Articles

Factors that Influence Students to Enroll in Technology Education Programs

Michael Gray and Michael Daugherty

Introduction

Increased primary and secondary student enrollment, recent expansion of secondary technology education programs, teacher attrition, and the decreasing number of universities offering technology education degrees have led to a nationwide shortage of technology teachers (Bell, 2001; Daugherty, 1998; Daugherty & Boser, 1993; Litowitz, 1998; Weston, 1997). This study sought to identify effective recruitment techniques and factors that might influence students to enroll in undergraduate technology education programs. To accomplish the purposes of the study, two sample populations were surveyed: (1) Technology Education Collegiate Association (TECA) undergraduate students who attended the 2001 TECA Midwest Regional Competition in Peoria, Illinois and (2) Technology teacher education faculty members in Midwest institutions as listed in the *Industrial Teacher Education Directory* (Bell, 2001).

Background to the Study

The shortage of technology teacher education graduates and the increasing numbers of technology teacher retirements continues to be a major problem in the profession. Starkweather (1999) stated that the technology teacher shortage was an immediate problem that needed to be addressed. Daugherty (1998) asserted, "The greatest problem facing the technology education profession in the next decade will be the acute shortage of entering technology education teachers" (p. 24). Studies more than twenty years old show a shortage of technology/industrial arts teachers, so attracting students into the profession has not been a new problem (Edmunds, 1980; Miller, 1978). In a study that consisted of an expert panel of technology teachers, collegiate supervisors,

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administrators, and teacher educators, Wicklein (1993) implied that the most critical issue in the profession was the insufficient quantities of technology education teachers and the elimination of teacher education programs. In the mid-1980s, Wenig (1986) pointed out that "the future of technology education in our public schools is inextricably and critically linked to the future of technology teacher education and, in particular, to critical problems in the supply and preparation of technology teachers" (p. 77). Edmunds (1980) acknowledged that even though many problems exist within the profession, recruiting students into the profession was a major one.

In 1990, over 50% of all technology teachers were over the age of 50 (Dugger, French, Peckham, & Starkweather, 1991). This aging workforce has led to an increased number of retirees. With as many as 76 million baby boomers approaching retirement age, this trend is likely to continue and will impact the classroom (Dohm, 2000).

Even though the total enrollment at higher education institutions has continued to increase over recent years to about 15 million students (Gerald & Hussar, 2001), technology teacher education enrollment has continued to dwindle (Bell, 2001). Many technology teacher education preparatory institutions have closed their programs or significantly reduced the number of graduating technology teachers. For instance, in the 2000-2001 issue of the *Industrial Teacher Education Directory*, nine institutions in the United States and its territories closed their technology teacher education programs. During the same period of time, no institution added new technology teacher programs (Bell, 2000).

Between 1997-2001, Weston (1997) projected there would be 13,089 middle and high school technology teacher vacancies in the United States. More recently, Ndahi (2002) completed similar research and projected there would be 6,655 middle and high school technology teacher vacancies between 2001-2005. To add to this dilemma, many states do not have a single technology teacher education preparation program and depend on other states for all of their technology teachers (Litowitz, 1998). In the mid-1970s, technology/industrial technology teacher education programs were preparing approximately 6,000 students per year (Rogers, 1997). According to the 2000-2001 *Industrial Teacher Education Directory*, U. S. institutions prepared only about 800 technology education students in 2000 (Bell, 2001). Volk (2002) indicated that in the 2001-2002 *Industrial Teacher Education Directory* "less than 625 new technology teachers graduated" (p. 2). If this trend continues, the profession will be substantially short of qualified technology education teachers in the upcoming years (Bell, 2001; Ndahi, 2002; Volk, 2002; Weston, 1997).

While there are undoubtedly numerous factors that influence people to enter the technology education profession, the relationships built during formal and informal recruitment exercises sponsored by the university can affect personal decisions (Daugherty, 1998). If we desire to alleviate this current shortage, the recruitment of technology educators has to become a top priority of the

profession (Daugherty, 1998). Secondary teachers, post-secondary teachers, administrators, counselors, and alumni must begin to identify the tools needed to recruit potential teachers and use this knowledge to exert their influence. Members of the technology education profession need to explore all possible avenues toward increasing the quantity of qualified graduates.

