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Council on Technology Teacher Education

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# Table of Contents

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# A Survey of North Carolina Graduates in Technology Education from the Years 1989-1998

By

Aaron C. Clark & William J. Haynie, III

## Abstract

In the fall of 1997, the North Carolina Council on Technology Teacher Education determined that a need existed to survey previous North Carolina graduates from technology education undergraduate certification programs. Four universities participated in the survey that spanned the years from 1989 to 1998. The survey was developed by representatives from each of the universities within the state that offer a technology education undergraduate degree with teacher certification. The survey took place during the fall of 1998 with a mailing to over 100 graduates. The instrument was designed to solicit information about who is still teaching, or if they are not teaching, what fields did they go into and why did they leave the classroom. The survey focused on areas that included the value of mentoring, professional development needs, and ways universities within the state can improve degree programs.

## Introduction

During the 1997 fall meeting of the North Carolina Council on Technology Teacher Education (NC-CTTE), representatives from the four universities offering teacher certification programs in technology education (Appalachian State University, Elizabeth City State University, North Carolina Agricultural and Technical State University, and North Carolina State University) were concerned about retention of graduates as technology teachers. Also, members wanted to have feedback on the development and implementation of a mentoring program for first-year teachers. This program would be a statewide initiative sponsored by universities for teachers in technology education during their first year of employment. The purpose of the mentoring program is to help new teachers in areas associated with technology education in the hope that more first-year teachers will stay in education and not seek other forms of employment. Before such a program could be established information about graduates who are teaching and

those who have left teaching needed to be obtained. This information would allow technology education teacher educators within the state to identify target areas for development, modifications, and/or enhancements to improve teacher retention. This study was developed to yield background information on graduates from undergraduate teacher certification programs in technology education and seek information to help increase retention of new teachers.

## Methodology

The survey methodology utilized components from previous survey strategies used in other disciplines (Murray, 1994; Johnson, 1998). The process began by soliciting names and addresses of technology education graduates from 1988 to 1998 from each of the four North Carolina universities that certify technology education teachers. These universities included Appalachian State University, Elizabeth City State University, North Carolina Agricultural and Technical State University, and North Carolina State University. A committee from the North Carolina Council on Technology Teacher Education (NC-CTTE) developed the instrument during the spring and summer of 1998. Representatives from all four universities gave input and feedback during the development of the instrument (Nall, Henry, & Meszaros, 1987). Once final approval of the instrument was given by each of the four participating universities, the survey was mailed to the graduates in the fall of 1998. A follow-up postcard reminder was mailed two weeks after the initial survey mailing to increase the response rate. Listed below are the results from those graduates that responded to the survey (Braverman, & Slater, 1996; Lyberg, et. al., 1997) .

## Findings

A total of 110 graduates from these four universities who graduated from 1988 to 1998 were mailed the survey instrument. Thirty graduates (27%) responded to the survey, with 17 (14.5%) returned to sender by the US Postal Service for incorrect address.

The survey began by asking each participant to indicate the year they obtained their degree in technology education. The graduation of those participants who responded to the survey spans from 1989 to 1998. Table 1 displays these results.

**Table 1**

**The Year Participants Graduated with a Technology Education Undergraduate Degree (n=30)**

| Year | n | % |
|---|---|---|
| 1989 | 5 | 16.7 |
| 1990 | 5 | 16.7 |
| 1991 | 4 | 13.3 |
| 1992 | 2 | 6.7 |
| 1993 | 3 | 10.0 |
| 1994 | 1 | 3.3 |
| 1995 | 2 | 6.7 |
| 1996 | 4 | 13.3 |
| 1997 | 3 | 10.0 |
| 1998 | 1 | 3.3 |

The survey asked each participant if they were currently teaching technology education full-time on the date they received the survey instrument. Ten (33.3%) participants indicated that their current full-time job was in teaching technology education, 20 (66.7%) participants indicated that they did not teach technology education. The question also asked participants who

were not teaching technology education, what their current job title was? The job titles with the highest number of responses for the question were: Three (10%) participants indicated that their job title was in Engineering, while four (13.3%) said management, and two (6.7%) listed graduate students. Other listings were vocational teacher, CAD operator, drafting teacher, state board examiner, airline pilot, real estate agent, football coach, correctional officer, graphics teacher, office support, armed services, equipment servicing, and director of instructional technology.

The survey asked participants if their current job related to technology education and the training they received. Thirteen (43.3%) participants indicated that it did directly relate to technology education, and nine (30%) said that the training they received did not relate to their current job. Eight (26.7%) participants did not respond to the question.

