

In working closely with Barbara Jungjohan, Ramsay was apprised of all efforts of the original subcommittees and began to quickly solicit additional individuals for the final Student Life Committee. In addition to Barbara Jungjohan, Carolyn Bray, and Patricia Rektorik-Sprinkle, the following individuals joined the expanded committee: Deborah Arnold (representing Financial Aid), Lucy Brakefield (Housing), Eric Jackson (Police), Julia Dunn (Recreation), Cletus Johnson (TAMS), Vicki Loftice (Denton Parks and Recreation), Sheila Meyer (Health Center), George Mitchell (Media Library), Alan Moore (Education), Tom Overton (Counseling and Testing), Rodney Washka (Housing/McConnell Hall), and Mary Yates (Student Union) (Jungjohan, 1994; Ramsay, 1995; SLC Minutes, Feb 3, 1988).

The Student Life Committee would meet bi-monthly from February through May, 1988. It would make recommendations to the Associate Director for Student Life who, in turn, would forward to the Director of the Academy. Recommendations of the Student Life Committee would be seriously considered in all decisions pertaining to the formation
of the student life program; however, the final decision would rest with the Academy
director (SLC Minutes, Feb. 3, 1988).

On February 3, 1988, the first committee meeting was held and the group
determined the aspects of the student life program upon which it would focus. By the
February 19th meeting, a time line for discussion topics was generated for the next three
months. In discussing the priorities for the semester, the committee members prepared
fourteen suggestions for further study and development:

1. ID cards for Academy students should have a special logo and be a
distinctive color. Meal cards for Academy students should also bear the
Academy logo.

2. Academy students should be given a library orientation during their first
week on campus. During this program, Academy staff members would put
bar codes on TAMS Student IDs.

3. It was suggested that an Academy designation should be placed on class
rolls to enable faculty members to recognize which students were part of
the Academy. This would assist instructors since progress reports were to
be requested for TAMS students.

4. The Graduate Assistant for Recreation position would need to be defined
and filled. It was recommended that this staff member begin planning
activities by the first summer session if possible and by the second summer
session at the latest.
5. It was suggested that a Faculty Mentor Program be coordinated through the Dean of Student's Office. It was felt faculty members could be readily recruited since several had requested academy students through UNT's existing mentor program.

6. A Host Family Program was also recommended. It was hoped local families could be found to host two TAMS students each. This program would make TAMS students more comfortable away from home. Host families would be sought who had children approximately the same age and gender as Academy students they might host.

7. A determination would need to be made as to which student activities and Union facilities the TAMS students could access.

8. A determination would also need to be made as to which Physical Education Building facilities these minors could utilize.

9. Special attention would need to be given to the area of housing. The level of interaction between the TAMS and traditional housing staff members would need to be defined, the numbers and types of full time and paraprofessional staff members would need to be determined and procured, and the security measures and facility alterations of McConnell Residence Hall would need to be orchestrated.

10. An assessment of handicapped facilities would need to be made for TAMS students.
11. General health care, human sexuality services, and insurance and immunization needs for TAMS participants would need review.

12. Policies and regulations for the Student Life Program would need to be developed and a disciplinary due process system created.

13. The type of dining services offered to TAMS students would need to be determined.

14. Police Department issues such as dealing with juvenile related issues and parking needs would need review.

Chronological Development and Description of Program

The Student Life Committee had a tremendous amount of work to achieve in four short months and seven group meetings (February 3 and 19, March 4 and 25, April 8 and 22, and May 6). The fourteen agenda items were reduced to individual research efforts with scheduled group discussions. Following, in the same order as addressed by the committee, an overview of the committee's recommendations for each topic is provided:

Housing and Dining Services

As noted in the minutes from the February 19 Student Life Committee meeting, arrangements for housing and dining services were described as follows:

McConnell Hall will house the Academy students and extra security measures (i.e., extra locks on student rooms, converting outside doors to fire exits, and a 24 hour desk at the entrance to the Academy section of McConnell). Students will sign a special adaption of the housing contract based upon the recommendations made by this committee last semester. A full time Hall Director will be hired for the Academy. The job requirements are a completed master's degree and at least one year of full-time experience as a hall director at NTSU. Resident Assistants (RAs) will be
hired for the Academy at a ratio of one RA per 25 students. Resident Assistants will be required to have previous experience as an RA at North Texas, and graduate students or students in math or science will be given preference.

Academy students will be required to take a seven day meal plan, and their meal cards will be specifically marked. (SLC Minutes, February 1988)

The housing contract came under final committee review during the March 4th meeting and was printed by the North Texas Print Shop after spring break.

**Graduate Assistant in Charge of Recreation Programs**

During the March 4th Student Life Committee meeting, the group discussed the Graduate Assistant position which would be responsible for the TAMS Recreation Programs. The individual serving in this position would coordinate recreation activities through the Union, the Housing Department, and the Denton Parks and Recreation Department. In working with the Denton Parks and Recreation Department, TAMS students would have interaction with age-appropriate peers.

The primary responsibility of the Recreation Coordinator would be to work closely with the TAMS staff in coordinating activities fostering a sense of community for the students. Instead of physical education, the program would give students a leisure education. It was hoped the TAMS students would develop an appreciation for a lifetime of activities that centered on overall physical and psychological wellness (SLC Minutes, March 4, 1988).

The recreation position was targeted to begin by August 1, 1988. The possible compensation alternatives were considered. Options including paying $6.00 per hour for a 20 hour work week or paying the individual an outright stipend. Although a benefit
package was considered, the cost of $2208 a year and the requirement that retirement be deducted from the paychecks was off-putting.

From this meeting a subcommittee was formed to investigate the following questions: a) Would TAMS students receive credit for their participation in the recreation program; b) If they were to receive credit, how would it be assessed? and c) What would happen if students chose not to participate in the program? A subcommittee consisting of Julia Dunn, Vicki Loftice, Mary Yates, Rodney Waschka, and Annetta Ramsay investigated these issues. On April 8, 1988, they gave an additional report to the Student Life Committee. In reference to the question of how students would receive credit for their participation, the following suggestion was offered:

Academy students will be given general expectations from the Academy staff about participation. Student input will be sought so students will be encouraged to participate and so the program will meet the recreational needs of Academy students. Students will be given some time during orientation week to begin planning the activities they wish to have. Some activities will be required of all Academy students. Students who participate in club sports or PE could, if they wish, be excused from these activities. A goal for the recreation program could be to encourage students to learn at least one new skill or activity each semester. The Academy staff will need to exercise care so that Academy students are not over-programmed. Part of learning a leisure style is to have free time so that choices can be made about how to spend it. (SLC Minutes, April 8, 1988)

In response to the question of what to do with non-participants in the recreation program, the following statement resulted: "If students are not participating in the optional activities planned for them, the Academy staff needs to reexamine the program to see if it is meeting the needs of the students" (SLC Minutes, April 8, 1988). Upon
approval by TAMS Director, Rogers Redding, efforts would be initiated to achieve the
recreation position's posting through the UNT Personnel Office (Ramsay, 1994)

**Health Care Issues and Human Sexuality Services**

Committee work on one of the most delicate and potentially controversial aspects
of the Academy was begun during the March 4th meeting. Sheila Meyer, Director of the
UNT Health Center, had been consulting with Richard Rafes, UNT Attorney, and had
been collecting information from the Public Health Department and other sources. Meyer
conveyed Rafes' recommendation that the Academy provide explanations to potential
TAMS students and their families concerning services the institution would be required to
provide by state law. Parents might be given some opportunity to decline or block certain
treatments, but at this point, this was undetermined. It was also noted that Alfred Hurley,
Chancellor and President, needed to be made aware of the final decisions regarding human
sexuality provisions recommended by the TAMS administration (SLC Minutes, March 4,
1988).

In the April 8th committee meeting, Sheila Meyer further discussed the
information TAMS parents should be provided when their children were accepted into the
program. Meyer provided the following overview of services offered by the UNT Health
Center:

The Student Health Center cannot view sexuality as a moral issue if we are
to practice responsible and comprehensive medicine. Even with the
younger students in the Texas Academy of Mathematics and Science, we
do not feel it is in their best medical or psychological interests to deny them
services they may need or desire. These services include the following:
Sexually transmitted diseases—testing and treatment. A minor has the option of getting these services from the Public Health Department without parent approval or notification. The rationale behind the law was that a minor would be more likely to seek treatment knowing they did not have to tell their parents. We would like to offer our younger students this same level of confidentiality, but the law requires us to show a minor's medical records to parents at their request.

Birth control is another human sexuality service provided by the Health Center. When a girl is sexually active, then we feel that birth control is a responsible alternative to an unwanted pregnancy. Birth control is not easily obtained at the Center because we want the students to understand all the risks associated with sexual activity. In line with this objective, all girls are required to attend a 30 minute program on female health and have a pap smear before they are given a prescription for birth control pills through our general practice women's clinic.

We also do programming in the dorms regarding human sexuality. The programs cover topics such as "Relationships," "Sexually Transmitted Diseases," "Contraception," "AIDS," etc. The objective is to educate students so they can make informed decisions about human sexuality. (UNT Health Center, 1988)

Upon examination of this information, the committee suggested the Garland School District be contacted for further information in that its officials had recently struggled with these same questions. It was further recommended that officials of the Selwyn School of Denton be contacted as they had worked with the high school-aged populace as well (SLC Minutes, April 8, 1988).

Meyers indicated she would draft a policy statement outlining birth control services and have Ramsay add a policy statement on dating and pregnancy. The committee would review this information on April 22, and forward a copy to the
University Attorney and to the Parents' Council as soon as it was formed in the upcoming summer of 1988. The Parents' Council would also be asked to recommend awareness program topics for TAMS students. Some of these programs might also be provided to the parents during the summer orientation program (SLC Minutes, April 8, 1988).

Prior to the April 22nd meeting, Ramsay would solicit information from Jean Hanson of the Pickens Health Center at Duke University. The Pickens Health Center had contracted with and provided services for the high school-aged students participating in the North Carolina School of Science and Math. The information garnered from Hansen would be shared with Sheila Meyers and was utilized in developing the policy statements generated by Ramsay (Ramsay, 1988). The initial rough drafts of policy statements on human sexuality, programming, and dating were presented on April 22, 1988:

Policy Statement on Human Sexuality

Because the Texas Academy of Mathematics and Science will enable younger, gifted students to attend the University of North Texas, the staff of the Academy wishes to make parents and students aware of some of these issues that Academy students will be facing. The University of North Texas is a diverse campus with more than 22,000 students. While the Academy staff will make every effort to provide an excellent environment for students, the existence of the Academy on a college campus creates certain concerns for parents and students. The Academy staff does not wish to condone irresponsible behavior on the part of the students. However, we desire to approach the area of sexuality in a manner that is clear, so that parents will understand how Academy officials will routinely respond to the various situations that Academy students may face. This document is designed to outline all areas pertaining to human sexuality, so that parents may be informed. In order to reflect the opinions of the Parents' Council, it will be updated annually. Health Center - list Human Sexuality Services provided. [Information previously submitted in an overview in the April 8th meeting.]
Programming

Programming will be aimed at two target groups: parents and students. During summer orientation programs, parents will be given general information on security, including sexual assault awareness. Parents will review the statement by August 1st of this year in order to make changes that reflect the values of the majority of the parents present at summer orientation. If individual parents disagree with the majority opinions expressed by parents, they may do so by contacting the Academy staff in writing. While the Academy staff cannot be responsible for the individual behavior of students, they will make prudent efforts to cooperate with the wishes of individual parents.

Throughout the year, the Academy staff will plan educational programs for students. Optional programs offered to students may include but are not limited to: interpersonal relationships (including dating), self-protection, sexual assault awareness (including date rape), AIDS awareness, birth control, dances and a Spring Prom.

Dating

Academy students will be permitted to double-date only with other Academy students. If an academy student wishes to date a student from out of town, he/she must have written parental permission on file with the Academy staff at least 24 hours prior to the date.

While Academy students are on dates, they must observe all Academy regulations, including curfews and the check-in/check-out procedures. Academy students who violate policies or falsify records in order to get around the dating policy will be subject to disciplinary action.

Pregnancies

The Academy staff recognizes that an unwanted pregnancy is a possibility for an Academy student. Therefore, the following procedures will apply:

1) Any staff member who becomes aware of a student who is pregnant will immediately notify the Associate Director for Student Life, who will discuss the matter with the student involved. As soon as the information is verified, the student's parents will be notified immediately. Under no circumstances will information about a student who is pregnant be withheld from parents.
2) Each case will be handled on an individual basis according to the wishes of the student and her parents. Academy staff members will discuss options with the family, but the decision about what to do will rest with the family.

3) An Academy student's pregnancy will not be considered grounds for dismissal from the Academy.

In handling such situations, the Academy staff will be most concerned with supporting the decision made by the student and her family. ("TAMS Policy Statement on Human Sexuality," April 22, 1988)

The document would close with a 'statement of informed consent' section. Here the student and parents would reflect: 1) that they accepted the guidelines established by the Academy; or, 2) that they objected to the guidelines of which they had been informed. It was also noted that it would become the parents' responsibility to provide the Academy officials with written instruction for their child no later than August 15, 1988. Parents would then provide the student's name and sign and date this document ("TAMS Policy Statement on Human Sexuality," April 22, 1988).

After a two week period to review this information, the committee generated several suggestions for the Policy Statement on Human Sexuality:

1) Under Programs, gay issues and human sexuality were added to the possible list of programs.

2) Under Dating, dating shall be defined as any activity with a member of the opposite sex that takes place off-campus.

3) The suggestion was made that an "honor system" be incorporated into the Academy regulations. This will be added to the Student Handbook.
4) After some discussion, the consensus of the committee was that Academy students should only be allowed in the public areas of other residence halls (and not in student rooms).

5) A policy statement concerning irresponsible social behavior was added to the section entitled Pregnancies, including the expectation that Academy students will not be sexually active ("TAMS Policy Statement on Human Sexuality," April 22, 1988).

Based on these suggestions, a revised copy was generated and forwarded to the University attorney for additional suggestions. The final draft forwarded by the committee would be reviewed by consultant, Julian Stanley, before being submitted to Academy parents at their summer orientation program (SLC Minutes, May 6, 1988).

In addition to human sexuality policies, programming, and services provided in the TAMS program, other health care questions had been researched and policies determined by Ramsay and Sheila Meyer during the Spring 1988 semester. Questions concerning maintenance of TAMS students' medical records, tracking of their immunizations and insurance information, and the special care and attention that would be needed for this age group were examined. In a memo to Rogers Redding on January 1, 1988, Ramsay forwarded suggestions she and Meyer felt were needed for participants:

1) Prior to admission, Ramsay would ask parents to complete a medical history form, including permission to treat the student. This completed form, along with proof of immunizations and an insurance claim form would have to be provided.
Photocopies of these materials would be maintained by the TAMS office. Original records would be forwarded to and maintained by the Health Center.

(2) Ramsay would propose that Academy students who did not have insurance be required to participate in the insurance program sponsored by the UNT Dean of Students Office. The yearly premiums would run from $150 to $500. Parents would be asked to send their checks to the Student Life Office. Ramsay would turn this money in directly and track all deadlines and payments to ensure lapses in coverage did not occur.

3) Sheila Meyer recommended that the UNT Health Center schedule physical exams for all Academy students after they arrived. This would be advantageous for the Health Center because a standardized medical history could be obtained on each student, and this would simultaneously orient TAMS students to the Health Center (Ramsay, January, 1988).

Annetta Ramsay and Sheila Meyer were also sensitive to the special needs of this age group. Both were aware that the Health Center staff and the Residence Life staff would need to develop excellent lines of communication, provide special training for the live-in staff, and assure a willingness on the part of Health Center employees to keep TAMS students for observation because of their age (Ramsay, 1995).