Purpose of the Study and Research Questions

The purpose of this study was to identify effective recruitment techniques and influential factors that attract individuals to the technology education teaching profession. The following research questions guided the study:

1. What are the effective recruitment techniques and influential factors through which current technology education undergraduate students discover, are attracted to, and enter the field of technology education in Midwest institutions?
2. What recruitment techniques, as perceived by technology teacher education faculty members in the Midwest, are effective in recruiting undergraduate students into the field of technology education?

Methodology

To answer the research questions above, the faculty sample of technology teacher education programs in the Midwest and a sample of Technology Education Collegiate Association (TECA) students who attended the 2001 TECA Midwest Regional Conference in Peoria, Illinois were surveyed. For the TECA group, a convenience sample of the larger population of all TECA students was used. The faculty group was a purposive sample of all technology teacher education faculty members in the Midwest. This sampling technique was used in an effort to survey faculty members from the institutions represented by TECA members attending the TECA Midwest Regional Conference. For this study, Midwest states were identified as Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin (*Encarta Online Encyclopedia*, 2001). Due to the fact that not all faculty members representing Midwest institutions attended the TECA Midwest Regional Conference, the researchers used the *Industrial Teacher Education Directory* (Bell, 2001) to identify the faculty sample for this study. Two questionnaires were generated: One for technology teacher education faculty members in the Midwest and one for TECA undergraduate students in technology teacher education preparatory programs who attended the conference. By reviewing previous studies in the technology education discipline (Craft, 1980; Devier, 1982; Edmunds, 1980; Frisbee, Belcher, & Sanders, 2000; Isbell & Lovedahl, 1989; Izadi & Toosi, 1995; Sanders, 1986; Smith, 1983; Wright & Custer, 1998), recruitment techniques and influential factors were generated. The questionnaires were pilot tested with technology teacher education faculty members ($n = 6$) and undergraduate students ($n = 25$) at Illinois State University, Normal, Illinois. A Cronbach Coefficient Alpha test was conducted on the returned pilot-study questions for both questionnaires

in order to establish reliability and validity for the instruments. After removing three questions from the TECA survey and two questions from the faculty survey, reliability indexes of .82 and .84 respectively were achieved in follow-up tests. The refined instruments were then used to collect data for the study.

The faculty questionnaire consisted of open-ended free-response, multiple-choice, rank-order, and Likert-type questions designed to elicit recruitment techniques that are believed to be the most effective in attracting potential student candidates to the technology education major. The faculty questionnaire consisted of three sections. Section 1 consisted of questions designed to elicit demographic information about the respondent and general information about perceptions of student recruitment. Section 2 asked faculty participants to rank the three most (and three least) effective recruitment techniques. Section 3 was designed to identify those techniques most often (and least often) used by faculty members.

The TECA student survey also consisted of three sections. Section 1 was designed to gather demographic and general information concerning students' motivation for entering the field of technology education. Section 2 asked students to identify appropriate recruitment techniques and techniques that may have been used to recruit them into the field or how they found out about the career path. Section 3 contained four questions designed to identify individual, personal, and job related characteristics that influence students to enter the field of technology education.

Data Collection

The TECA student questionnaire was administered in November 2001 at the TECA Midwest Regional Conference in Peoria, Illinois. The protocol for administering the test was read, and then the questionnaires were distributed. Upon completion, the questionnaires were collected for analysis. Thirty-one student questionnaires were administered and returned; all instruments were deemed usable. The faculty questionnaire was mailed to all Midwest technology teacher education faculty members (n = 52) as listed in the *Industrial Teacher Education Directory* (Bell, 2001) in January 2002. After follow-up e-mail messages and phone conversations to non-respondents, an overall return rate of 59.6% was achieved by February 2002. However, only 53.8% (n = 28) were usable.

Findings

The collected data were analyzed using descriptive statistics to discover the effective recruitment techniques and factors that influence undergraduate students to enroll in Midwest technology teacher education programs. Frequency distribution was utilized to summarize values and to identify the most common responses by the participants.

Research Question One

What are the effective recruitment techniques and influential factors through which current technology education undergraduate students discover, are attracted to, and enter the field of technology education in Midwest institutions?