Participants were asked if they were prepared for employment upon graduating with their technology education degree. Twenty-one (70%) participants indicated that they were prepared, while seven (23.3%) indicated that they were not prepared for employment. Two (6.7%) participants did not respond to the question.

The survey instrument asked participants if they have pursued or are planning to obtain a graduate degree. Thirteen (43.3%) participants answered that they are planning to obtain a graduated degree. Of these participants, one participant is pursuing or has obtained a Masters of Arts degree, six participants indicated they are pursuing or obtained a Masters of Science degree, and three participants reported obtaining or pursuing a Masters of Education degree. No participants are currently pursuing a doctorate degree.

The survey asked a series of five questions about current trends and issues related to technology education. These items asked participants to rate each topic on a Likert scale from 1

to 5. Participants were told that a rating of one represents strongly disagree, two represented disagree, three indicated no opinion, four indicated agree, and five represented strongly agree. Table 2 lists the overall means and standard deviations for each question. VoCATS was the only item that received a negative response.

**Table 2**

**Participants' Attitudes Towards Current Trends and Issues Related to Technology Education (n=30)**

| Question | M | SD |
|---|---|---|
| Profession is growing in a positive direction | 3.83 | .98 |
| Technology education degree is useful beyond education | 4.03 | 1.03 |
| More emphasis needs to be placed on skill development | 3.80 | 1.06 |
| Women are playing a more active role within the profession | 3.36 | 1.24 |
| VoCATS help improve instruction in technology education | 2.90 | 1.18 |

The survey asked participants another series of questions about teaching and the course(s) participants offer to their students. First, the survey asked each participant the number of years in teaching industrial arts and/or technology education. The average number of years for the 30 participants that responded to the survey was 2.75. Next, the survey asked participants that were currently teaching if they follow the state curriculum for technology education. Twenty (66.7%) participants indicated that they do follow the state adopted curriculum and two (6.7%) said that they do not. As a part of this question,

participants were asked what courses in technology education they offered on a regular basis. Table 3 lists the response rates for each course in technology education.

**Table 3**

**Courses in Technology Education Taught on a Regular Basis (n=30)**

| Course | n* | %** |
|---|---|---|
| Communications | 5 | 16.7 |
| Manufacturing | 1 | 3.3 |
| Structures | 1 | 3.3 |
| Principles of Technology | 2 | 6.7 |
| Technology Studies | 0 | 0.0 |
| Fundamentals of Technology | 4 | 13.3 |
| Exploring Technology | 3 | 10.0 |
| Other Vocational Classes | 7 | 23.3 |

*Note: Maximum frequency for each course is 30.

**Note: Maximum percentage for each course is 100.

The survey asked each participant about involvement in professional organizations. Eleven (36.7%) of the 30 participants that responded to the question indicated that they were active in a professional organization. The survey also asked which professional organizations they participate with on a regular basis. Epsilon Pi Tau had the highest response rate with five (16.7%) participants listing this organization. The Technology Student Association (TSA) had the second highest response rate with four (13.3%) participants listing the organization. Other

organizations listed only once were American Vocational Association, North Carolina Vocational Association, American Federation of Teachers, North Carolina Technology Education Association, Vocation Industrial Clubs of America, International Technology Education Association, GAMSEC (mathematics, science and technology mentoring program), Technology Education Collegiate Association, Airline Pilots Association, Retired Teachers of North Carolina, and construction related organizations.

The survey asked participants what activities they participate in for professional development. Many different activities were indicated, but three had the highest number of responses. Conferences/workshops was the highest indicated professional development activity with five (16.7%) participants indicating this area. The second highest was college courses with four (13.3%) indicating this area, and seminars was third with three (10%) indicating this professional development area. Other types of professional development activities mentioned were training, ALPA, TSA, curriculum alignment meetings, regional groups, NC Workforce conferences, NCTEA workshops, and internships.

The survey asked participants that were still teaching what factors keep them in the profession. Also, those participants that had left teaching, the survey asked why they left the profession. Table 4 shows the four factors with the highest response for each of these areas.

Next, the survey asked a series of questions about mentoring. The survey asked participants if their university provided a mentor for new teachers. Eight (26.7%) participants said that a mentor was provided for new teachers. Fourteen (46.7%)

**Table 4**

**Factors that Influenced Participants to Stay in or Leave the Profession of Teaching (n=30)**

| Factors | n* | %** |
|---|---|---|
| Why Participants stay in the Profession: | | |
| Schedule/Vacations/Hours | 7 | 23.3 |
| Students | 6 | 20.0 |
| Personal enjoyment | 5 | 16.7 |
| Inability to find job with equal pay/satisfaction | 2 | 6.7 |
| Why Participants Left the Profession: | | |
| Money | 8 | 26.7 |
| Politics/Administration | 5 | 16.7 |
| Students | 2 | 6.7 |
| Graduate School | 2 | 6.7 |

*Note: Maximum number for each factor is 30.