Ramsay consulted Jean Hansen of the Pickens Health Center at Duke University. Pickens Health Center provided health center services for the North Carolina School of Science and Math. Based on the information provided about the NCSSM, the Academy
would incorporate a similar approach to residence life staff members and health center employees providing special services (Ramsay, March 28, 1988).

The resident assistants at NCSSM were equipped with first aid kits and special training. The basic first aid kits (containing items such as thermometers, band aids, first aid cream, alcohol wipes, etc.) were utilized to enable RAs to deal with minor health care needs. The RAs also received special training to determine when students needed to go to the health center or the hospital. As Ramsay noted, "Students this age are used to having parents decide when they should see a doctor, so many don't seek medical assistance until they are quite ill" (Ramsay, March 28, 1988). Communication channels and training efforts for health center, residence life, and counseling staff members would need to be developed long before the students come to the campus.

Though the committee and individual efforts lasted many months, the results were thorough and laid the groundwork for a successful transition once the students arrived.

Library Services

In the March 25th Student Life Committee meeting, George Mitchell, Marilyn Christiansen, and Julie Tharp were present to represent the libraries. As recommended in the initial meeting at the beginning of the semester, the library representatives felt TAMS students should be given a library orientation during their first week on campus. The library staff believed it was imperative that Academy students have a positive experience with their first library contact. A general library orientation, including bibliographic instruction, basic reference tools, automated tours, and self-paced written tours would be offered. During this program the library staff would also put bar codes on the students'
identification cards. In short, the information offered during the orientation presentation would bolster the Academy students' self-confidence in using the library facility.

The library staff members obtained a copy of the Academy students' curriculum schedule. Christiansen indicated the library would strive to work with lab instructors and faculty members of the classic learning core in coordinating library services and sources with class assignments (SLC Minutes, March 25, 1988).

**Student Union Activities and Service**

During the March 25th committee meeting, Mary Yates, UNT Union Director, spearheaded the efforts to determine the student activities in which TAMS students would be allowed to participate. All TAMS students would be paying the same fees as traditional aged college students which theoretically would gain them access to all areas and programs. However, due to restrictions generally applying to minors, some activities or areas might require restrictions. Three primary areas of concern were addressed and voted upon by the Student Life Committee:

1) The Rock Bottom Lounge facility, housed within the Union, was similar in atmosphere to a pub or bar. Alcohol was sold in the RBL and a "night club" atmosphere was provided for the mature college student. The committee determined that TAMS students should not be permitted to frequent the Rock Bottom Lounge.

2) The Syndicate area of the UNT Union offered video games and billiards. The committee felt TAMS students could be allowed to enter this area provided parental consent was obtained.
3) The University Union offered a plethora of programming activities. Efforts would be made between Ramsay and Student Activities Coordinator, Robin Zaruba, to develop cooperative programming ventures from which the TAMS population could benefit. The committee felt certain types of programs might require additional restrictions: (1) "R" rated movies could not be seen by TAMS students (by law); (2) risky physical activities, such as rock climbing, etc., would require a TAMS student to obtain prior written parental permission in order to participate; and (3) controversial program topics or speakers, i.e., Ruth, would warrant further discussion with the Parents' Council. It was hoped reasonable guidelines would be developed to deal with programming such as this (SLC Minutes, March 25, 1988).

Additional suggestions were generated by the committee to aid TAMS students in using the Union facilities. It was noted that birth dates should be added to the meal cards of Academy students. If students did not have a driver's license, they would be encouraged to get a Texas ID card for an approximate fee of $8.00. The Union offered a check cashing service to all students but an official photo ID was required for check cashing purposes (in addition to a UNT ID). With this ID, TAMS students could pay the $ .25 fee to cash checks on campus. The Union would work with the TAMS administration to obtain an alphabetical listing of Academy students with the name of parents or guardians added (since the Union would cash personal checks or two-party checks if they were from the guardian or parent). In summation, the vast majority of
facilities and services would be open to Academy students (SLC Minutes, March 25, 1988).

Faculty Mentor Program

At the time the Faculty Mentor Program was discussed by the Student Life Committee, the Associate Director for the Academic Program position had not been selected. The primary responsibility for developing and establishing the formal faculty mentor program would rest with that individual. It was felt the initial mentor program should be informally offered. At most, the Student Life Committee might generate suggestions to be forwarded to the Associate Director for the Academic Life Program; however, it was deemed inappropriate for the committee to undertake the creation of the formal program (SLC Minutes, April 1988).

The University of North Texas already had a campus wide mentor program in place. Faculty and staff members from a variety of departments volunteered to make themselves available to or matched with students requesting their assistance. This program was offered through the Dean of Students Office. Barbara Jungjohan coordinated these efforts. She suggested that the TAMS students could be provided with a list of faculty members, including their areas of research. Efforts would be made to request faculty participation in this special mentor-ship opportunity. Several faculty members had already expressed an interest, so it was hoped recruitment of others would prove successful (SLC Minutes, April 8, 1988).

The committee did generate suggestions to forward to the individual selected for the Associate Director of Academic Affairs position. It was felt student input should be
sought from the beginning to develop a meaningful program. It was also deemed appropriate to implement the program during a student's second semester with the Academy (since the first semester students would be bombarded with regulations, academic demands, and adjustment to college life). To allow a supportive relationship to develop, Academy mentor assignments would be for at least two years. However, students were to be given an opportunity to request a new mentor if warranted. Mentors were to be recruited beyond the math and science fields to ensure there would be ample faculty members from which to recruit (SLC Minutes, April 8, 1988).

Host Family Program

The Academy developed a Host Family program to provide a family type support network within the Denton area for Academy students. Efforts would be made to select faculty members, "pillars of the Denton community," and to possibly recruit families from the Denton Ministerial Alliance (for students who might be regular church attendees) (SLC Minutes, April 8, 1988).

It was proposed that two Academy students be assigned to each host family. It was felt this would probably put the students more at ease. It would also cut in half the number of families with whom the Academy administration would need to communicate. Host families would be encouraged to coordinate special occasions and birthdays with TAMS students' parents. Communication between the host family and TAMS families would also be encouraged.

The committee determined that the matches between host families and students should be made around September 15. An adjustment period for the students to become
acclimated to the UNT campus and the Academy program would be allowed the first two weeks of the semester. A questionnaire was utilized to match students and host families.

Guidelines for host family participants generated by Ramsay and the Student Life Committee included the following expectations:

1) Host Families will be asked to commit to the program for the academic year (10 months). If, at any time, they feel they cannot continue to participate in the program, they are asked to inform the Academy staff.

2) Host Families will be given two Academy students to host. Academy students whose parents live in the Denton area will either be given the option of not participating in the program, or their own family will be assigned one other student for whom they will serve as host.

3) Because residence hall students at the University of North Texas are not served Sunday evening meals, Host Families should expect to furnish a Sunday evening meal and/or a family activity approximately once a month.

4) Host Families will be asked to attend a brief orientation program once each semester.

5) If Host Families and Academy students share the same religious beliefs, Host Families will be encouraged to allow the students they are hosting to attend church with them as often (or as infrequently) as they wish.

6) Host Families and the families of Academy students will be given each others' addresses so they may communicate and coordinate special occasions such as birthdays and holidays.

7) Transportation will be provided for official Academy activities. On some occasions, Host Families may provide transportation for Academy students with prior parental approval. The details of this will be worked out between the students and their hosts, and Host Families will be free to say they are unable to do this.

8) If Host Families have personal concerns about students (i.e., depression, adjustment problems, etc.), they will be expected to discuss these with the students. In addition, they will be expected to let the student know they will be notifying the Academy staff and/or the student's parents.

(SLC Minutes, April 8, 1988)
Disciplinary System

To the Associate Director for Student Life position, Annetta Ramsay brought numerous years of experience dealing with student behavior. Ramsay had been a residence hall director at both Southern Methodist University and The University of North Texas. Through being the administrative disciplinarian as the Associate Director for Residence Life at UNT, through obtaining state and national licensure credentials as a certified counselor, and through obtaining her Ph.D. in Counseling, Ramsay had honed her skills as a student development specialist. Further, she had augmented her professional experience, educational background, and professional counseling credentials with years of personal research on the development and special needs of adolescents and young adults. Though Ramsay would submit an overview for the TAMS Disciplinary Process (see appendix D) to the Student Life Committee, she was chiefly responsible for developing the model that would be utilized by the Texas Academy of Mathematics and Science (Ramsay, 1994).

The discipline process for Academy students developed by Ramsay would contain three tiers for dealing with student behavior: 1) the hall level/hall director hearing; 2) the student judicial board level; and 3) the administrative level. Each is discussed in the following paragraphs.

Hall level decisions would entail "violations of University or Academy policies which occur in or around McConnell Hall and which would not normally result in probation." The hall directors of McConnell Hall would hear and rule on cases at this level ("Discipline Flowchart," TAMS Archives, April, 1988).
For cases involving repeat violations, or "when the nature of the case requires it to be heard by an impartial panel, rather than by an individual at the hall level, and to insure due process, the case may go to the Student Judicial Board. Any appeals of the Student Judicial Board would next be heard by the Student Judicial Appeals Board" (Judicial Board Manual, TAMS Archives, p. 3).

The third and more serious level for dealing with student behavior would require an Administrative Hearing. The Associate Director for Student Life or the Assistant Dean of Students would investigate the case based on the point of appeals. Cases that involved policy violations such as "theft, drugs, firearms, major vandalism, major assault, sex offenses, or burglary" would be dealt with in an Administrative Hearing (Judicial Board Manual, TAMS Archives, 1993, p. 3). An appeal of the Associate Director for Student Life's sanctions would first go to the Director of the TAMS program and then to the Dean of Students Office. Beyond that level, the campus-wide appeals hierarchy, the UNT Student Appeals Board, Vice President for Student Affairs, and President of the University, would rule on the matter (Jungjohan, 1994).

The disciplinary model outlined by Annetta Ramsay in April, 1988 would not be implemented in full until the fall semester of 1990. During the first two years of the program, the hall directors, Associate Director for Student Life, and the TAMS Director would deal with the vast majority of disciplinary investigations. With the establishment of the TAMS Student Judicial Board in 1990, the disciplinary model proposed by Ramsay was finally brought to fruition (TAMS Newsletter, October, 1990).
**Student Judicial Board**

Once the student judicial board process was incorporated, the entire TAMS disciplinary process would be referred to as the Judicial Board System:

"Judicial Board System" is a generic term which encompasses all the discipline meetings. These discipline meetings are represented by the Appeals Board, Student Judicial Board, and Administrative Hearings.

Appeals Board: Does not determine guilt or innocence. According to the criteria for appealing, the Board is to determine whether or not a decision should be over-turned, added to or remain the same. Only when a student has been found guilty can he/she file for an appeal.

Student Judicial Board: This board determines guilt or innocence based on the incident at hand and imposes an appropriate sanction. When the nature of the case is such that it is necessary to be heard by an impartial panel, rather than by one individual, and to ensure due process, it will go to the Student Judicial Board.

Administrative Hearing: This can be held by the Associate Director for Student Life depending on the point of appeals. Each meeting is held to review an appeal, except when a situation surpasses the board due to the necessity of privacy or severity of an infraction.

With each part of the Judicial System fulfilling its purpose in conjunction with the goals and philosophy of the system, the results will be far more effective than if there were no inter-system support.

Police violations which occur in or around the residence hall and which would normally not result in suspension are heard by the Associate Director for Student Life. Typically, cases involving burglary, drugs, firearms, major vandalism, major assault, sex offenses, or theft should be heard by an Administrative Hearing. The only circumstances in which a case may move from the hall level to the Student Judicial Board is in the case of a repeat offender, when the decision of guilt or innocence is difficult to determine by one individual, or when the severity poses a threat of harm to others in the community. (*Judicial Board Manual, TAMS Departmental Archives, 1993, p. 3*)

The Judicial Board concept and manual generated by Ramsay were developed from a combination of disciplinary procedures utilized at the University of North Texas,
Texas A&M University, Texas Tech University, and Eastern Illinois University. The Judicial Board was developed to enable students to become involved in the disciplinary process. The Judicial Board would serve as "a forum for learning by using peer discipline as its vehicle," and would "provide the opportunity to deal with policy violations as close to the source as possible" (Judicial Board Manual, TAMS Archives, 1993, Introduction, p. 5).

The first Judicial Board would be composed of three student administrators, and student representatives from the senior and junior classes (TAMS Newsletter, October, 1990). Though judicial board officers would attend all hearings, only three board members would be present and have voting privileges in a hearing. Judicial Board members would also serve as student advisors on a rotational basis. Students going before the board would be allowed to select from a list of members not serving on their case--persons to answer questions regarding the entire process. To participate in the board, members would have to maintain a 2.5 GPA, remain free of disciplinary action above minor hall-level documentation, and would be thoroughly trained about the process prior to serving on the board (Judicial Board Manual, TAMS Archives, 1993).

When rendering sanctions, the Judicial Board could render a single sanction or combination of sanctions. The board would try to stay consistent in meting out similar sanctions for types of incidents that were referred to this governing body. The primary goal of a rendered sanction was twofold: 1) to have an educational impact on the residents and to help them understand the need for the policy, and, 2) to be enough of a deterrent to
cause the students to refrain from violating this or other policies in the future (Judicial Board Manual, TAMS Archives, 1993).

Disciplinary Sanctions and Steps

The range of disciplinary actions utilized by the hall directors, the academy administration (and by the Judicial Board when established) would include the following:

No action: The student under investigation was found 'not guilty' of suspected policy violations (Judicial Board Manual, TAMS Archives, 1993, p. 23).

Creative discipline: Community service projects, programs, or work details could be imposed on individuals who disrupted the hall community through their behavior. The sanction would need to relate to the offense (i.e., vandalizing a study room might require cleaning that room a certain number of days, etc.). Sanctions at this level would not be placed in students' permanent records (Judicial Board Manual, TAMS Archives, 1993, p. 23).


Hall Probation: If this status were imposed, it would become effective immediately (at the time of notification of this status). While in this status, the student could not serve on any Academy board or governance committee. The student would also be unable to serve at an affair of the student body, or a TAMS organization, nor participate in the intramurals athletic program. Other restrictions could be imposed on participation in additional UNT activities and could also result in removal from the UNT residence halls (Judicial Board Manual, TAMS Archives, 1993, p. 23).

Counseling Referral: Counseling referrals would either be recommended by the full-time hall director staff or the Associate Director for Student Life. If a counseling referral were recommended by the Judicial Board, this sanction would not be discussed with the student at the time of the hearing. A follow-up meeting with the Associate Director would be scheduled to review the matter (Ramsay, 1994).
Recommendation for Academy Disciplinary Probation: A student placed on this disciplinary status would be close to removal from the TAMS community. For the specific period of time the student was placed on this status, that individual would have to demonstrate an ability and willingness to conform to TAMS policies. Like hall probation status, the individual could not serve on a TAMS board or governance committee, nor serve as an officer for a student organization, nor participate in the campus intramurals program. Further restrictions could be added, including expulsion from the Academy. Due to the seriousness of this status, the Judicial Board could recommend disciplinary probation but only the Associate Director for Student Life could make the final decision to administer this status (Judicial Board Manual, TAMS Archives, 1993, p. 24).

Suspension, Withdrawal, and Expulsion: As with the most serious university level policy violations, TAMS students could be removed from the Academy program or the University of North Texas for severe offenses. Only the Associate Directors or Director of the program would handle cases of this magnitude (Jungjohan, 1994; Ramsay, 1994).