**Note: Maximum percentage for each factor is 100.

participants indicated that no mentor was provided and eight (26.7%) participants did not respond to the question. Then, the survey asked if having a mentor would have been helpful. Nine (30%) participants indicated that it would have been helpful and five (16.7%) said that it would not have been helpful. Sixteen (53.3%) did not respond to the question. The series of items ended by asking each participant how would a mentor have been helpful for a new teacher. The six comments provided by the participants concerned: Sharing of information and experience, share skills, help with day-to-day duties, classroom management, encouragement,

and course planning. Sharing of information and experiences had the highest response with three (10%) participants indicating this benefit.

The survey asked participants about their future career plans. Although many different career plans were given, Table 5 lists the four career plans with the highest response rates from participants. Other career plans included football coach, coordinate state board exams, architecture, Assistant Superintendent, and non-graduate degree.

**Table 5**

**Future Career Plans for Participants (n=30)**

| Career Plans | n | % |
|---|---|---|
| Teaching | 11 | 36.7 |
| Private industry | 10 | 33.3 |
| Graduate school | 6 | 20.0 |
| Learn computer skills/computer-related field | 4 | 13.3 |

The survey then asked participants how the universities could better serve graduates. Many suggestions were given, but the three with the highest response rates were as follows. Four (13.3%) participants indicated more student teaching experience and observations are needed. Three (10%) participants suggested better ways for getting certified or re-certified for courses. Also, three (10%) participants suggested better preparation for initial employment. Other suggestions included keeping in contact, help in updating skills, satellite graduate programs, course on vocations, more emphasis on technology, and increase the number of scholarships and financial aid given to students.

Next, the survey asked participants for the strengths and weaknesses of their degree program. Table 6 shows the five comments with the highest number of responses for each category.

**Table 6**

**Strengths and Weaknesses for Participants' Degree Program (n=30)**

| Category | n* | %** |
|---|---|---|
| Strengths of Program: | | |
| Instructors | 12 | 40.0 |
| Course variety/content | 7 | 23.3 |
| Caring/Supportive environment | 5 | 16.7 |
| Class size/ratio | 4 | 13.3 |
| Hands-on training | 3 | 10.0 |
| Weaknesses of Program: | | |
| Courses/Facilities not up-to-date | 7 | 23.3 |
| Lack of hands-on training/student teaching | 4 | 13.3 |
| Certain instructors and lack of field experience | 4 | 13.3 |
| Not in-depth enough on specific skills | 2 | 6.7 |
| Degree lacks flexibility | 2 | 6.7 |

*Note: Maximum possible number for each factor is 30.

**Note: Maximum possible percentage for each factor is 100.

The final item within the survey asked participants to list things that universities could do to help keep teachers in the classroom. The highest response came from 10 (33.3%) participants who stated universities needed to encourage better pay. Four (13.3%) participants indicated that more or better hands-on instruction needed to be taught in university classrooms. Three (10%) participants said that universities needed to be teaching more mainstream software/courses, and more training on discipline and classroom management. Other responses included teaching

towards certification; more flexibility in courses for credit; bring private industry into the classroom; more interaction with human resources; better administration; have better teachers; fund field trips; better preparation for initial employment; encourage better benefits; give the best possible education; ensure school officials have same expectations; train for working with special populations; decrease the amount of paper work; offer classes on educational law; teach creativity; develop a website for trading projects and teaching techniques; be involved with VICA; establish a mentoring program; raise awareness of the importance of vocational classes; maintain contact with graduates; and recruit students from mathematics, science, vocational, and technology.

## Conclusions

Many conclusions can be made from the descriptive information found within this study. However, the authors of the study consider the facts that only 27% of the total population surveyed participated in the study and that the type of information found was mainly qualitative (subject to personal feelings and attitudes at the time each participant fill-out the survey). This limits the amount and depth of inferences that can be made. Although these problem areas exist within the study, the study's authors do submit the following conclusions.

First, given the number of graduates that have left the profession for other types of employment, one could suggest that a degree in technology education is useful beyond its original intent. Also, it appears that about one-third of graduates remain in educational related areas (i.e. teaching, administration, support services). This conclusion is further supported by the participants' responses to items concerning future career plans. About one-third indicated that teaching is still in their future career plans.

A second conclusion focuses upon graduates being properly trained for the profession. Although some participants within the study suggested ways to improve the degree, the majority (70%) is happy with the degree they obtained and the training they received. This is also reinforced by the number (43.3%) of participants wanting to continue their education.

The mean scores for the five Likert items led to the conclusions that: Technology education is growing in a positive direction, the degree applies well in other careers, women are becoming more involved and teachers feel that programs should give more emphasis to skill development. The only issue that received a low rating was VoCATS. VoCATS is the statewide assessment process for improving vocational programs. Each class is given a pre and post-test for evaluating student knowledge gains after completing the course. Teachers did not feel that VoCATS is a positive means of improving the profession. More research is needed to better understand how the profession can improve this area for our teachers.

Next, one could presume from the data found within this study that the main reason technology education teachers leave the profession is due to low salaries. This conclusion is further supported by the fact that participants indicated a need to have universities support teachers in the field by helping increase both salaries and benefits.

Mentoring is defined by the researchers as a process of supporting new teachers during their first years of employment. Few participants indicated that a mentor was present during their first years of teaching, nearly a third of the participants agreed that having a mentor would be helpful in many different ways. The researchers of the study suggest that universities study the potential benefits of establishing a mentoring program for new teachers to help with the retention of new teachers. NCATE guidelines encourage follow-up of all graduates obtaining a degree from an accredited program.

It is easily concluded within the findings of this study that technology education programs from universities within the state have two major strengths. These strengths are in the faculty that teaches technology education related classes and the subject matter that makes-up a technology education degree program. The hands-on instruction and the learning environments are factors that keep students in the degree programs. The one weakness that technology teacher educators need to address is the updating of existing facilities to meet current technologies.

In conclusion, this study gives technology teacher educators a "snap-shot" as to what our graduates are doing once graduated from our programs. It is suggested that further research be conducted to include more students' responses so that inferences can be made as to what exactly our students are doing when they graduate. The researchers suggest that this be an ongoing effort for the North Carolina Council on Technology Teacher Education and that other states become actively involved in this type of data gathering information. If the profession is to improve its teacher certification programs, we need to constantly stay focused on the future and seek information from our past.

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# TRANSFORMATIONAL LEADERSHIP: A NEW MODEL FOR DEVELOPING PROFESSIONALISM IN TECHNOLOGY EDUCATION

By

Robert Wenig

## Introduction

Check into the lives of the super-successful people, organizations, institutions, and businesses and what single positive factor stands out? The answer is "Leadership" (Schuller,1977). And what is leadership? Most people have some personal definition of leadership. We have witnessed individuals who made things happen to achieve exceptional results. These people have some special leadership quality, for they are able to establish a shared vision and empower others to join in the quest for excellence (Gardner, 1990). The big question is, what do the leader and the organization do to propel individuals toward the summit of success? The information found in this *ex post-facto* research report provides a possible answer and framework for developing professionalism in technology education.

## Transformational Leadership to Professionalism: A Rationale

The relationship between leadership and professionalism is direct and powerful. Donald Maley, (1985) one of technology education's top leaders and professionals agreed when he stated, "There is no way we can separate leadership from professionalism in education" (as cited in Maryland Technology Teacher Vol. 2, Winter 2000). The profession identifies a professional as an individual who gives to the organization. There must be a better way for developing professionals, for association memberships are low and dropping.

A new and powerful rationale for developing professionals in technology education begins by contrasting Burns' (1978) transactional leadership with transformational leadership (see Figure 1). Contrast (in Figure 1) the traditional definition of a professional or professionalism with the proposed new rationale that emerges from transformational leadership.

The foundation for developing a robust conceptual rationale for professionalism is anchored to the definition of transformational leadership. It provides the dynamics of professional behavior, which occurs best when leader-followers interact in such a way that results in mutually raising each other to higher and higher levels of motivation and morality. The key to this transforming relationship is that it mobilizes and inspires both leaders and followers so they join forces to achieve a mutually agreeable goal. Burns also suggested that the dynamics foster moral fortitude in the leader-follower relationship because the level of human conduct (professionalism) is constantly raised. In essence, it is not what the individual gives the organization (traditional leadership-professionalism), but what the organization can do for the individual (transformational leadership-professionalism) to increase his/her human condition (Kennedy, J. F. & Peters, 1992).