Disciplinary Steps

Because Academy students would concurrently be university students, they would be bound by the UNT Student Code of Conduct and the UNT Housing Department policies as well as those listed in the Academy's Student Handbook. Disciplinary problems and rule violations would be forwarded to parents and made part of the student's permanent record (if the seriousness of the matter so warranted) (Student Handbook, TAMS Archives, 1989).

Though the case of a serious policy violation might warrant an immediate referral to the Associate Director for Student Life, in general the disciplinary procedure would follow four steps:

1. Initial policy violation--warning and documentation by resident assistant.
2. Second policy violation—referral to hall director; behavioral contract with hall director.

3. Third policy violation—referral to Student Judicial Board. If the board assigns sanctions, the students will meet afterwards with the Associate Director for Student Life to discuss how sanctions will be completed.

4. Fourth policy violation—referral to Associate Director for Student Life who will assign appropriate sanctions. Dismissal from the academy is a possibility (Student Handbook, TAMS Archives, 1989, p. 18).

In the case of serious policy violations, the first three steps may be skipped and the student may be referred to the Associate Director for Student Life. Generally, these cases will involve, but not be limited to, incidents that threaten the health or safety of other Academy students, use of illegal drugs or alcohol, or extreme lack of cooperation with staff members (Student Handbook, TAMS Archives, 1989, p. 15).

Initial TAMS Policies

Much of the groundwork for the development of the initial rules pertaining to residence hall living stemmed from the work of the ad hoc committee headed by Barbara Jungjohan. The policies were based on a compilation of input from the North Carolina School of Science and Mathematics, the Louisiana School for Mathematics, Science, and the Arts, the Selwyn School, Austin College, and Simon's Rock of Bard College (Student Handbook, TAMS Archives, 1989; Jungjohan, 1994).

As the ad hoc committee members, Jungjohan, Rektorik-Sprinkle, and Bray developed the rules, all felt the pressure of trying to achieve a reasonable structure for residence hall living without becoming too restrictive. As Jungjohan would recall:

We were trying to find a happy medium. Highly intelligent students simply could not be placed in perfect little rows, marched around the
campus, then told when they can move or where they can go . . . There is no possible way that you can treat adolescents like children; you have to treat them as young adults. And, if they are highly intelligent, the resentment of being treated other than as a young adult is even greater. Even in knowing this, we felt a great deal of pressure to develop guidelines to circumvent legal concerns . . .

Though Richard Rafes was not a part of our committee, we repeatedly submitted conclusions and reports to the administration via Rafes. We were regularly cautioned about potential liability issues and warned that the university would need to be protected from liability as much as possible . . . We were told to stress to potential TAMS parents that we would strive to make the residence hall environment safe but to remind them that their sons and daughters would be living in a college setting. Though we could require that they be in the residence hall by a certain time, and that they check-in and check-out when leaving the hall, they would still have a great deal of free time each day. We could not and would not structure their every move.

Thus in trying to achieve this balance, we felt pressure to generate requirements more restrictive in nature than were probably needed . . . On the whole, kids of this age group in Texas were probably given more freedom by their own parents than the Academy allowed. Nobody forced these decisions on us, but the constant pressure of potential legal ramifications greatly impacted the rules that were established . . . Though we had general guidelines from some of the other schools, what we were attempting to do was very unique; no other school was placing adolescents in residence halls or college classes with traditional college students (Jungjohan, Interview with author, 1994).

The general residence hall rules developed and implemented for the first TAMS class of 1988 included the following:

1. Quiet hours begin at 9:00 p.m. and continue until 6:00 a.m., Sunday evening through Friday morning. During quiet hours, all radios, record players, televisions, stereos, musical instruments, etc., must be off or used with headsets so that they are audible to the user only.

2. Quiet hours end at 6:00 a.m. each morning, Monday through Friday. Rooms should be cleaned, beds made, clothing and personal items put away. Students should complete personal grooming, room clean-up, dining, etc., in time to leave for class at 7:50 a.m.
3. Curfew is at 10:00 p.m. Sunday through Thursday. Students should be in the residence hall by 10:00 p.m. unless they have prior permission from the hall director for a later curfew for required participation in an academic function. Curfew on Friday and Saturday nights is at 12:00 midnight. All outside doors are locked at curfew each night.

4. Room check regulations are strictly enforced. Students must be in their own rooms at 11:00 p.m., Sunday through Thursday nights, and at curfew time on Friday and Saturday nights. Room check will begin at 11:15 and 12:15, respectively.

5. Laundry and showers must be completed by 10:00 p.m., Sunday through Thursday.

6. Alcohol and drugs are strictly forbidden for Academy students. Any student found in possession of alcohol or drugs may be suspended or summarily dismissed from the Academy.

7. Co-educational visitation is not allowed in residence rooms.

8. Overnight guests of the same sex are allowed in residence rooms on weekends only (Friday or Saturday nights) with agreement of the roommate and prior permission of the hall director, who will assist in arranging sleeping quarters for the guest.

9. Weekend absence from the campus is recommended to be no more than one weekend per month. Students are encouraged to abide by this recommendation because a number of activities and special academic opportunities are planned for weekends. Prior parental permission must be on file with the hall director before a student may leave campus overnight or for the weekend. Student must sign out giving destination and estimated time of return. No overnight absences are allowed Sundays through Thursdays.

10. Motor vehicles are not allowed on campus for first-year Academy students. This includes cars, motorcycles, motorbikes, mopeds, etc. Permission to have a motor vehicle on campus by second-year students is an earned privilege. The University STRONGLY DISCOURAGES any student from operating a motor vehicle during his/her stay at the Academy. Students may have bicycles, which may be registered in accordance with university regulations.

11. Residence life seminars are scheduled weekly with the housing facility; attendance is required. These seminars include study skills, goal setting,
time management techniques, career exploration, communication, health education stress management, and social/interpersonal relationships.
("Executive Summary: Admission, Curriculum, and Student Life," TAMS Archives, 1988, pp. 10 and 11)

Level System and Privileges

In order to encourage exemplary classroom performance and adherence to residence hall rules, a level rewards system was developed and also outlined in the Student Handbook:

All students begin the school year on the same level (level I) and advance periodically, according to criteria stipulated under each level.

Level I:
1. Juniors are level I for the first semester.
2. Seniors are on level I for the first two weeks of classes.

Level II:
1. All students must have a 2.5 cumulative GPA.
2. Students have no more than three minor violations (warnings given by resident assistants).

Level III:
1. Juniors must have a 3.0 cumulative GPA and no more than two minor violations.
2. Seniors must have a 2.0 GPA with no grades lower than "C" and no more than three minor violations.

Level IV (For Seniors Only):
Students must be on level III.

Level V (For Seniors Only):
1. Students must have at least a 3.0 GPA.
2. Students must have no more than two minor violations.
3. Students who have been placed on a behavioral contract must petition the Associate Director for Student Life to request level V privileges.

4. All requirements must be met with no exceptions or alteration.

Privileges

Level II:
1. Students who have not had any visitation-related disciplinary infractions for the last semester may study in the co-ed study lounge after curfew.

2. Students may study in the library until 11:30 p.m. two nights per week. They must make arrangements to return from the library with another Academy student or an escort.

Level III:
1. Curfew will be extended to 11:30 p.m. for one week night and 1:30 a.m. for one weekend night (Friday or Saturday). The student must select these nights and note them on the sign-in/sign-out card prior to taking this privilege.

Level IV (for Seniors only):
1. Students may bring automobiles to campus with the following restrictions:

   A. Parental permission must be on file with the residence hall staff authorizing the student to have a car on campus.

   B. Students must sign in and out when using cars.

   C. Only the student who owns the car may operate it.

   D. Other Academy students will not be permitted to ride in cars driven by students unless they have permission to do so.
2. Students who have reached the age of 18 may visit student rooms in other residence halls. With parental permission, students may have this privilege the semester prior to their 18th birthday.

Level V (for Seniors only):

1. Students may purchase a university student parking permit.

2. Curfew will be extended to midnight one night each week and 2:00 a.m. one weekend night. The student must select these nights and note them on the sign-in/sign-out card prior to taking this privilege.

3. Students may apply for a desk clerk position at the Academy desk. Eligibility to apply does not imply that the student will be hired. (Student Handbook, TAMS Archives, 1989, pp. 27-28)

The general information regarding the disciplinary system to be utilized by the Academy was presented to the expanded Student Life Committee at various times during the Spring 1988 semester with a final, more formal overview presented during the last Student Life Committee meeting held May 6, 1988. Ramsay also noted that the policies and this information would be discussed with the Academy parents who attended the parents summer orientation meeting and with the Parents Council once it was organized in the immediate months to come (SLC Minutes, May 6, 1988).

Physical Education Facilities and Programs

In addition to the overview on discipline, a discussion on the use of the Physical Education Building by Academy students was included in the last meeting of the Student Life Committee on May 6, 1988. Once the Academy students arrived for the Fall 1988 semester, Mary Ellen Circle, Assistant Director of Recreational Sports, would solicit a list
of Academy students and information about their identification cards. Liability waiver forms, signed by the parents, would be required from all students. As soon as the Teaching Assistant for Recreation was selected prior to the beginning of the fall semester, Circle would work closely with that individual and brief him/her on the special considerations and arrangements which would be made for this special population.

Circle felt that TAMS students should compete in the Residence Hall Association league if they chose to participate in intramural sports. This suggestion was made because the TAMS students were automatically Residence Hall Association members since they would reside in McConnell Hall. There was also concern when considering TAMS students’ possible involvement in the independent league since that league was more competitive and more injuries would likely be incurred if Academy students competed with independents. Circle suggested that Academy students might want to participate in sports activities with the Selwyn School, a private school in Denton, as well as the Denton Parks and Recreation program (SLC Minutes, May 6, 1988).

The final comments regarding the recreational sports department topic included the notation that the current departmental policy on the need for a chaperone for individuals under a certain age would need to be reworded. The rule in question stated that anyone under the age of sixteen using the Physical Education building would have to be accompanied by someone over eighteen years of age. That rule was amended to state that anyone under the age of sixteen must be accompanied by someone older than eighteen unless he/she has a UNT student ID card. As previously discussed by the Student Life Committee, TAMS students would have special UNT identification cards which clearly
note their participation in the TAMS program as well as their dates of birth (SLC Minutes, May 6, 1988).

**Police Related Issues**

The final topic reviewed by the Student Life Committee on May 6th included a discussion on police related juvenile issues which could pertain to Academy participants. Captain Jim Weisinger of the UNT Police Department indicated that Academy students who committed an offense of less than a Class B misdemeanor would be turned over to the TAMS administration by the Police Department for appropriate disciplinary action. If a TAMS student's behavior attracted the attention of the Denton Police, or if the offense was equivalent to a Class B misdemeanor or higher, Academy students under the age of seventeen could be turned over to a juvenile detention facility. Captain Weisinger suggested that Ramsay meet with Ron Darley, Denton judge, to discuss how such cases might be handled. Weisinger believed that if the custodial relationship of the TAMS participants were made clear, Judge Darley's office might be responsive to releasing these students to an Academy official. A statement would be added to the parental permission form that read, "I understand that my son/daughter is in the custodial care of the Texas Academy of Mathematics and Science for purposes of juvenile supervision and welfare." This form would be reviewed with Judge Darley, and Ramsay would follow all steps recommended to structure this procedure for releasing TAMS participants to Academy officials when appropriate and possible (SLC Minutes, May 6, 1988)
Additional Student Life Program Components

In addition to the components of the TAMS Student Life Program structured by the first ad hoc committee and the Expanded Student Life Committee, Annetta Ramsay would devise other programs, support groups, activities and organizations to help the young Academy students adjust to university life. As Ramsay would convey to NT Daily reporter Joy Jones, "We know they're going to get a good education at North Texas, but they also need to learn about the other side of school--study skills, social skills, dating, communication, stress management—everything that happens outside the classroom" (Jones, 1988).

To foster these skills and augment the university experience, the Student Life Program would incorporate a Friday afternoon seminar series, weekly discussion group meetings, and periodic progress reports and grade reports would be forwarded to parents (Jones, 1988; Ramsay, 1994).

In the Friday afternoon seminars, topics solicited from the students themselves would be offered. Topics ranged in focus from career guidance information, college planning and placement, stress and time management, to depression, racism, suicide, and values clarification. The seminars would prove successful and helpful (Jones, 1988; TAMS Newsletter, October, 1991).

The weekly discussion groups would follow the seminars. Limited to seven students per group, the discussion group meetings would remain highly confidential. These groups gave students an outlet to talk about problems and voice frustrations without fear of reprisals (Jones, 1988). The discussion group leaders would also meet
periodically with the administration to note common threads of complaint with the program. Student names were never shared, and information was kept general to protect the confidentiality of the individual; however, the sharing of these insights would aid the administration in making adjustments during the first year (Jungjohan, 1995).

To aid in the communication between the Academy administration, the TAMS participants, and the families of the students, periodic progress reports would be completed by the TAMS students and the TAMS staff members. Information regarding the students' adjustment to community living, the Academy environment, and their academic progress would be conveyed ("Executive Summary: 1987," TAMS Archives, 1987).

Clubs, Organizations, and Activities

Though Academy creators and officials knew they had a great deal to offer potential TAMS students academically, there was also concern about what these students might be sacrificing in relinquishing the junior and senior years of the high school experience. As first Academy Director, Rogers Redding, would note in an interview with Dallas Morning News reporter, Connie Pryzant, "We recognize that the student is going to be giving up working on the student newspaper, football or whatever, and that could be a strong argument for not getting out of high school." To counter this, Redding would add that, "Most of these students will not have had anybody to talk to. For the first time in their lives, they'll be able to talk to intellectual peers of their own age." It was hoped that experience gained would greatly outweigh the deficit of the shortened high school experience (March 21, 1988, p. 13A).
Students from the early Academy classes would reflect that the activities and organizations offered by the program and the University of North Texas would satisfactorily replace most opportunities they would have been afforded in high school and in addition offer a far greater variety of choices than any traditional high school could. In an article featured in The Chronicle of Higher Education in October, 1989, reporter Katherine Mangan noted that while Academy students were "encouraged to join the university's marching band and academic clubs, other activities, like fraternities and sororities or the university's intercollegiate sports teams, are off limits. Instead, the Academy's staff came up with a variety of special outings and activities for their students" (pp. A38-39).

Representative examples of special activities and recreational programs which were planned to be made available to Academy students were described in the "TAMS Admission, Curriculum and Student Life, 1988" report:

*Structured weekly activities: Attendance at scheduled spectator events; clubs and organization activities; community programs of the Denton Parks and Recreation Department; non-credit physical education, performing arts, and graphic arts courses; cookouts; special group shopping trips or field trips; Academy team participation in recreational sports.

*Unstructured weekly activities: Open activities of the University Union; recreational sports open activities; community activities (e.g., restaurants, movies, shopping, church-related activities sponsored by local churches and campus ministries); residence hall activities.

*Weekend activities: Dances; museum visits; concerts; athletic events; shopping malls; theme parks; metroplex area fairs and festivals; canoeing and hiking; holiday events; special university events such as Homecoming, Parents' Weekend, and University Day. (pp. 11-12)
Actual activities and events offered to TAMS students during the first four Academy classes would include:

1. American Gladiators American Style
2. Beach Bash
3. Beta Phi Epsilon Food Bank (for the Denton food band)
4. Bowling
5. Camping/rock climbing at Mineral Wells
6. Dallas Center for Holocaust Studies
7. Dallas Symphony Orchestra Concerts
8. Day at the Races
9. Denton State School visits
10. Fashion show
11. Friday night at Six Flags over Texas
12. Hallwide dances
13. Intramurals basketball, indoor soccer, volleyball, and water polo
14. Jello wrestling
15. Lock-in
16. Omni Theater of Ft. Worth
17. Metroplex museum trips
18. Numerous wing level programs
19. Programs on multicultural awareness
20. Scarborough Faire Medieval Theme Park
21. Soviet Space Exhibit

22. Spinning Wheels skating

23. State Fair of Texas (representing the UNT Solar Car Exhibit)

24. Student Campaign Against World Hunger

25. Study breaks


This plethora of programming activities far exceeded similar opportunities the traditional high school could afford any student.

In addition to the numerous programs offered, Academy students had opportunities to participate in special TAMS committees and organizations: the Academy Players Club offered opportunities for those interested in becoming thespians; the Beta Phi Epsilon Club was organized to coordinate community service projects; the Dull Roar Music Society was established for those with musical interests and talent; FROG (friendship opportunities group) offered social contacts; HIP (hall improvement program) planned projects to clean and improve the McConnell Hall facility and grounds; the Student Judicial Board allowed peers to impact and insure disciplinary due process was afforded; a Key Club was established and supported by the Denton Breakfast Kiwanis Club; the McConnell Hall Association was continued as part of the residence hall system wide governing body, the Residence Hall Association; Peer Facilitators were selected and trained to assist all TAMS students in adjusting to the TAMS experience; a chapter of the senior honor society, National Honor Society, was founded; the Sports and Recreation
Committee was established to work with the Recreation Coordinator in planning competitions and events; a Student Council governing board was created similar to that found in most high schools; a Video Yearbook Committee was formed to record major events on video throughout each academic year; and a Yearbook Committee was founded to create a hardbound Academy Yearbook for each academic year. TAMS students were also eligible to participate in all UNT clubs and organizations with the exception of fraternities and sororities and NCAA intercollegiate sports (TAMS Newsletters: October 1990, December 1990, October 1991, December 1991, May 1992).

**Traditional High School Events**

In an effort to offset any sense of deprivation in missing traditional events universally associated with the American high school experience, Ramsay and the Student Life staff members would coordinate programs emulating several high school traditions. As noted previously, TAMS students had the opportunity to participate in Student Council and had a National Honor Society chapter. TAMS students also participated in the creation of a video yearbook as well as a hard cover yearbook. Academy participants had special high school rings created and would develop a special ceremony, the Ring Ceremony, in which an invited senior made a special presentation to each junior of his or her senior ring (Ramsay, 1994).

As TAMS participant, Kelly Southard (Class of 1990), would reflect, she greatly appreciated the substitutions for two very important high-school traditions: the senior prom and a homecoming. "I really wanted a prom and a homecoming, and we got both," she expressed as she complimented the Academy (Mangan, 1989, p. A39).
The Senior Prom and after prom activities would evolve into an elaborate social event. Sponsored by the TAMS Student Council, the event would usually enjoy the attendance of two to three hundred people. A professional photographer would be on hand, and the event would be professionally catered. As with a traditional high school prom, student attire would include extravagant evening gowns and dapper tuxedos. Senior Superlative awards were given to students in the categories of Most Athletic, Friendliest, Most Likely to Succeed, Mr. GQ, Ms. Vogue, Best Smile, and Most Likely to Win a Nobel Prize. Proms were usually held at the Denton Civic Center or Country Clubs and evolved into one of the most momentous programs of the year (Johnson, 1994; Ramsay, 1994; TAMS Newsletters: October 1990, December 1990, October 1991, May 1991, March 1992, May 1992).

The TAMS students would also participate in all festivities centering around the University of North Texas annual homecoming. The Residence Hall Association dance would become a well attended Academy tradition. Competing in the "Yell Like Hell" and "Human Pyramid Building" events would become tradition as well. In fact, the Academy students would be finalists in these events several years as they competed against all other UNT student organizations (TAMS Newsletters: October 1990, October 1991).

The final traditional high school event offered through the TAMS program would be the graduation ceremony. An elaborate ceremony would be organized beginning with the first graduating class of 1990. Graduating seniors would attend a rehearsal the day before. A reception would be held immediately following the event in the Student Union Building. During the ceremony, two students selected by the senior class would speak
(because there would be no class ranking process within the Academy). The first two
speakers to deliver commencement addresses at Academy graduations would be Texas
Speaker of the House, Gibson "Gib" Lewis, and E. L. "Buddy" Langley, consecutively.
Both men played significant roles in the creation and establishment of the Texas Academy

Unique TAMS Program Traditions

In addition to offering traditional high school activities, general programming
opportunities and club and organizational participation, the Student Life Program would
also put into place several special events which would become annual traditions:

Apple Polishing - An event held in both fall and spring semesters in which TAMS students
invite their favorite instructors or staff role models to McConnell Hall for recognition and
a reception. The faculty and staff members are invited to the event when they receive an

Blue Moon Saloon - This major event is the equivalent to the spring prom and occurs each
fall. Students dress in western attire and the theme for the evening is life in the old west.
Students listen to student bands, watch dance performances, play poker with tokens, and
try to stay out of jail though the town sheriff is keen to make arrests (TAMS Newsletters:
Parents' Weekend - At the end of each Spring, a special weekend of student life events coincided with Parents' Weekend. Parents were invited to attend such special events as Parents' Council Meetings, the Student Life Awards Brunch, and the Rose Cutting Ceremony. Other presentations, such as programs on college admissions procedures, performances by the Academy Players, etc., might also be offered (TAMS Newsletters: October 1991, March 1992).

Parent and Student Orientations - Prior to the beginning of each academic year, parents and students were invited to participate in special TAMS orientation programs. Parents would participate in an orientation lasting a few days; TAMS students would participate in week long activities in the Fall and a few days preceding each Spring semester. Presentations on the Academy program, the UNT campus and Denton community, the D/FW metroplex area, as well as information to aid in making the adjustment to college life would be included in these informative mini-conferences (Ramsay, 1994; "Parent/Student Orientation Schedules," TAMS Archives, 1988).

Rose Cutting Ceremony - A special tradition devised by Annetta Ramsay, this event not only honored the graduating seniors, but helped them bring closure to their TAMS experience by offering them a chance to formally and officially say goodbye to each other. In the ceremony, each senior would enter the room with a long stemmed rose. Each rose was encircled by one long ribbon that connected the entire senior class in one long line. At the end of the presentations made in the program, each senior's rose was cut free from the others signaling the separation of each individual from that particular class upon
graduation. It became a touching, emotional tribute to what these students experienced as a group and what they would face as individuals upon graduation (Ramsay, 1994).

**Senior Ring Presentation** - As noted previously, after ordering their senior rings, Academy juniors would invite seniors of their choice to present their class rings to them in this elegant service held in December. Following the ceremony, a reception would be held for all participants (Ramsay, 1994; *TAMS Newsletter*, December 1990).

**Student Life Awards Brunch** - Held in April with an attendance usually exceeding one hundred people, this awards brunch took place to recognize students for their contributions to Academy organizations and their general contributions to the Academy community. The brunch was discontinued after the second year and replaced by an awards ceremony. Award categories included Certificates of Merit, the Citizenship Award, Outstanding Part-time Desk Clerks, the Leadership Award, the Integrity Award, the Academy Spirit Award, the Personal Growth Award, the Friendship Award, the Cornerstone Award, and the RA's Choice Award (*TAMS Newsletter*, May 1991).

**Teacher Appreciation Dinner** - Each November, first year TAMS students would invite teachers from across the state of Texas to be their honorees at this special dinner reception. The TAMS students would have the opportunity to introduce and explain why these teachers had been inspirations to them and how they assisted the students in becoming TAMS scholars. The teachers would also be presented with framed certificates and paperweights. Coordinated by the TAMS director’s office, this memorable event

Final Preparations for Inaugural Class

Resulting from the efforts of the three Student Life Committees and Associate Director, Annetta Ramsay, the vast majority of planning for the Student Life program was reaching culmination by early Summer, 1988. Policies, programs, and structure were in place and preparations were underway to ready the UNT departments and campus for the arrival of the first Academy class.

A meeting was scheduled for July 5, 1988. It would be held in the University Board Room and representatives and departmental directors from recreational sports, the libraries, Financial Aid, the Registrar's Office, the Police Department, the Dean of Students' Office, the Chancellor's Office, Dining Services, the Housing Department, Health Services, Telecommunications, Admissions Office, Office of the Controller, the College of Arts and Sciences, the Public Affairs Office, and the University Union would be in attendance. All were called "to gather in one place to discuss those things that are necessary to smooth the path for the students to get off to a good start and to make sure that the program gets under way as crisply as possible without anything falling through the cracks." (Redding, June 14, 1988, p. 1)

An overview of all Academy arrangements was promoted. The Academy student orientation schedule, TAMS student identification cards, library arrangements, academic advising and registration process, financial aid considerations, Housing Department check-in and payment preparations, Health Center medical considerations, scholarship
considerations, scheduling of TAMS student exit interviews, and TAMS student usage of microcomputers and typewriters were discussed. After this meeting and appropriate follow-up action by all departments involved, the TAMS program would be ready for the final preparations for the first TAMS Orientation Week for students and parents, and the official kick-off of the program in August, 1988 (Redding, Minutes From July 5, 1988).

Parent Orientation, July 1-2, 1988

The final structure and policies for the Student Life program were put to the test on July 1, 1988. For two days, parents of future Academy students were brought to the UNT campus to be briefed on every aspect of the program that had been developed at that point. On the evening of July 1, the Parent's Council would be officially established. This organization was created:

To promote the Texas Academy of Math and Science and provide support to the students and staff... This purpose is further specified as including, but not necessarily limited to, directory fund raising efforts to support these activities, to provide a parents' advisory board to serve at the request of the Academy on student issues and to engage in all activities which the board of directors feels is necessary for the betterment of the Texas Academy of Math and Science. ("Bylaws of the Parents' Council," TAMS Archives, 1988)

While the Parents' Council aided in solidifying the administrative aspects of the TAMS program, potential TAMS students in attendance assisted in planning programs for the orientation week yet to come. Final information was prepared detailing what to bring to campus, what to leave at home, and what to expect during orientation week, registration, and the first few weeks of classes. When the final wrap-up session and check-out were completed on July 2, 1988, parents and students were fully aware they had
approximately one and one-half months to formalize personal preparations before returning for the official opening of the Texas Academy of Mathematics and Science on August 22, 1988 ("Parent Orientation Schedule," TAMS Archives, 1988).

**Parent and Student Orientation Week**

After years of diligent efforts by a great many people in creating and shaping the mosaic which would become the Texas Academy of Mathematics and Science, the students and parents of the first class arrived at McConnell Hall on August 21, 1988. The week-long, extremely thorough orientation program would prepare the excited students for this grand event and help quell the fears of anxious parents (Ramsay, Video Yearbook, 1990).

During the orientation program, numerous housekeeping details would be coordinated, informational programs would be offered, and social opportunities would be planned prior to the beginning of classes ("Orientation Week Schedule," TAMS Archives, 1988).

To aid in the myriad of arrangements which would need to be made in making the transition to the UNT campus, students were assisted with checking into their residence hall rooms, renting post office boxes, and having meal card photographs and student identification cards completed. They were also helped with completing foreign language testing, auditioning for the band or choir if they were interested, purchasing their textbooks, completing their individual advising sessions and registration, and registering bicycles if brought from home as well as having other personal property marked by the
UNT Police Department through Operation ID ("Orientation Week Schedule," TAMS Archives, 1988).

Informational sessions offered during Orientation Week included such topics as a student leader workshop, overview of the curriculum, student life overview, review of the Academy honor code, a presentation of the student activities and programs offered through the university, a financial aid overview, study skills presentation, recreational sports orientation, library orientation, University Health Center Orientation, a Residence Life Seminar, and security programs and precautions ("Orientation Week Schedule," TAMS Archives, 1988).

To offset the stress and to attempt to preclude students becoming overwhelmed by the sheer volume of information highlighted, numerous ice breakers, socials and field trips to Dallas and Ft. Worth were squeezed into the orientation schedule. Though many events were for TAMS participants and family members only, the TAMS students were also scheduled to participate in various campus wide "Howdy 1988" programs. Howdy Week at the university offered daily and nightly events for students to be welcomed to the UNT campus community. Students were also provided an opportunity to become involved in the formation of Academy student groups including the Hall Association, National Honor Society, Student Council, Programming Board, and Judicial Board ("Orientation Week Schedule," TAMS Archives, 1988).

The first day of classes took place on Monday, August 29, 1988. Annetta Ramsay shared her recollections of this historical time in the first Video Yearbook (1990) created by the TAMS Students:
The charter class of eighty-eight students arrived in August of 1988 and checked into McConnell Hall. I have so many memories from that time. I remember it rained during the first day of class, and we had to walk all over campus in the rain. There was a song called, 'Don't Worry, Be Happy,' that was popular at the time, and it seemed to sum up what we were all feeling. Newspaper and television reporters were abundant, and our students took it in stride. Hot dogs were designated the official Academy food because we served them several times during orientation week.

It was interesting how quickly a community developed. Our students became close and supportive in a short period of time. Most of all, students developed close ties to friends, and they are finally in a place where it is okay to be smart or intellectually curious. Their friendships are incredible. The Academy is a great program, but the structure we provide pales by comparison to what the students give each other.

A great many challenges would lay ahead that first year. The policies and structure in place were greatly scrutinized and challenged by students and the Parents' Council because everyone knew the program was completely new (Ramsay, 1994).

There were also much greater challenges for the first year because the program was initially understaffed. And, because the program was truly unique within the United States, there was not another program or administration to which TAMS officials could turn for answers or suggestions when the director or associate director found themselves in unchartered territory (Redding, 1995).

Still, the excitement of the moment and realization that all involved in this project were part of a history making venture made the challenges worthwhile. Of this experience and the decisions made during this time, Rogers Redding would note, "I would not have changed a thing if I had it to do again" (Redding, 1995).
Changes in Student Life Program Through 1992

Throughout the operation of that first year, the Student Life staff would learn much and make numerous adjustments. They would learn a great deal about the special needs and the social and emotional development of fifteen to sixteen year old adolescents in comparison to typical college freshmen. In particular, becoming sensitive to the emotional demands of these younger adolescents was paramount (Educating Able Learners, September/October, 1989) The initial concern of the staff was to ease the transition to college life while combating homesickness and nurturing independence (Johnson, 1994; Ramsay, 1994).

As Alfred Hurley foretold in his opening address to the first Academy class during their orientation week, the students and staff would be under a great deal of pressure. All would be scrutinized by legislators, financial backers, the general public, and the students' parents. The abilities and achievements evidenced by this first class and staff performance in that first year would set the standards of the program for years to come (Gilberto, August, 1988).

There were two major adjustments most TAMS students would face each year: the adjustment of leaving home prematurely and the challenge of developing the self-discipline associated with honing study skills and study habits. With most of these young teenagers living away from home for the first time, they were quickly forced to form coping skills and to learn to fend for themselves. They would learn to mediate conflicts with peers, to clean their own rooms, to do their own laundry, and to generate their own
daily schedules. The adjustments of learning how to study and becoming responsible for timely class attendance and preparation were also frequently new experiences. Many of these gifted individuals had never had to seriously study. Many had depended upon the nagging of parents to ferry them to high school classes on time. For them, the independence and maturity demanded by the college regime would require increased study time, classroom preparations, and personal organizational skills (TAMS Annual Report, 1989).

In their initial exposure to the North Texas campus, TAMS participants did not wish to be identified and wished to blend anonymously into the traditional population; however, by year's end, the TAMS students would develop a strong sense of pride and identity in the program (Janos, 1989).