**Figure 1: Contrasting Leadership Types with Definition of Leadership and Professionalism**

| Leadership Type / Definition | Transactional or Traditional | Transformational or Visionary |
|---|---|---|
| **Leadership** | The traditional definition using command and control. The relationship between the individual and the organization is just a contract to do some specific task for pay. The organization only gets involved when employees must meet job requirements. Example, teacher /professor at school/university. It's a one way contract. | A definition that is mutually beneficial and empowering to all. Its dynamics transform both the organization and the individual to higher and higher levels of motivation and morality. The genius lies in the manner in which organizations see and act on their own values and motivation as well as their members to achieve common goals. Individual development is the key. |
| **Profession-alism** | The traditional definition of professionalism is based on what the individual gives, offers or brings to the organization. It is promoted by the organization as a duty, as a requirement, and/or as a demand. | All humans want to be accepted, appreciated and valued plus experience a positive feeling of making a contribution to their field. Professionalism in a transformational organization occurs when exciting strategies are used to build and develop the human condition. It's what the organization does for the individual that counts. |

## Problem

Traditional professionalism is judged by organizations in terms of what a member gives or has to offer. It is promoted by the profession as a duty, as a requirement, and/or as a demand. Results from sociological research ( Gardner,1990; Robbins,1992; Schwartz, 1983) support the fact that today, individuals are more attuned to their own needs, interests and desires than organizations. We know in technology education that the professional association membership is less than 10 percent of the potential and dropping. Even those who join don't stay or fail to attend meetings.

As associations encounter increasing apathy and differing needs and wants of members and potential members, how can they promote the type of professionalism that is attractive and worthwhile? Clear evidence exists (Maslow,1954; Robbins,1992; Rogers,1961) that all humans want to be accepted, feel they are appreciated and valued, plus experience self actualization. Low numbers

in professional associations and general apathy toward professionalism require a new solution. One way is to promote professionalism as the best medium for members to gain personal well being (the state of being well, happy, and successful) through their professional association ( McGregor, 1960).

The experts on self development and leadership (Bennis. 1989; Covey,1989; Robbins,1992; Schwartz,1983; Waitley,1983 &1987; Zigler, 1986) agree that humans naturally seek the best possible life and want to enjoy the benefits from their labor. With the over emphasis on applying the traditional definition of professionalism, the professional associations are losing membership, which severely impacts on the growth and development of the profession of technology education. Succinctly, the problem is that the professional associations are not meeting the personal needs, interests and desires of their members because they are applying an inappropriate approach to professionalism.

## Purpose

The purpose of this study was to determine whether the intended and unintended results of the ITEA 1985, 1987, and 1989 International Leadership Development Symposiums could be used as a rationale for engendering transformational professionalism in technology education personnel.

## Research Questions

1. What were the combined intended evaluative results of the 1985, 1987 and 1989 Leadership Development Symposiums as determined by the following assessment instruments?
    a. End-of-symposium assessment instrument evaluated: objectives, presenters, facilities and operation and overall personal value to participants, and
    b. One year later, follow-up using the same assessment instrument.

2. What were the unforeseen evaluation results from the three Leadership Symposiums as determined by the following assessment processes?
    a. Open-ended comments from end-of-symposium assessment instrument, and
    b. Follow-up of participants to determine the number who entered professional association leadership positions.
3. Did the intended and unintended evaluative results from the three symposiums provide a framework for developing transformational professionalism in technology education?

## Methodology

### Historical Background

The Leadership Symposiums for ITEA developed from of the former American Industrial Arts Association (AIAA) l983-l986 Professional Improvement Plan (PIP). Planning for the first (1985) Symposium started during August of l984 when William E. Dugger, Jr. then President of AIAA, appointed this writer as chair of the Leadership Symposium Committee. The planning group included the following: James Bensen, Stout; William Dugger, Virginia Polytechnic Institute; Thomas Hughes, Virginia State Department of Education; and Milton Miller, then from The University of Missouri. This writer prepared the proposal and the 1985 and 1989 Symposiums were funded by the Technical Foundation of America and several technology education vendors. The 1987 Symposium was funded mostly by participants' tuition, some by commercial vendors and several by this writer offering selected grants to North Carolina Technology Education Association potential leaders.

**Recruitment**

An elaborate recruitment process was established to identify and select new and emerging association leaders from across America and Canada. The Symposium Director, this writer, wrote a letter followed by phones calls to all state and provincial association presidents describing the program objectives and activities of the one-week Symposium. The ITEA Board of Directors and especially the Regional Directors on the Board were enlisted the in recruiting process by making personal contacts. Once participants agreed to attend they were sent travel options, room and board forms and times to arrive and leave the Symposium.

**Population**

The first 1985 Symposium was held at the University of Wisconsin, Stout in July and attended by 50 selected participants from 21 states and the Canadian province of Nova Scotia. The second, 1987 Symposium was held in July at Camp Caraway, North Carolina and had 25 selected participants from 12 states across America and one from the Canadian province of Nova Scotia. The third, 1989 Symposium was held again at University of Wisconsin, Stout in July and attended by 28 selected participants from 14 states. The genders of the 103 participants from the three Symposiums were nine women and 94 males. Seventy five percent (77) of the participants were classroom teachers. The others consisted of 15 college professors and administrators, 8 doctoral students, one school principal, two chief state supervisors of technology education and two commercial technology education vendors.

**Program Design, Organization and Operation**

The conceptualization and design of the program emerged from the research identified above on personal leadership development. The three Symposiums ran on a five-day, 40 hour, 12-16 session program which was fast paced, extensive and varied to capture participant interest (see symposium schedule, Appendix A). The symposium started on the weekend during the latter part of July and ran either to Thursday or Friday noon. The typical training day started at 8:30 A.M. and ended by 9:00 P.M. The daily program (8:30-4:30) concentrated on personal and association leadership. The evening activities were devoted to a mixture of picnics, band concerts, and interesting technology education forums. On Wednesday evening a formal banquet was held with a highly polished after-dinner speaker/entertainer. At the two University of Wisconsin, Stout Symposiums the ITEA Board of Directors met at the same time which added tremendous impact (interaction at meals, recreational events, daily breaks and presentations) to the professional development of the participants.

Professional presenters were selected and matched with specific topics and time frames to capture uplifting dynamics. To assure top quality, the Symposium Director used a very successful business and industrial training model along with the best possible professional presenters for the funds available.

**Instrumentation**

The Symposium evaluation required the development, implementation, and an analysis of three instruments. These were as follows: (a) individual session evaluation form, (b) end of Symposium evaluation form, and (c) participant one year follow-up questionnaire. Information was collected as to the number of participants who assume professional association leadership positions.

**Individual Session Evaluation Form.** After each of the major sessions the participants were asked to complete and turn in the session evaluation instrument. The director of the Symposium reviewed these each evening to monitor how participants felt about the individual presentations and the total Symposium up to that time. Changes were made when possible.

**End-of-Symposium Evaluation Form (Intended and Unintended).** This was the major assessment instrument used to evaluate the symposium which was administered on the last day of the Symposium. The participants directly evaluated: objectives, presenters, facilities and operation and overall personal value of symposium. The direct part of the instrument used Likert type items (1 represented poor and 5 excellent on the scale). The indirect or open-ended part of the end-of-symposium assessment instrument asked participants to make written comments about how they personally felt.

**Follow-up Evaluation Form.** Approximately one year later the same end- of-Symposium evaluation form with record results was sent to the respective 1985, 1987, and 1989 participants. The data were compared from the initial and follow-up to determine gain or loss.

**Follow-up of Participants' Involvement in Association Leadership.** Information was collected on the number of participants who entered various leadership positions in technology education professional associations.

**Informal Evaluation.** During and months after the Symposiums plus at the ITEA conference participants' reception, many written and verbal comments were received. These are recorded in the results section of this study.

## Evaluative Findings

**Research Question One, Intended Results:**

Research question 1 a, and b, were answered by analyzing the four individual data tables found in each symposium instrument (end-of-symposium and one year later assessments) then collapsing the individual results into a mean average number. Data were collected from participants by their completing a 1-5 (1= poor to 5= excellent) Likert scale to determine how well symposiums' objectives, presenters, facilities and operation and overall personal value to participants were perceived. Table I shows the breakdown of that assessment data.

**Table I**
**Combined Evaluative Mean Averages (end of symposium and one year later) from the 1985, 1987, and 1989 ITEA International Leadership Development Symposiums**

| Year | N-100 Prtps. | End of Symp. M | One Year Later M* | Gain/Loss |
|---|---|---|---|---|
| 1985 | 48 | 4.5 | 4.56 | +.06 |
| 1987 | 24 | 4.42 | 4.48 | +.06 |
| 1989 | 28 | 4.40 | 4.47 | +.07 |

*Returns from administering the end-of-symposium assessment instrument again one year later for the 1985, 1987 and 1989 participants averaged 65 % from each year.

The analysis of the data in Table I showed three things. First, that there was no significant difference between and among the three evaluations from the symposiums. Second, the very high rating (4.4 or above) on each symposium indicated that results were consistently reliable. Third, the impact of each symposium remained the same after one year.

**Research Question Two. Unintended Results of Symposium:**

Research Question 2 a and b, were answered from the combined results of the three symposiums as determined by the following assessment processes:
(a) open-ended comments from end-of-symposium assessment instrument and (b) yearly follow-up of participants to determine the number who entered leadership positions in professional associations.