The University of North Texas Center for Collaborative Research developed an evaluative questionnaire for the first TAMS participants. From this study, the university was able to determine that the self esteem of the typical Academy students increased significantly when they were placed in this unique environment with other gifted and talented students. In evaluating the Student Life Program and student acclimation to college life, the majority of the students indicated they had adjusted very well and had enjoyed a good transition to the environment ("Texas Academy of Mathematics and Science 1989," UNT College of Education, 1989).

The study produced encouraging but surprising results. The questionnaire had stressed the academic side, and the responses were expected to deal primarily with the
academic gains experienced. However, students instead perceived they had changed the
most through social and emotional development:

... most of the students talked about maturity, increased independence, 
enhanced social skills, and more positive self concepts—qualities that public 
and private high schools would deem desirable goals for their programs;
attributes that are essential for success in future academic endeavors and in 
life in general. ("Texas Academy of Math and Science," Educating Able 
Learners: Discovering and Nurturing Talent, September 10th, 1989, p. 15)

Academy Rules and Disciplinary Matters

The greatest complaint voiced by Academy students about the student life 
component centered on the rigid restrictions placed upon them. In the North Texas Daily 
article, "Academy Pupils Settle in to Modified College Life" by Joy Jones, Annetta 
Ramsay was called upon to describe the dilemma of the time:

They have the academic requirements of college students, but they are 
faced with the restrictions of high school students . . . They tend to focus 
on the non-freedoms of the Academy rather than the fact that they certainly 
have more freedom than most high school students . . . We're trying to 
listen to their complaints about the rules, and after a few months we may 
lesson the restrictions to some extent . . . but they're so bright, they see the 
logic behind the rules even if they don't agree with them. In some ways 
they're easier to deal with than the traditional students. (1988, p. 2)

The complaints focused on the rules requiring mandatory signouts (indicating 
where the students planned to go after 4:00 p.m.), the inability to visit rooms occupied by 
members of the opposite sex, the inability to date non-Academy students, curfews of 
10:30 p.m. on week nights and midnight on weekends, monitored study breaks between 
8:00 and 10:00 p.m. on week nights, and the prohibition of student use of their cars on 
weekends. Though the cars were parked on campus, students would only be allowed to 
leave the UNT campus one weekend in every four (Jones, 1988).
A creative uprising erupted during the first semester. To rebel against the bevy of restrictions while also taking care to refrain from upsetting the administrators of the program, the Academy students began stacking cold drink cans in one student hallway. In stacking the cans on their sides, the students could reverse certain cans to create messages in the display. By March, 1989, there were over two thousand five hundred cans, and the collection covered two walls and the end of a hallway. However, the protest aspect lost its sting, and instead evolved into a project of team spirit and pride. The collection, as well as the participation grew, and the project became a creative outlet for TAMS community participation (Cadenhead, 1989; Jones, 1988).

By the Spring 1989 semester, the original rules were modified. Ramsay worked in conjunction with student representatives from the Academy's Residence Hall Association to refine the policies. Input from the Parents' Council was also considered. As a result, curfew hours were extended to 11 p.m. on week nights and 1:00 a.m. on weekends. The sign-in, sign-out system was abolished as well as the monitored 8:00 p.m.-10:00 p.m. study hours. However, the limitation on visitation in rooms by members of the opposite sex remained (Marlowe, 1989). By the Fall of 1989, visitation in rooms of the opposite sex was permitted on Saturday and Sunday afternoons (Donnelly, 1989). By academic year 1991, rules were further expanded to allow co-ed visitation from 1:00 p.m.-7:00 p.m. on weekends and from 6:00 p.m.-9:00 p.m. Monday through Friday (Student Handbook, TAMS Archives, 1991).

Review and revision of rules and guidelines became a yearly exercise. In addition to the level system incorporated at the beginning to reward scholastic achievement and
citizenship, a point system would be devised to track individual student's disciplinary status. By assessing points for a range of possible infractions, a student's disciplinary status could be categorized. This would aid both students and staff members in determining when student misbehavior was still considered minor or when the accumulation of points would require a disciplinary status. It would also help students clearly understand when they were in jeopardy of being removed from the Academy (Ramsay, 1994).

As anticipated, some of the greatest challenges faced by the TAMS administration were spawned from the student life area. As Richard Brown of the Louisiana School of Mathematics, Science and the Arts had advised on his visit with the planning committee in 1987, to establish an in loco parentis relationship with the students, the school would need to carefully hammer out its policies and get a good lawyer! (Student Affairs Committee Minutes, 1987). The great majority of TAMS participants would possess the maturity and personal integrity to become productive members of the TAMS community. However, through the end of the 1991 academic year, there would be a small number in each class who chose not to live within the boundaries. One of the greatest fears early in the program was that TAMS students would become pregnant and that the backlash would be devastating. However, in the very rare instance when a pregnancy occurred, the staff effectively worked with the student, and no major repercussions were suffered (Brady, 1995).

Alcohol use and abuse were more common problems until the administration clamped down determining that individuals found in violation of state law for under-aged
drinking would be removed from the program. The majority of policy violations would include minor infractions or individuals who habitually violated minor policies. There were a few interesting escapades over the years including the student who suspended himself from a tree with rolls of saran wrap, clad in pajamas and bunny slippers, and read excerpts from Hamlet to passersby (Ramsay, 1994). A few students would be found "making out" in various other buildings on campus when visitation was at its most restrictive period. Another specific incident resulted in an FBI investigation. A few TAMS students had photocopied dollar bills to use in vending machines, spurring the investigation of a counterfeiting charge. Students would also be caught scaling the University Union Building to remove Christmas lights or climbing out of McConnell Hall on occasion to escape the Academy's curfew restrictions (Ramsay, 1994).

In dealing with such incidents, including more serious medical emergencies or students in suicidal, emotional crisis, the Student Life team commanded by Ramsay rose to every challenge. Both Redding and Brady would applaud the excellent work done by Ramsay and note she often bore the brunt of the most stressful challenges the administration would face (Brady, 1995). Redding would declare, "Hiring Annetta Ramsay was probably the single best decision I made while serving as director of the program." (Redding, 1995) And, Alfred Hurley would add that, "Ramsay was the glue that held the program together, being the only constant within the TAMS administration from 1988 through 1992" (Hurley, 1995).
Legal Issues

Though there would be a myriad of legal issues posed to the University of North Texas general and assistant general counsels as the TAMS program evolved, two particular matters surfaced in the research of this area.

When the Academy first dealt with the marriage of a TAMS participant during the academic year, the question arose as to whether this individual could continue in the program. At that time the program had a firm requirement that participants reside in McConnell Hall. The decision was made to allow the student to remain in the program because she was willing to abide by the residency requirement (Rafes, 1995). However, the written residency requirement would be added to the 1991 TAMS Student Handbook:

All students in the Texas Academy of Mathematics are expected to reside in McConnell Hall and take a board plan through the UNT Office of Dining Services. No exceptions will be made to the residency requirement, and a student who moves out of the residence hall or severs the board contract will be withdrawn from the Academy. (Student Handbook, p. 13)

In addition to the issue of marriage and the TAMS residency requirement, a clarification of when minors could consent for counseling without parental permission and a revision of the consent forms to be used by parents and students would be generated by assistant general counsel, Yvette Clark. In a memorandum to TAMS psychologist, Darrell Horton, Clark noted: "a minor may only consent for counseling without parental approval in the following areas: sexual abuse, physical abuse, suicide prevention, or chemical addiction, dependency or abuse." (1990) Based on this clarification, two different student consent forms would be drafted: 1) one to be used when students were required to attend counseling based on behavior exhibited; and 2) one to use when
students voluntarily wished to participate in the program. Parent consent forms were also drafted by Clark to be used in tandem with the student consent forms when warranted (Clark, 1990).

Parents' Council

Prior to the commencement of the first academic year of the program, The Parents' Council of the Texas Academy of Mathematics and Science was established. Comprised of an elected slate of officers and extending open membership to any interested parent of a currently enrolled TAMS student, this group would assist and at times challenge the efforts of the Student Life staff members (Ramsay, 1994; Stukel, 1994).

The council would meet four times throughout each academic year to aid in reviewing policies and assisting with the Student Life Program as needed. As Ramsay would reflect by the first year's end, the Parents' Council members were fairly negative in their criticism that first year, but they kept the Student Life staff members continually alert. The council was consulted often as the administration sought to refine the rules, making policies more acceptable to parents and more comfortable for the students (Janos, 1989; Johnson, 1994; Jungjohan, 1994; Ramsay, 1994; Stukel, 1994).

The council would also aid in coordinating transportation for students to get to airports during holiday breaks, in soliciting donations for recreational equipment and furniture for the residence halls, and in furnishing chaperones and committee participants to assist in major Academy events such as the senior prom each Spring (TAMS Newsletters: October 1990-May 1992).
Although the council had strong leadership, unfortunately, at times it could be more a hindrance than help to the TAMS administration. There were years when parents would push personal agendas rather than seeking group consensus. At other times parents would challenge the wisdom of a young but professional, experienced Student Life team (though these parents had no knowledge or experience of the collegiate student life profession). They also challenged because they knew TAMS was breaking new ground. Their agendas were well-intentioned, however, the method (group catharsis with no problem-solving) was not productive. Still, in general from 1988 through 1992, the Council was primarily beneficial to the program. As the Academy become more grounded and the staff members involved in its evolution became more confident, the need for an organized Parents' Council diminished, and the organization was ultimately dissolved (Ramsay, 1994; Stukel, 1994).

**Residence Hall Alterations and Expansion**

When Academy founders first envisioned a home for the TAMS participants from the existing UNT residence halls, McConnell Hall was the clear choice. The twenty-eight year old facility was shaped like a giant letter "E," with three wings extending from the building's facade in three stories. The residence hall was centrally located on the UNT campus. Though program planners ultimately hoped a new facility for the Academy would be built, it was believed McConnell would be the easiest existing residence hall to which an additional wing could be added if this were the route chosen for expansion. McConnell could initially house two hundred and seventy-three students. It had
historically housed upperclassmen and graduate students and was thus in good condition (Lusk, 1989).

In the year prior to the arrival of the first class, the third floor of McConnell underwent renovation. An official Academy office and front desk were created on the third floor landing of the building's central staircase. All traffic destined for the Academy floor would be channeled from the McConnell Hall lobby, through the central staircase, to the third floor and the Academy desk. Here, individuals would have to produce identification and check-in or check-out. The other doors on this floor, leading to other stairwells in the building, would be rendered for emergency evacuation use only. TAMS students could exit through the doors for evacuation purposes; however, any use of these doors would activate audible alarms. An additional alteration on the floor would include creating a small apartment for the hall director. Resident assistant rooms were already in existence. The third floor of McConnell was successfully secured from the rest of the hall, and the Student Life staff would live in close proximity to the TAMS students (Andrews, 1988).

Though the access to the TAMS floor was restricted and required an official check-in, the atmosphere ceased being laborious once on the floor. Whereas students living on the wings of traditional residence halls on campus were requested to keep their doors locked at all times, even for short jaunts down the hall, Academy students would enjoy a different environment. In a setting where students would quickly meet each other, attend classes together, eat together, study and live together, a supportive neighborhood mentality would develop. Doors could be left unlocked and were often left ajar as
students shuffled up the hall to visit or to ask for assistance with perplexing homework assignments. This supportive, intellectual community proved to be one of the greatest benefits of the Academy experience (Guess, 1991; Ramsay, 1989).

In the first year of the program, housing eighty-eight Academy participants translated to fewer available spaces for the traditional student population normally housed there. In 1988, UNT enrollment crested with a record enrollment of 23,500 students (up from an enrollment of 22,000 the previous Fall). Freshman enrollment alone was up eight percent, and transfer student registration was up sixteen percent. Like the university's enrollment, demands for hall residence space increased significantly, and all 4,300 residence hall spaces were assigned (Marlowe, 1988).

Though the TAMS students were quickly assimilated into academic classes with little resistance voiced by the general population, some negative debating ensued when talk of a second floor in McConnell being converted for Academy use, or when the building of an additional wing for Academy students was discussed. Articles generated by the campus newspaper, the North Texas Daily, began appearing on the front page of the paper. The articles described the proposed expansion and highlighted the further reduction of spaces to be made available for traditional students. The articles also stressed that the expansion would be generated from auxiliary services (i.e., residence hall students' rental fees). A negative editorial article, generated by a nameless North Texas Daily staff member, entitled "TAMS Scam: NT Students Come First," further attacked the displacement and insisted that TAMS enrollment should be capped until housing for regular students was increased (Hemby, 1989; Lusk, 1989; North Texas Daily, 1989).
The critical article provoked strong responses from Associate Director Ramsay and many TAMS students. Ramsay would issue an editorial response in the Daily on March 21, 1989, making the following points:

I take exception to the notion that TAMS students are "displacing" average, ordinary college students. Displacement means driving someone from their home. How can Academy students, who apply to the Academy almost a full year prior to their arrival on campus, displace students who apply for housing a month or so prior to their arrival on campus?

By design, the Academy enrollment does have a cap. TAMS will not grow beyond 400 students, and that figure will be reached in the Fall of 1991. The enrollment cap has been common knowledge since the Academy was first approved by the State Legislature in 1987.

In summary, the lack of residence hall space to house every student who applies to the university is an unfortunate, but an understandable problem for a growing institution such as NT. Blaming Academy students for creating the shortage appears to be unfair (p. 2).

In addition to Ramsay's editorial response, over twenty-five TAMS students marched to the North Texas Daily Staff Office demanding to be heard. Expressing frustration at not being accepted as official UNT students in the eyes of the Daily and other students, Academy students confronted the staff. The TAMS students stressed that they had now successfully completed their first semester as college freshman, many had taken over eighteen semester hour loads, participated in numerous campus activities and organizations, and had achieved respectable grade point averages (North Texas Daily, 1989; Ramsay, 1989). The Daily's response was to print a favorable editorial commending the TAMS' students active stance in this debate. Once the negative North Texas Daily articles and the debate and editorial volleys were discontinued, the controversy ceased.
In the midst of the media debate, Elisabeth Warren, Housing Director, was busily working with Academy officials and architect, Susan O’Brien, to develop a proposal for the expansion. The proposed design, forecasting a 2.6 million dollar budget, would attach a fourth, three-story wing to the west side of the residence hall (Lusk, 1989).

The proposal was presented to the Texas Higher Education Coordinating Board which approved the $3,000,000 addition though a moratorium had been placed on college building projects by the State of Texas at the time. Two factors were in UNT’s favor: 1) the project was being entirely funded by the university’s auxiliary surplus funds; and, 2) with a 100% occupancy rate in the residence halls the previous year and with the same demand expected for years to come, there was a dire, legitimate need for residence hall expansion (Hemby, 1989; Lusk, 1989; Denton-Record Chronicle, 1989).

The McConnell Hall expansion, completed in the Fall of 1990, added seventy-two rooms and 144 spaces to McConnell. With this addition and the completion of the original strategy for the Academy to take over the entire McConnell residence hall, the original cap of 400 TAMS students could be accommodated in McConnell Hall by Fall, 1991 (Denton-Record Chronicle, 1989; Hemby, 1989).

Expansion of the Student Life Staff

When the first Academy class arrived on the UNT campus, the Student Life program was comprised of the associate director, head hall director, four resident assistants, Academy recreation director, two desk clerks, and a part-time psychologist. By 1989, the psychologist position was increased to a three quarter position, and an assistant hall director had been added. The resident assistant ranks would increase to seven. By
1992, the completed expansion had taken place. Under the direction of the associate director were the head hall director, two assistant hall directors, four desk clerks, fifteen resident assistants, a full-time psychologist, and the coordinator for student activities. The associate director would also enjoy the direct benefits of a full-time administrative assistant (Johnson, 1995; Ramsay, 1994).