**Results of Research Question 2 a.** The total number of open-ended other comment statements were over a hundred for both the end-of-symposium evaluations and one year later follow-up. Figure 2 combines the pros' and cons' statements to eliminate duplication.

**Figure 2 Opened-Ended Other Comments from the Three End of Symposium Assessment Instruments and One Year Later Follow-Up Assessments.**

| Program Related | Personal Growth & Development | Association's Growth |
|---|---|---|
| Presentations outstanding | Best I've had in the past five years | All associations need this |
| Fantastic, hold every two yrs. | Most productive and rewarding week | ITEA should sponsor this yearly |
| Excellent information and sessions | Best personal experience that I have ever had | No doubt about ITEA's vitality, it has been felt and experienced here |
| Staff, organization and interaction was great | Helped me understand myself and help my state Assoc. | I wish there would be a follow-up symposium |
| Could see at the end how | Felt honored to attend, the very best in personal growth | the whole thing fit together |
| One hell of a job | Once in a life-time experience | Better than ITEA Conference |
| Note alone was worth tag price | Best professional experience of my professional life | All state officers should attend- Need more symps. |

Absolutely wonderful, I'll never forget the experience, built my self-confidence and awareness.

**Individual professionals grew together to form an electrifying whole**

**Cons/Suggestion for Improvement**

Too much material covered, need more free time in morning and afternoon, recreation, flex time, central recording of all sessions and for state groups to do planning, Too formal, don't schedule programs at night, and have better publicity for recruiting new people.

**Results of Research Question 2 b.** A more significant indication of the unintended benefits of the three symposiums was the number of participants out of 100 who were elected or ran for association offices either at the international and/or state/provincial level. Those who either ran for or were elected at the international level are seen in Tables II and III.

**Table II**

**Participants From the 1985, 1987, and 1989 Symposiums Who Either Ran for or Elected to Leadership Positions in The ITEA**

| Ran for Pres. | Elected Pres. | Ran for Reg Dir. | Elected Reg. Dir. | Other ITEA Roles* |
|---|---|---|---|---|
| 14 | 6 | 25 | 14 | 25 |

* The other roles were people in leadership positions but not as president or regional directors.

**Table III**

**Symposium Participants Who Were Either Elected to or Ran for State/Provincial Leadership Positions in Technology Education**

| Ran for Pres. | Elected President | Ran for Other Offices | Elected |
|---|---|---|---|
| 78 | 10 | 28 | 23 |

These numbers reflect participants' involvement professionally either directly or indirectly due to the symposiums.

**Research Question Three:**

Did the intended and unintended evaluative results from the three symposiums provide a framework for developing transformational professionalism in technology education?

**Discussion of Results.** Assessment results (4.4 or higher out of 5) from participants clearly show that the intended purpose of the three symposiums was successfully and consistently met. Even more significant was the unintended overwhelming positive response from symposium participants. It was a personal euphoric sensation that reached an emotional crescendo moments before the end of the events. The model for developing transformational professionalism for technology education did not emerged from the actual (intended purpose) symposium program but indirectly or unintentionally as each participant experienced an emotional high. Evidence came from the open-ended or other comments and the number of participants who increased their involvement in professional association leadership positions.

We learned servant first leadership (Greenleaf, 1977 & Spears, L. C., 1995) that a person who wants to become a leader must first genuinely serve others. Also we learned (Burns, 1978) that a profession can only be elevated to its very best when a transformational leadership environment is followed. The high evaluation means from the three symposiums provided solid evidence that the three symposiums were consistently very successful. In fact they were so successful that the Technical Foundation of America copied the same format to run their own leadership training events which have become a model for professional development.

## Why It Worked

The success of the three symposiums is perhaps clear as shown from the results, yet, why they were successful may remain somewhat mysterious. Regardless, it happened three times under very similar conditions and circumstances. Some reasons why the symposiums worked are:

- The location and facilities provided a simple environment with a minimum of distractions.

- The program ran all day and into the evening. During this period much more material was provided then possible to absorb by participants. High motivation and interest was maintained by using a dynamic mix of program topics and presenters.
- Camaraderie was established and grew and grew resulting in building personal empowerment for the common cause.
- Free and supportive atmosphere enabled participants to "feed" upon each other's enthusiasm.
- Sharing took place early, negative or disappointments of life faded due to the highly charged and supportive atmosphere (created by the mix of speakers, excellent food, recreational events and the super-positive attitude of staff).
- Sharing provided another positive force--each participant brought his/her own experiences. Together they helped each other to achieve separate, but common goals.
- Each participant experienced a significant emotional event (SEE) through the five-day event. Everyone witnessed something special occurring to himself or herself as the week progressed until at the end--they realized a powerfully professional transformation had occurred. Yes, it was the concept of transformational leadership-professionalism that affected all involved.