From 1987 through 1992, the Academy's Student Life Program evolved into a highly successful component of the TAMS model. The students, initially interested in becoming chameleons who blended with the traditional population, would soon develop a strong sense of community and pride in being TAMS scholars. Through the years, this tradition of pride would be passed from class to class. As individual participants, most TAMS students would enjoy an enhanced sense of maturity and self esteem. The committee and staff members involved in creating and bringing the student life program to fruition would enjoy the acknowledgment that their efforts were successful in helping these exceptional students achieve this challenging transition. And, the University of North Texas community would benefit from the involvement of TAMS students. In an interview for an article in the North Texas Daily, Annetta Ramsay would note:

I had imagined that the students would become good leaders and be sociable, but they have done more than I expected. They have become interested in moral issues. They are concerned ... and want to help make a difference in the world. (Janos, NT Daily, 1989, p. 1)

With their desire to make a difference, the TAMS students would infiltrate the primary leadership organizations and honorary societies within the university. Many would become executive officers or be selected as outstanding academic achievers from competition across the UNT campus. The students made invaluable contributions to the
University of North Texas, and the Academy experience dramatically impacted their lives at the same time (Janos, 1989; Ramsay, 1994).
CHAPTER VI

KEY INDIVIDUALS INVOLVED IN DEVELOPMENT OF TAMS

Through their major contributions, many individuals would prove invaluable in the
development of the Texas Academy of Mathematics and Science. Others would be
instrumental in guiding the program's evaluation during its first five years of existence. In
this chapter, key contributors to this revolutionary program for the gifted will be identified
and their contributions cited. The chapter will be divided into sections covering those
involved in the establishment of the program and those involved in the program's
evolution.

The listing of individuals in the next two sections will be made in alphabetical order
with the exception of the first entry. That individual, James Miller, will be listed first as
he is the man primarily responsible for the creation of this unique program. Deservedly,
the description of his contributions is listed before all others.

Program Creators

James Miller

More than any other individual, James Miller was responsible for the development
of the concept and establishment of the Texas Academy of Mathematics and Science. At
the time the concept was generated, Miller served as the Dean of the College of
Education. Drawing upon more than three decades of experience in teaching gifted high
school and college students as well as his involvement as a World War II veteran, Miller developed the unique TAMS concept (Hurley, 1995; Ramsay, 1995; Redding, 1995).

James Miller would provide the motivating force needed to take the TAMS program from concept to fruition. Miller's widespread respect and keen political savvy enabled him to solicit key supporters from the UNT community (Brady, 1995; Hurley, 1995; Redding, 1995). His pragmatic, unassuming approach is reflected in his own words:

Because this program was going to be in the College of Arts and Sciences, and I was the Dean of the College of Education, I made an early decision to back-off from the program. Once the concept was accepted and others became involved, I knew the program did not need the meddling of James Miller. In fact, I believed if I stayed too involved, or it became known as James Miller's program, it would not succeed . . .

I backed-off, and since the establishment of the program, I have only done what I have been asked to do. (Miller, Interview with author, 1995)

James Miller would, in fact, be invited to serve as a representative on the first TAMS Advisory Board through 1991. He was also actively involved in several TAMS selection processes and delivered an early convocation address (Miller, 1995; Rafes, 1995; Ramsay, 1994; Redding, 1995; Stream, 1995).

For his outstanding contributions to UNT, James Miller was selected for the 1989 President's Award. The most prestigious honor offered by UNT, the President's Award is bestowed upon individuals whose activities or accomplishments have brought recognition to the school. In addition to his involvement in the creation of the TAMS program, Miller also initiated many higher education programs at UNT including the Dallas Teacher Corps Project, the Fort Worth Cooperative Teacher Aid Scholar Program, the NT Quality Assurance Guarantee for Beginning Teachers, the establishment of the Department of
James Miller was solely responsible for the creation of the TAMS concept, and he proved to be an invaluable resource to the first two directors and the first advisory board. His professional contributions would lead Julian Stanley, founder and Director of the Study of Mathematically Precocious Youth at The John Hopkins University, to regard him as one of the most outstanding deans in the nation (Stanley to Hurley, 1987). The TAMS program, the University of North Texas, and the field of education for gifted and talented children are much indebted to this individual (Brady, 1995; Hurley, 1995; Ramsay, 1995; Redding, 1995).

Alfred Hurley

Integral to the creation and initial success of the TAMS program was Alfred Hurley, President and Chancellor of the University of North Texas. Hurley would immediately embrace the TAMS concept when initially briefed. He helped direct the university's strategies in gaining legislative approval and ultimate funding. As James Miller would note, "Without Hurley's earnest endorsement and support, the TAMS concept would have just remained a creative idea" (Miller, Interview with author, 1995).

Through strong community and legislative networking efforts, Hurley would take advantage of social and work-related opportunities to discuss the TAMS idea with important business leaders, such as E. L. Langley and Trammel Crow; as well as Texas
legislators, such as Speaker of the House Gibson Lewis, Senators Bob Glasgow and Carlos Truan, and Representatives Jim Horn and Wilhemina Delco. Hurley's vision of the potential of this unique program for the University of North Texas, the State of Texas, and for gifted adolescents would provide the catalyst to ignite key players at UNT, leaders within the Dallas/Fort Worth business communities, and Texas legislators (Brady, 1995; Miller, 1995; Parker, 1995; Redding, 1995).

The creation, funding, and early success of the TAMS program is directly attributable to the support and direction provided by this politically astute college president (Miller, 1995).

Gibson D. Lewis, Bob Glasgow, Jim Horn, Carlos Truan, and William Clements

Several Texas legislators would play important roles in the efforts to gain legislative establishment and funding for the TAMS program. Texas Speaker of the House, Gibson D. ("Gib") Lewis, was responsible for coordinating the political footwork necessary to get the TAMS bill and legislative funding approved. After accompanying Alfred Hurley, E. L. Langley, and Trammel Crow on a trip to observe the North Carolina program, Lewis headed the efforts to draft the TAMS bill. Alfred Hurley, UNT President, would commend the work of Speaker Lewis in establishing the program and assisting in funding procurement. As Hurley would explain, "Happily, for several legislative sessions, with Lewis serving as Speaker of the House, there was no question of funding coming through for the program. Lewis served as Speaker of the House long enough to establish the reputation of the Academy" (Hurley, 1995).
Senator Bob Glasgow and Representative Jim Horn sponsored the bill to create the Academy. They both provided enthusiastic support leading to the establishment of the program and continuing through its formative years (Hurley, 1995).

Senator Carlos Truan played a critical role in securing legislative funding. At the time the university sought funding approval, Truan served on the Senate Finance Committee. Senator Glasgow would later report to Hurley, "In one particular instance, Truan was tenacious in getting the funding through the Senate, and he would not allow anything to happen to the budget. He fought for it all the way through" (Hurley, 1995).

Hurley would further explain that in some legislative sessions, no one but legislators could talk. Thus, it became imperative to have the support of an active advocate. President Hurley would note, "There was an old line Vice President Walt Parker told me years ago. You better have somebody that will make the necessary motions on your behalf . . . Senator Truan was that somebody for the TAMS program" (Hurley, Interview with author, 1995). Not only did Truan assist in securing funding, he also proved a tremendous asset as a dedicated, vigorous member of the first advisory board (Hurley, 1995).

Though not generally recognized for his contributions to education while in office, Governor William Clements was another political advocate for the TAMS program. Clements aided the program in particular by helping to promote the financial kick-off campaign headed by E. L. Langley. Not only did Clements participate in the fundraising, he also took part in news conferences and other public relations opportunities to champion the program (Hurley, 1995).
James Muro

In the embryonic stages of TAMS' existence, achieving financial stability was critical. James Muro, UNT Vice President for Development, was charged with the responsibility for obtaining funding for the first year of the program. Muro and his staff successfully solicited more than $550,000 in contributions from the Texas industrial and business communities. Many foundations and corporations would contribute more than $10,000 each to the program. Without these Herculean fundraising efforts, the Academy could not have succeeded as planned (Miller, TAMS Convocation Address, 1990).

E. L. "Buddy" Langley

One of the most vital advocates of the TAMS concept would be metroplex businessman, E. L. "Buddy" Langley. President of General Telephone Company of the Southwest and Chairman of the North Texas Commission (a group promoting economic development opportunities throughout North Texas), Langley was a key player in the establishment and evolution of the TAMS program (Mathis, 1987).

In his convocation address to the TAMS students and administrators, James Miller would elaborate on the contributions of Langley:

Mr. Langley was instrumental in the founding of the North Carolina School of Mathematics and Science. In a speech given in Dallas to the North Texas Commission, Mr. Langley signaled the need for a similar school in Texas. He has been involved in every major event in the establishment of the Academy, including sponsoring a flight to the North Carolina School which included Chancellor Hurley, Mr. Trammel Crow, Bill Kirby, and Speaker Gib Lewis. He assisted Jim Muro in obtaining funding for the Academy during its first year. (Miller, TAMS Convocation Address, 1990)
From the beginning, Langley would provide tremendous leadership and would go on to become the only chair the TAMS Advisory Board would have through 1992. He was also appointed the Vice Chairman of the UNT Board of Regents (Hurley, 1995; Miller, 1995).

Langley was indispensable in his contributions to the establishment, funding, and evolution of the Texas Academy of Mathematics and Science (Hurley, 1995; Miller, 1995). As James Miller would reflect, "Though people give me credit for the establishment of the Academy, Langley's contributions were equal to my own" (Miller, Interview with author, 1995).

Walter Parker

Walter Parker, UNT Vice President for External Affairs, played a vital role in securing the legislative approval for the Academy. Parker's legislative expertise guided UNT's successful efforts to work with key legislators (Hurley, 1995; Miller, 1995). As James Miller would remark:

He (Parker) worked daily with key members in both houses of the Texas legislature, especially Lt. Governor Bill Hobby, Speaker Gib Lewis, Senators Bob Glasgow and Carlos Truan, and Representatives Jim Horn and Wilhemina Delco. (Miller, TAMS Convocation Address, 1990)

Parker supervised the university's successful strategies for gaining legislative approval of the program in 1987 as well as gaining legislative funding for the program (Hurley, 1995; Miller, 1995; Parker, 1995).
Rogers Redding

In Rogers Redding, the TAMS program was fortunate in having an ideal person to serve as its initial director. Personable, enthusiastic, and amicable, Redding could effectively relate to legislators, business leaders, potential students and their parents (Miller, 1995). As a father of teen-aged children at the time, he evidenced an understanding and appreciation of the issues faced by TAMS students and parents as well as program organizers and supporters (Brady, 1995; Hurley, 1995; Miller, 1995; Ramsay, 1994). As James Miller would reflect:

Ironically, when I wrote the description for the TAMS director position, I wrote it with Rogers Redding in mind. He was the person with the ideal background for being the director; I just had no idea at the time that he would be interested. Rogers had been the Chair of the UNT Physics Department, was an outstanding teacher, was very interested in public school education, was very affable, and had a degree in physics. He was the perfect combination of someone from an academic field who was also an administrator (Interview with author, 1995).

Julian Stanley would be equally impressed with the selection of Redding. In a letter to Hurley, written on September 16, 1987, Stanley would note:

You are fortunate to have an excellent "hard" scientist, Rogers Redding, eager to direct the Academy. Other similar schools tend to be headed by educational administrators, and some of them bow too readily (it seems to me) to political pressures to permit under-qualified students to enter. Redding will uphold the highest possible academic standards for the Academy. Also, he has the scientific background, administrative experience, and personality to direct all its activities well. (Stanley, 1987)

Prior to coming to the Academy, Redding had attained impressive professional credentials and achievements. Having received bachelor's and master's degrees in chemistry from Georgia Tech, and his Ph.D. in physical chemistry from Vanderbilt University, Redding would become a UNT faculty member upon completion of post
doctoral research work as a National Academy of Sciences Fellow at the National Bureau of Standards in Washington. While Redding served as the Physics Department Chair at UNT from 1980-1987, the department developed a world class laser physics program and an aggressive accelerator program (Student Handbook, TAMS Departmental Archives, 1988).

Under Redding's leadership, every two years the department would co-host an international accelerator conference, drawing more than 600 scientists world-wide. In noting personal achievement, Rogers Redding received campus-wide recognition in 1981 when he was selected for the John Houston Shelton Award for Excellence in Teaching (Student Handbook, TAMS Departmental Archives, 1988).

Rogers Redding's devotion to the TAMS program during his two year tenure was irrefutable. He served as fundraiser, recruiter, public relations director, and ultimately administrator for the entire enterprise. Undoubtedly, his leadership directly contributed to the initial success of the TAMS program (Brady, 1995; Hurley, 1995; Miller, 1995).

Julian Stanley

Julian Stanley, renowned authority on early admissions and accelerated programs for gifted youth, would play a monumental role in the creation and evolution of the TAMS program. Stanley would initially agree to serve as a consultant as TAMS creators labored to hammer out a program description to be used in seeking legislative approval. After that approval was granted, Stanley was selected to serve on the first TAMS advisory board (Miller, 1995).
The importance of Stanley's support and involvement in TAMS is clearly noted in the following comments:

    We were especially honored that Julian wished to serve on the Advisory Board of the Academy since he would bring instant credibility and national visibility to it. (Miller, Interview with author, 1995)

    In my first phone conversation with Julian Stanley, my immediate reaction was, 'wow... we have a great resource and a very friendly, helpful person as well. Stanley came as a consultant to the program and was instrumental the whole way. Julian Stanley was a guiding force in terms of the development of the Academy. (Schaake, Interview with Author, 1995)

    I cannot overemphasize the prestige he brought to the program. He was the external validator. I asked the Commissioner of Higher Education to appoint Stanley to the first TAMS Advisory Board. We really needed a nationally known figure to be affiliated with our efforts and Stanley provided that expertise and exposure. (Hurley, Interview with author, 1995)

Julian Stanley was regarded as one of the leading experts in the United States on the education of the intellectually precocious child. Creator and Director of the Study of Mathematically Precocious Youth (SMPY) at The Johns Hopkins University, Stanley would amass an impressive publication record with thirteen scholarly books and more than 400 articles, chapters, and research notes concentrated on gifted education and the general field of education. ("Proposal to Confer an Honorary Doctorate on Julian Stanley, Jr."
TAMS Departmental Archives, 1988).

Highlights of Stanley's prolific career would be included in the "Proposal to Confer an Honorary Doctorate on Julian Stanley, Jr." dated December 16, 1988:

    The Harvard Educational Review is generally considered the preeminent scholarly journal in education. To have been chosen Chair of its Editorial Review is a high national honor. Of the same caliber is his presidency of the American Educational Research Association, and to be
the recipient of that organization's Distinguished Contributions Award in 1980 is recognition of the highest order . . .

Also of special note are the two Fulbright Awards and the Rockefeller Foundation Grant as are the visiting lectureships at such places as Stanford and The University of Chicago. His books, especially the ones on research and measurement, are regarded as definitive in the field (pp. 1 and 2).

In addition to serving as an initial TAMS program consultant and an Advisory Board member, Stanley would assist one of his post-doctoral students in establishing a SMPY branch at the University of North Texas. For his contributions to TAMS, the University of North Texas and the field of education, Julian Stanley would be awarded an honorary doctoral degree from UNT in 1989 (Miller, 1995).

Those Responsible For TAMS' Evolution

Tom Brady

Like his predecessor, Tom Brady, second TAMS Director, brought scientific credibility to the program. Through an impressive career, anchored in a strong science research background and administrative experience, Brady offered a similar combination of credentials as his long time friend, Rogers Redding. And, like Rogers Redding, Brady had an affinity for communicating with TAMS students, parents, and the public. He was a true asset as a recruiter, public relations spokesperson, and as ultimate administrator of the Academy (Hurley, 1995; Miller, 1995).