**Professionalism Growth: A True Story**

The powerful value of the ITEA Symposium model is best exemplified with a true story. The story is about Bill, a discouraged local technology teacher. He was quitting teaching. He had had it with the same old problems of obsolete facilities, lack of resources, and an indifferent administration. Further, students were poor, troublesome, and terribly unmotivated. Then, he reluctantly got involved with the 1985 ITEA Summer International Leadership Development Symposium.

Wow, Bill made a 180 degree turn. He found new resources from local, state, and national efforts. Administrators began to listen and to provide support, student interest soared, and his boredom turned to excitement. Bill's influence rose significantly through the distribution of his dynamic videotapes on teaching technology. Bill's increased personal and professional success provided him joy, excitement, and an elevated sense of well being. Bill eventually was elected to the ITEA Board of Directors as a Regional Director from his region.

What was the secret to Bill's transformation? First, Bill took that big initial step and got involved. Over time a transformation began to occur through Bill's new-found desire to learn and so he could share his feelings with others. Since Bill was enjoying his increased involvement, his leadership ability was uncovered and discovered. His influence spiraled higher and higher as he became more effective. The result, Bill, on the way to positive self-leadership, became a true professional, providing him and his family true joy.

Second, Bill had a well-being problem, which changed when he decided to accept the opportunity to learn self-leadership strategies through a leadership symposium. Most individuals do not realize the value of self-leadership. They think leadership is just for the supervisors, just for the administrators, just for those wanting those positions. How wrong they are; the best organizations, regardless of type, are where all members get involved in leadership. Or they may think self-help is for the other guy, those who are weak and unable to cope with the stress of life. Yet, Blanchard and Peale (1982) stated that all people have hurts at one time or another.

A person's life is made up of many seasons--some good and some not so good. Every person has his/her high and low points. A person must be on solid ground or be centered emotionally before venturing out to take risks. The truth of the matter is that people do not have to feel down about

themselves. They can learn to elevate their self-systems to higher and higher levels of healthy and productive well being.

## Recommendations For NC Leadership Academy

The North Carolina Council of Technology Teacher Education (NCCTTE) in 1998 proposed to establish a leadership academy for promoting and expanding the field of technology education at the local level in North Carolina. The responsibility for outlining the theoretical framework or scheme for the leadership academy was assigned to this writer. After examining the powerful results from the three **s**ymposiums the writer concluded it can serve as a dynamic framework or scheme for the leadership academy which is based on the concept transformational professionalism. Therefore, the following recommendations for developing and operating a technology teacher leadership academy are:

- Name specific guidelines, which must be used to identify, select and recruit the top 15-20 local school technology education teachers in North Carolina. The process will assure status, honor and influence of those selected with other teachers.
- Select a location and facility that cuts interruptions, promotes day and evening programming, creates recreational outlets, provides great meals and breaks and provides access to various types of transportation.
- Spend considerable time on the transformational professional topics and the presenters who can reach the participants.
- Employ those items listed above under "Why It Worked" to propel the academy from average to an outstanding transformational professionalism event.

- Establish a five-member leadership team used to guide and direct the academy and to build support from the major decision-makers in local and state school administrations.

## Summary

What can one conclude from the information presented? First, the definition of a professional or professionalism relates to leadership--a matter of influencing. The process operates through such media as publishing, speaking, organizing, serving, reacting, persuading, and/or planning. Second, the quality of this involvement and its impact on the profession determines one's ranking as a professional. Bill, the potential dropout was saved through finding himself in personal leadership. He learned how influencing others results in elevating his well being. Third, associations that provide self-leadership development programs enhance the members' desire to be true professionals. They get involved in association work for the simple reason that it elevates their well being

The three symposiums provided the evidence that leadership and professionalism mean the same thing. Individuals are transformed and raised to higher and higher levels of motivation and morality. Further, top professionals are promoting professionalism through their activity as part of their regular job. Once individuals are recognized for their professionalism, leadership typically becomes the substitute word.

Human nature tells us as well as leadership research that people follow or influence others mostly because they just like them. Naturally, these likable people have competence but that is not the major factor. Think of the people that we like or have been influenced by and we conclude that they have elevated our self-esteem or our feeling that we hold of ourselves. They are supportive, not demanding. They cheer us on--they make us feel better about ourselves. They are seen by us as a **merchant of hope**, one of the driving forces of those who show leadership.

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