Brady received his bachelor's and master's degrees from North Texas and obtained a doctorate from the University of Texas. For three years, he served as the Chair of the Chemistry Department, and in 1987, he was designated a Regents Professor of Chemistry
in honor of an outstanding record of teaching and research in organic chemistry. In addition to the Regents Professor designation, Brady received the W.T. Dougherty Award from the Dallas-Fort Worth Chapter of the American Chemical Society and had been named a Student Association Honor Professor (Student Handbook, TAMS Departmental Archives, 1989).

Under Brady's leadership, the Academy would undergo great expansion. Brady would take a staff comprised of "a handful of people" and increase the department to between twenty-five and thirty employees (Brady, Interview with author, 1995). Brady would also improve communication within the program by structuring weekly staff meetings and encouraging interaction between the Associate Director for Student Life and the newly appointed Associate Director for the Academic Program (Brady, 1995).

Tom Brady proved a dedicated, successful director who made important contributions to the Academy. During his tenure, staffing was expanded, recruiting efforts were strengthened, the Director of Admissions was selected, and summer research opportunities for TAMS students were established on a large scale. Brady took command of an embryonic program and left behind a reputable Academy and a larger, more stabilized organization (Donahue, 1995; Hurley, 1995; Miller, 1995; Stream, 1995).

Manus Donahue

Before his selection as the Associate Director for Academic Programs, Manus Donahue had already played an active role within the Academy. Donahue had participated in the TAMS Host Family Program and helped to create and teach a special biology
Manus Donahue brought scientific credibility to the program. Having been widely published, having received over one million dollars in grants for research projects, and enjoying an excellent teaching reputation from students and administrators alike, Donahue appeared a perfect fit for the Academic Associate Director post. Under Donahue's guidance, the TAMS academic program underwent subtle, but highly important changes (Brady, 1995; O'Donovan, 1995; Student Handbook, TAMS Departmental Archives, 1989).

Annetta Ramsay

Prior to coming to the TAMS organization, Annetta Ramsay had spent eight years working in the housing departments at two universities—Southern Methodist University and the University of North Texas. Immediately before accepting the TAMS Associate Director for Student Life position, Ramsay had completed a three-year stint as the Associate Director for Residence Life in the UNT Housing Department. In that capacity, and in previous professional experiences, Ramsay served as an administrative disciplinarian, crisis case manager, and staff trainer and developer. Ramsay earned dual bachelor's degrees at Southern Methodist University where she was also selected Outstanding Senior Woman. Ramsay obtained master's and doctorate degrees in Counseling and Student Services at UNT. Ramsay was also a Licensed Professional Counselor and National Certified Counselor. In addition to her educational and professional credentials, Ramsay was selected for the prestigious UNT Community
Award for significant contributions for the betterment of the UNT campus community (Student Handbooks, TAMS Departmental Archives, 1989 and 1990).

Annetta Ramsay was directly responsible for the formation of a solid, successful student life program. Through the first five years of the TAMS program, Ramsay would be the sole TAMS administrator to remain in her original position. Directors would change, the student enrollment would continue to grow, and new administrative positions would be added, but Ramsay would "provide the glue that held the TAMS organization together" (Hurley, Interview with author, 1995). Her contributions to TAMS were immeasurable and indisputable (Brady, 1995; Hurley, 1995; Jungjohan, 1995; Miller, 1995; Redding, 1995).

**Jean Schaake**

Other than Annetta Ramsay, Jean Schaake was the only person to serve in the same capacity with the TAMS program from 1987 through 1992. Schaake, Associate Dean of the College of Arts and Sciences, was selected to chair the Curriculum Committee (Miller, 1995; Schaake, 1995).

Under her direction the Curriculum Committee would perform numerous, varied functions vital to the TAMS program. In the beginning, Schaake and her committee took on the critical task of developing the curriculum description to be used to gain legislative approval. During this same time the committee designed the initial application process as well as the interview paperwork to be utilized. Not until the establishment of the Director of Admissions position would the Curriculum Committee cease coordinating the selection process (though its members would continue to be active participants) (Redding, 1995).
The ultimate reputation of the TAMS program would primarily rest on the caliber of academic opportunities afforded TAMS participants as well as the evidenced educational performance of program graduates. Jean Schaake would lend exceptional support to the initial academy directors and TAMS administrators by laying a strong foundation for the selection process and the curriculum. This foundation provided a strong framework on which to build as subtle transformations in the program became warranted (Brady, 1995; Miller, 1995; Redding, 1995).

Richard Stream

Selected during in the program's fifth year, Richard Stream became the first TAMS Director of Admissions. Described as an outgoing, genuinely friendly man, he seemed a natural choice for the position. Stream worked very well with high school students and their parents. He also enjoyed travel and effectively met the challenges of an arduous, on-going recruiting mission that would take him to the far corners of the State of Texas numerous times (Brady, 1995).

With knowledge gained from his involvement on the UNT Pre-medical Committee and previous experience serving on the Texas Medical Branch School in Galveston's admissions committee, Stream would streamline the TAMS admissions process, successfully increase minority participation in the Academy, increase the regional and national exposure of the program, and would free the director to focus on new challenges. Richard Stream offered tireless dedication to the program. Tom Brady, Stream's
supervisor, would note, "He did a great job and was wonderful to work with" (Brady, Interview with the author, 1995).
CHAPTER VII

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

FOR FURTHER RESEARCH

Summary

This study offered a historical analysis of the significant events leading to the establishment of the Texas Academy of Mathematics and Science, the evolution of the program through 1992, and a depiction of the contributions of the key individuals impacting upon the program's development. The subject was introduced by describing the historical perspective of early college entrance and acceleration in the American educational system. The establishment of residential programs for mathematically and scientifically precocious high school youths was also examined.

Primary data were examined through the historical research techniques of external and internal criticism. Data included official records, bulletins, catalogues, general publications, newsletters, Advisory Board and committee meeting minutes, as well as personal papers, memorandums, reports, letters, videos, and documents from the files and archives of the TAMS office, the UNT College of Arts and Sciences, and the University of North Texas Archives. Other primary sources included 22 interviews conducted with former and current UNT and TAMS administrators, faculty, staff, and Advisory Board members. In addition, a wide selection of professional publications, journal and
newspaper articles (many of which were written by the same individuals interviewed) were utilized.

From its historical origins, the concept of acceleration within the American educational system has met sporadic support and opposition. In early American colleges, the practices of early entrance and acceleration were common. However, converging social, political, and economic conditions mounting through the 1920's contributed to the development of the practice of the age-in-grade lockstep still prevalent in the American curriculum today.

Demands have been placed on the citizenry from two World Wars, from the national scare emanating from the space race with the Russians following the Sputnik launch, and from the state of alarm reached in the late 1970's and early 1980's when national studies found American students alarmingly deficient in basic math and science skills when compared to most other industrialized nations. From this increasing concern, much national attention would be focused upon improving the American curriculum and devising special educational opportunities to better cultivate the talents of mathematically and scientifically gifted youth.

From these nationally perceived needs and this race to become more technologically competitive, which the state of Texas was also undergoing in the 1980's, James Miller would become inspired to devise a unique accelerative educational prototype which combined the last two years of high school with the first two years of college. Miller's brainchild would form the basis for the TAMS model. Combining his personal experience with research on the University of Chicago early admissions program, the Ford
Foundation early admissions program, and the existing North Carolina School of Mathematics and Science and the Louisiana School of Mathematics, Science and the Arts, Miller, with support from Dean Tom Preston, President Alfred Hurley, and members of a special Honor's Program Review Committee, developed the initial TAMS proposal.

During the period when the initial development of the TAMS proposal was underway, E. L. Langley, then president of GTE Southwest, became aware of and endorsed the project. Soon additional metroplex business leaders and key Texas legislators, including Speaker of the House, Gibson Lewis, became involved in the enterprise.

Concerted efforts were undertaken by numerous individuals from the UNT campus, from the Dallas and Fort Worth business communities, and from Texas legislators. Representatives of such organizations as the Texas Association of School Boards, the Texas Coordinating Board, the Texas Education Agency, and the Texas Association for the Gifted and Talented would lend support and guidance. Under the direction of Walt Parker, Gib Lewis, Senators Truan and Glasgow, and Representative Horn, House Bill 2079, establishing the Texas Academy of Mathematics and Science, was introduced, was met with uncontested support, and was signed into law on June 23, 1987.

From 1987 through 1988, exhaustive efforts were undertaken to prepare for the inaugural class. Rogers Redding, the first director of the program, worked diligently with members of the Curriculum and Student Life committees to develop those components of the program as well as the admissions process. Internationally acclaimed educator, Julian Stanley, would become an important consultant, external validator, and later TAMS
Advisory Board member. Input from the North Carolina and Louisiana programs, among other sources, was also solicited.

By August 1988, the inaugural class began the TAMS program. By the end of 1989, the program had been deemed a success. Though adjustments would be made in both the academic and student life components, the overall academic performance of the first class and their evaluated satisfaction with the experience validated this historic act of educational entrepreneurship.

In addition to the planning, coordination, and preparations made to welcome the first class, an ambitious funding campaign had been undertaken. Headed by E. L. Langley, Trammel Crow, James Muro, and Nat Irwin, the campaign generated over $500,000 in financial support—enough to fund the first two years of operation. Also during this period, the first advisory board had been established, lending important guidance and networking support for the program.

From 1989 through the end of Academic Year 1992, the program would undergo numerous changes. Legislative funding for the Academy was established in the 71st Texas legislative session. The TAMS population grew from the 88 members of the inaugural class to the first full class of 335 students admitted in the Fall of 1991.

Traditional events such as Convocation, the Teachers Recognition Dinner, the Student Life Awards Ceremony, Blue Moon Saloon, the Academy Prom, and Academy graduation ceremony would evolve. Academy participants would begin to successfully compete in the National Merit Scholarship Program, the local Summer Research
Scholarship Program, the Houston Area Resource Center Internship Program, and the Westinghouse Talent Search.

As the program became better known and respected on the national level, TAMS graduates enjoyed increasingly greater opportunities to compete for significant scholarships at Texas A & M University, the University of Texas at Austin, and other schools in Texas, as well as the many prestigious schools on the East and West coasts and throughout the United States.

To better meet the needs of the growing class populations, significant staff expansion would take place. Starting with a Director, Associate Director for Student Life, three full-time and eight part-time staff members, the program would evolve to more than thirty full and part-time employees by 1992. The Admissions and Recruitment area would also become a separate, independent component rather than an additional function of the Curriculum Committee.

Establishment of the Director of Admissions position would lift a great burden from the TAMS Director position. By 1992, the TAMS program would enjoy the leadership of a Director, Associate Director of the Academic Program, Associate Director of the Student Life Program, and Director of Admissions and Recruitment to form the nucleus of its administrative team.

Important satellite programs were spawned by TAMS, which directly benefitted the youth of Texas. Ann Lupkowski had established the "Texas Honors Group," an outgrowth of the Johns Hopkin's SMPY program. The Intensive Mathematics Institute, Julian Stanley Mentor Program, and the Summer Opportunities for the Academically
Ready (SOAR), the latter directed by Michael Sayler of UNT, were all supported by the TAMS program.

In June of 1992, the Academy also became involved in the Duke University Talent Identification Program by hosting one of the Texas Talent Identification ceremonies. The sponsorship or involvement of TAMS in all of these efforts afforded an opportunity to market the program and to encourage the potential of mathematically and scientifically precocious youngsters with hopes that they would one day become TAMS participants.

From the first class through 1992, the TAMS students steadily evidenced improved academic performance and acclimation to the program and campus environment. Though initially TAMS participants did not want to be identifiable on the UNT campus, this identification quickly became a source of pride. And, in successfully transitioning with a traditional college population, the TAMS students would attain numerous, highly visible leadership roles and academic honors in competition with their older peers.

From candid evaluations, offered by program creators during the course of interviews with the author, and from first TAMS participants (included in the evaluative study conducted by the UNT Center for Collaborative Research), a solid, general report of success for the program emerged. Plaudits from Julian Stanley, respected authority on programs for the gifted and talented, would include the premise that the TAMS program was the superior model for all residential programs for mathematically and scientifically gifted high school-aged youth (Stanley, 1991).

In 1992, the TAMS program was selected for the "Excellence in Higher Education Award" given by the Association of Texas Colleges and Universities. Selected from
twenty-nine entries, TAMS was honored for the outstanding contributions it had already made to higher education within the State of Texas. From 1987 through 1992, the Texas Academy of Mathematics and Science metamorphasized from concept and legislative birth to become an award winning, nationally acclaimed model.

Conclusions

Based on the findings of this study, the following conclusions were reached:

1) More than sixty years of empirical study, conducted in regard to the appropriateness of early college entrance and accelerative opportunities for the gifted, reflect solid evidence supporting the legitimacy and success of both. It is imperative that educators continue to conduct historical research and make written records of important strategies and programs for developing the potential of mathematically and scientifically gifted students.

2) Historically, social, economic, and political events have directly impacted widespread, societal acceptance of accelerative educational programs. Nationally publicized studies released in the late 1970's and throughout the 1980's, underscored the inadequacies of the American educational system to produce mathematically and scientifically competitive graduates. The tide of public concern would serve as the impetus for the creation of residential programs for mathematically and scientifically able high school-aged youths.

3) Though current economic and political changes, stemming from a persistent recession, disappointing corporate profits, and massive cuts in the defense industry, are resulting in the decline of science and engineering jobs, the predicted demand for engineers
and scientists projects the need for major growth. The Bureau of Labor Statistics predicts a 50% increase in engineering jobs by 2005. The National Science Board projects strong growth in technical operations, and the Oak Ridge Institute for Science Education forecasts a shortage of scientists and engineers by 1997. The expansion of high-tech industries and exciting new technologies are emerging world-wide. As the world confronts increasing challenges in dealing with the environment, the search for energy sources, technologies in information, and newly evolving viruses and disease, continued demands will be placed upon science and technology fields. The demand for professionals in these fields will continue to grow. It is essential to cultivate the minds of American youth. To fill the wide variety of jobs demanding mathematical, analytical, and problem solving skills, America must develop the full potential of every segment of its society, particularly the gifted (Campbell, 1994).

4) The unique TAMS model would offer many advantages compared to other public, residential programs for mathematically and scientifically gifted youth. TAMS was highly cost effective. Situated on a university campus, using existing facilities, new construction was not needed to establish the program. Utilizing experienced college faculty, the depth and breadth of teaching and research experience were substantial. A strong liberal arts education prepared graduates to successfully compete for selection to prestigious universities nationwide. And, the opportunity to complete the last two years of high school and the first two years of college concurrently, as well as the opportunity to accrue research experience prior to graduate studies, afforded the TAMS graduates a significant, competitive jump on their professional careers.
5) Of the existing residential programs established to meet and develop the needs of mathematically and scientifically gifted youths, internationally acclaimed Julian Stanley purports the Texas Academy of Mathematics and Science model to be the "academically sounder, less politically vulnerable, and more cost-effective version" (1991, p. 771). An advocate of rapid acceleration strategies and personally involved in the establishment of eleven such programs, Stanley (1991) strongly advocates the cloning of the TAMS program and believes it to be the superior model.

Recommendations

Based upon conclusions reached through this study, the following recommendations for further research are made:

1) It is recommended that a comparative analysis be conducted on all existing American residential programs for mathematically and scientifically gifted high school aged youths. The general description, cost, and effectiveness of each approach should be compared, contrasted, and evaluated.

2) It is recommended that a longitudinal study be initiated to track the achievements of TAMS graduates, and to determine:

   a) what successes they have experienced and what contributions they had made;

   b) if these individuals remained in mathematics or science career fields;

   c) what percent actually remained in or returned to Texas to pursue their careers; and
d) what impact this accelerative program had on its participants (including social, emotional, and psychological implications).
Research Questions

To describe the development of the TAMS program at the University of North Texas, answers to the following research questions were sought:

1. What was the general description of the TAMS program?
2. What was the purpose of the TAMS program?
3. What accelerated or enrichment programs for mathematically and scientifically precocious high school-aged students influenced the development of the TAMS model?
4. What was the chronology of major events leading to the creation of the TAMS program?
5. What steps were undertaken to gain legislative support for the TAMS program?
6. What were the political considerations and what was the political climate at the time legislative support was being sought?
7. Was there continued legislative support for the program from 1987 through 1992?
8. How was the organizational structure of the TAMS administration devised and who was first selected to comprise it?
9. How was the TAMS program funded?
10. Were there changes in the funding process for academic years 1988-1991?
11. What admissions process was developed to select academy participants and how did it evolve through 1992?
12. What system was incorporated into the selection process to ensure a
diverse student population?

13. What formula was used to determine the total number of TAMS
participants accepted each year?

14. What criteria were used to score candidates or generate a candidate
profile?

15. What qualities, aptitudes, or abilities were sought in potential TAMS
participants?

16. Who comprised the TAMS admissions committees from 1987-1992 and
how were these individuals selected?

17. How was the TAMS curriculum determined?

18. Who was involved in creating the TAMS curriculum?

19. What academic disciplines were represented in the curriculum and what
specific courses were required of participants?

20. What elective course work was offered to academy participants?

21. Was the TAMS model seen solely as an acceleration model or a
combination of an acceleration and enrichment model?

22. What was the organizational structure developed for the student life
program?

23. How did the student life staff evolve from 1987 through 1992?

24. What student life policies were implemented to create an in loco parentis
environment?
25. What changes did the student life program undergo from 1987 through 1992?

26. What types of co-curricular learning opportunities were TAMS participants afforded through 1992?

27. What disciplinary due process system was implemented to deal with student misconduct through 1992?

28. What evaluation process was utilized from 1987-1992 to determine the success or weakness of the program?

29. What were the results of the evaluations for years 1987-1992?

30. Who were the people considered most influential in the creation and evolution of the program?

31. What were the implications for research and practice?
Interview Guide

Questions For All

1. Having received the interview questions in advance, please indicate which sections you feel qualified or comfortable answering.

2. What was your connection with the Texas Academy of Mathematics and Science program?

3. What years were you associated with the TAMS program?

4. What were the purpose and goals set forth by the TAMS program?

5. What similar accelerated or enrichment programs for mathematically and scientifically gifted high school aged youth influenced or impacted the development of the TAMS program? Please describe what you know about these programs?

6. Who were the people involved considered most influential in creating and implementing the TAMS program?

7. How was the organizational structure of the TAMS program devised? Who helped create this structure? Who was first selected to comprise it?

8. Having seen the "Prospective Individuals to be Interviewed" sheet, do you suggest any additional names of people that should be interviewed? Do you recommend any other informational sources?

Chronology of Major Events, Seeking Legislative Support, and Program Funding

9. Describe the chronology of major events leading to the implementation of the TAMS program.
10. What were the political considerations and the political climate at the time legislative support was being sought?

11. Describe the legislative support, or lack there of, of the TAMS program from 1987-1992.

12. How was funding for the TAMS program achieved?

13. Were there changes in the funding process from 1987-1992?


15. Are there additional questions you feel should have been asked pertaining to this area? Is there additional information you would like to share?

**Admissions Process**

16. Please describe the organizational structure of the admissions program during academic years 1987 through 1992.

17. What admissions process was developed to select academy participants initially? Who created this model? What was the basis of this model?

18. Did the TAMS selection process attempt to reflect the demographic, ethnic, racial, or sex distribution of the total applicant pool or the state of Texas? What attempts were made to insure a diverse population?

19. Was a formula used to determine the total number of students for the classes of 1987, 1988, 1989, 1990, 1991? Please describe the process used for each and the results.

20. What criteria was utilized in the TAMS selection process? What was the basis for the use of this criteria?
21. What were the general areas being evaluated in each applicant's file? Describe examples of experiences or opportunities students may have had that reflected these areas being assessed.

22. Who comprised the initial TAMS admissions committee? Describe the role each individual played in the process and how the membership of this committee changed from 1989-1992.

23. What were the primary qualities, aptitudes, or abilities being sought in potential TAMS participants?


25. Are there additional questions you feel should have been asked pertaining to this area? Is there additional information you would like to share?

**Academic Program and Faculty**


27. Describe the TAMS curriculum.

28. How was the curriculum determined?

29. Who was involved in creating the TAMS curriculum?

30. What instructional theory or philosophy served as the foundation for the TAMS curriculum?

31. What academic disciplines were represented in the curriculum?
32. What specific courses were required of first year TAMS participants? What, if any electives were offered?

33. What specific courses were required of second year TAMS participants? What, if any electives were offered?

34. Did any changes in curriculum requirements take place during the 1988, 1989, 1990, 1991 academic years? If so, please describe.

35. Was the TAMS program seen solely as an accelerated program or a combination of an accelerated and enrichment program? Please elaborate.

36. What are the skills or competencies the TAMS program strived to foster in its' graduates?

37. What technological resources were afforded TAMS students from 1987-1992?

38. What types of teaching methodologies were utilized from 1987 through 1992?

39. How were faculty members selected and recruited for the program?

40. What special compensation or recognition did faculty members receive for participating in the TAMS program?

41. How was departmental support solicited for the program?

42. How did individual departments benefit from affiliation with the TAMS program?

43. What types of co-curricular learning opportunities existed for TAMS participants (i.e. mentorship programs, on-going seminars or guest lecturers, opportunities for independent or group research, etc.).

44. Are there additional questions you feel should have been asked in this section? Is there additional information you would like to add?
Student Life Program

45. Who was involved in creating the student life component of the TAMS program?

46. Describe the initial philosophy and goals of the student life program. Did it change from academic years 1988-1991?

47. Describe the organizational structure of the student life program (during academic years 1988-1991).

48. What was the ratio of academy participants to student life staff in 1988? Did this change within the next four years?

49. What student life policies were implemented to create an in loco parentis environment?

50. What events or aspects of the student life program were created to emulate traditional high school level events?

51. What unique programs were created to become special TAMS traditions?

52. What types of co-curricular learning opportunities or student life activities were TAMS students afforded from 1988-1992?

53. What support services were made available to help these students adjust to college life and cope with any emotional, psychological, or physical difficulties?

54. What disciplinary due process system was developed to deal with student misconduct from 1988-1992? Please describe the evolution of the system during this time.

55. Are there any additional questions you feel should have been asked in this section? Would you like to provide any additional information?
Evaluation Process and Results

56. What evaluation process was utilized from 1988-1992 to determine the effectiveness of, and satisfaction with the TAMS program through the spring semester 1992?

57. What were the results of these evaluations for academic years 1988 through 1991?
AN ACT

relating to the establishment of academies of mathematics and
science for advanced high school students.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Chapter 105, Education Code, is amended by adding
Subchapter H to read as follows:

SUBCHAPTER H. TEXAS ACADEMY OF MATHEMATICS AND SCIENCE

Sec. 105.95. ESTABLISHMENT; SCOPE. (a) The Texas Academy
of Mathematics and Science is established as a division of North
Texas State University for the following purposes:

(1) to provide an enriched school for gifted and
talented high school juniors and seniors to complete their high
school education and to attend college courses for credit;

(2) to identify exceptionally gifted and intelligent
high school students at the junior and senior levels and offer them
a challenging education to maximize their development;

(3) to provide a rigorous academic program emphasizing
mathematics and science, but also including a strong and varied
humanities curriculum; and

(4) to reduce the shortage of mathematics and science
professionals in this state.

(b) The academy is a residential, coeducational institution
for selected Texas high school students with interest and potential
in mathematics and science under the control and management of the
board of regents of the university. Faculty members of the
university shall teach all academic classes at the academy.

(c) A student of the academy may attend a college course
offered by the university and receive college credit for that
course.

(d) The board of regents of the university shall set aside
adequate space on the university campus in Denton to be used for
the operation of the academy and to carry out the purposes of this
subchapter.

(e) The academy is not subject to the provisions of this
code, or to the rules of the Central Education Agency, regulating
public schools, except that:

(1) professional employees of the academy are entitled
to the limited liability of an employee under Section 21.912 or
21.914 of this code;

(2) a student's attendance at the academy satisfies
compulsory school attendance requirements; and

(3) for each student enrolled, the academy is entitled
to allotments from the foundation school program under Chapter 16
of this code as if the academy were a school district, except that
the academy has a local share applied that is equivalent to the
local share assignment of the Denton Independent School District.

Sec. 105.96. SUPERVISION BY ADVISORY BOARD. (a) In
operating the academy the board shall consider the advice of an
advisory board composed of nine members.

(b) Each of the following shall appoint one member to serve
on the board:
(5) a formula of admission that ensures the admission
of students from the various geographical areas of the state; and
(6) acceptance of nominations for and the selection of
students to be admitted to the academy.
(g) The advisory board shall conduct an annual evaluation of
the programs of the academy.
(h) A rule recommended by the board under Subsection (f) of
this section shall be consistent with the law and, if adopted,
shall be enforced by the staff and faculty of the academy.
Sec. 105.97. PROGRAM AND OPERATION. (a) The academy shall
operate on the same fall and spring semester basis as the
university. Full-time students of the academy must be enrolled for
both the fall and spring semesters.
(b) In addition to academic classes, the academy may offer
short courses, workshops, seminars, weekend instructional programs,
summer programs, and other innovative programs.
(c) The pupil-teacher ratio in all regular academic classes
at the academy may not exceed 30 students per classroom teacher,
except that the pupil-teacher ratio may exceed that limit in
programs provided under Subsection (b) of this section, in physical
education courses, or in special enrichment courses.
Sec. 105.98. EXTRACURRICULAR ACTIVITIES. The academy may
offer any extracurricular activity that a public secondary school
could offer. Students attending the academy may participate in all
extracurricular activities sanctioned by the university
interscholastic league.
Sec. 105.99. ELIGIBILITY. (a) Except as provided by
(1) the chairman of the State Board of Education;
(2) the commissioner of higher education;
(3) the president of the Texas Association of School
Administrators;
(4) the president of the Texas Association for the
Gifted and Talented;
(5) the governor;
(6) the lieutenant governor; and
(7) the speaker of the Texas House of Representatives.

(c) The president of North Texas State University shall
appoint two members to the advisory board.

(d) A member of the board serves for a term of six years,
except that the original board members shall draw by lot for terms
of two, four, or six years. If reappointed, a member may serve for
more than one term.

(e) A member of the board may not receive compensation for
the performance of duties on the board, but a member is entitled to
reimbursement for actual and necessary expenses incurred in
carrying out official duties from funds appropriated for the
academy.

(f) The board shall make recommendations to the director of
the academy concerning the following:

(1) admission criteria;
(2) extracurricular activities;
(3) programs of study;
(4) rules for the discipline of students and for the
management of the academy and academy programs.
Subsection (b) of this section, the academy shall admit only high school juniors and seniors.

(b) The academy may provide for an early admission year to allow the admission of a student who is not yet a high school junior if the abilities of the student warrant early entry.

Sec. 105.100. FUNDING. (a) The board of regents of North Texas State University is hereby authorized to use available funds or to enter into contracts and accept grants or matching grants for the purpose of establishing an academy of mathematics and science.

(b) Any money received by the academy shall be expended to further the functions and purposes of the academy listed in Section 105.95 of this code.

(c) This section does not prevent the board from accepting federal funds or money from any corporation or other private contributor for use in operating or providing programs to the academy.

Sec. 105.101. DIRECTOR. (a) The board of regents of North Texas State University may appoint a director of the academy who shall serve at the pleasure of the board.

(b) The director shall report to the provost of the university and shall have a seat on the council of deans.

(c) The director shall prepare an annual budget for the operation of the academy and submit the budget to the provost of the university.

Sec. 105.102. LIABILITY. (a) The liability of the state under Chapters 101 and 104, Civil Practice and Remedies Code, is limited for the academy and employees assigned to the academy and
acting on behalf of the academy to the same extent that the
liability of a school district and an employee of the school
district is limited under Sections 21.912(b), (c), and (d) and
21.914 of this code and Section 101.051, Civil Practice and
Remedies Code.

(b) An employee assigned to the academy is entitled to
representation by the attorney general in a civil suit based on an
action or omission of the employee in the course of his employment,
limits on liability, and indemnity under Chapter 104, Civil
Practice and Remedies Code.

SECTION 2. If funding is available, the board of regents of
North Texas State University may begin academic operations on
January 2, 1988, and the academy may admit not more than 100 high
school juniors for the fall semester of 1988.

SECTION 3. Subchapter Z, Chapter 51, Education Code, is
amended by adding Section 51.912 to read as follows:

Sec. 51.912. ACADEMIES OF MATHEMATICS AND SCIENCE. (a) On
approval of the Coordinating Board, Texas College and University
System, a public senior college or university, as defined by
Section 61.003 of this code, may establish an academy of
mathematics and science as provided by Subchapter H, Chapter 105,
of this code as a division of the institution.

(b) An institution may pay the expenses of an academy
established under this section by:

(1) using available funds or entering into contracts
and accepting grants or matching grants for the purpose of
establishing an academy; and
accepting federal funds or money from any corporation or other private contributor for use in operating or providing programs to the academy.

SECTION 4. The importance of this legislation and the crowded condition of the calendars in both houses create an emergency and an imperative public necessity that the constitutional rule requiring bills to be read on three several days in each house be suspended, and this rule is hereby suspended.
APPENDIX D

DISCIPLINARY FLOW CHART
Disciplinary System
Texas Academy of Mathematics and Science

Hall Level Decision
Violations of University or Academy policies which occur in or around McConnell Hall, and which would not normally result in probation, are heard by the Hall Director.

Student Judicial Board
The Student Judicial Board determines guilt or innocence and determines disciplinary action based on the incident at hand. When the nature of the case requires it to be heard by an impartial panel, rather than by an individual at the hall level, and to insure due process, the case may go to this board.

Appeal

Associate Director for Student Life TAMS

Director, TAMS

Assistant Dean of Students

Administrative Hearing
An Administrative Hearing is held by the Associate Director for Student Life or by the Assistant Dean of Students, depending on the point of appeals. Typically, cases involving theft, drugs, firearms, major vandalism, major assault, sex offenses, or burglary, should be heard in an Administrative Hearing.
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Books


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**Dissertations and Proposals**


**Interviews**

Allen, Dr. John Ed, chairperson of UNT Mathematics Department and member of TAMS Curriculum committee. Written response to interview questions supplied by author, September 1995.

Brady, Tom, second TAMS Director. Taped interview by author, April 5, 1995, Denton, Texas.

Bray, Carolyn, member of initial TAMS Student Life ad hoc committee. Interview by author, November 21, 1994, Denton, Texas.

Bush, Jean, UNT Budget Manager. Interview by author, June 6, 1995, Denton, Texas.

Diebel, Phil, UNT Vice President for Fiscal Affairs. Conversation with author, March 31, 1995, Denton, Texas.

Donahue, Manus, TAMS Associate Director for Academic Programs. Taped interview by author, May 8, 1995, Denton, Texas.
Hurley, Alfred, Chancellor and President of the University of North Texas. Taped interview by author, April 24, 1995, Denton, Texas.

Johnson, Cletus, first TAMS Hall Director and Student Development Specialist. Phone interview by author, December 15, 1994, Krum, Texas.

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