To answer this research question, the undergraduate students were asked 18 questions within three sections (as described earlier). An analysis of the demographic data gathered in Section 1 indicated that the majority of students, 84% (n = 27) ranged from 18 to 22 years. This reflects the typical age range of students in colleges pursuing a bachelor's degree in technology education (Devier, 1982; Sharpe & Householder, 1984; Wright & Custer, 1998). The data also suggest that few non-traditional students participate in the TECA Midwest Regional Conference. The majority of students (80%, n = 25) were male. The data could reveal that males continue to vastly outnumber females in the technology education profession in the Midwest. Previous studies have identified this imbalance and have made recommendations to remedy the situation, though it appears that the methods used have resulted in only slight, if any, progress. When asked about their first exposure to technology education, the majority of students, 74% (n = 23), suggested that they first experienced a technology education class while in middle school. Even though this was the case, over 67% (n = 21) of the participants suggested that they wanted to teach only at the secondary (9-12) level when asked what they plan to do after graduation. The majority of students (90%, n = 28) indicated that they had decided to enter the technology education profession while attending high school rather than after enrolling at the university.

In 2000, the ITEA published the *Standards for Technological Literacy: Content for the Study of Technology*. This publication appears to have made an impact within Midwest technology teacher education programs. TECA student respondents were asked to mark the description that best described the university program in which they were currently enrolled. Over 80% (n = 25) of the participants indicated that the program with which they were affiliated offered a standards-based curriculum and learning experiences that were influenced by the *Standards for Technological Literacy*.

Section 2 asked the student respondents to identify the types of recruitment techniques that their university or department had used (if any were used) to influence or recruit them to enter into the technology education profession. Using the recruitment techniques that they identified (if any were), the respondents were asked to rank the ones that influenced them the most (see Table 1). The left column in the table lists the techniques used to recruit students to technology education. The columns to the right identify the number (N) and corresponding percent of participants who ranked the identified recruitment techniques as the first, second, and third most used. In some cases (noted in the table), the respondents indicated that no recruitment technique was used or that only one was used. The response of the majority of participants (68%, n = 21) suggested that the university had done nothing to recruit them.

Eight respondents split the number one recruitment technique equally among the following: (a) university recruiter visiting their high school, (b) brochures, (c) face-to-face interactions with faculty, and (d) contact with alumni. According to the data, few students are being recruited into the field of technology education by university faculty members.

Table 1
University's Recruitment Techniques Used to Influence Students to Enter Technology Education

	Student Rank					
	First		Second		Third	
Recruitment Techniques	***N***	**Percent**	***N***	**Percent**	***N***	**Percent**
None	*21	67.7	**29	93.5	**30	96.8
Univ. Recruiter to HS	2	6.5	1	3.2	0	0.0
Brochures	2	6.5	0	0.0	0	0.0
Face-to-Face Interactions	2	6.5	0	0.0	0	0.0
Alumni	2	6.5	0	0.0	0	0.0
Posters	1	3.2	1	3.2	0	0.0
Positive Job Characteristics	1	3.2	0	0.0	0	0.0
Current TE Students	0	0.0	0	0.0	1	3.2
Total	31	100.0	31	100.0	31	100.0

* denotes that 21 respondents indicated that they were not recruited in any way
** additional respondents were not exposed to a 2nd or 3rd recruitment technique

Section 2 also sought to collect data from TECA student respondents regarding recruitment techniques that they would use to attract students into technology education if they were in a position to recruit for a university. Using the recruitment techniques previously identified, the respondents were asked to rank the ones that they believed would be the most effective in attracting students to enter the field (see Table 2). The left column in the table lists the recruitment techniques that the students identified as being effective. The columns to the right identify the number (*N*) and corresponding percent of participants who ranked the identified recruitment techniques as the first, second, third, and fourth most effective. The student respondents suggested that explaining the positive job characteristics, sending a university recruiter to high schools, hosting open houses, and holding contests would be the most effective. From the techniques identified, the respondents suggested that high school counselors were least effective.

Section 3 of the TECA student questionnaire asked students to list all of the people who influenced them to choose a career in technology education. From that list, the respondents were then asked to rank the people, who influenced them the most to pursue a teaching degree in the field (see Table 3). The left column in the table lists the people who influenced student choices. The columns to the right identify the number (*N*) and corresponding percent of participants who ranked the identified people as the first, second, third, and

fourth most influential. High school technology teachers had the largest number of responses at 42% (n = 13). The groups identified as least influential toward encouraging entry into technology education were friends of the family, high school athletic coach, and high school counselor.

Table 2
Recruitment Techniques That Should Be Used to Recruit Students, as Perceived by Student Participants

	Student Rank							
	First		Second		Third		Fourth	
Recruitment Techniques	***N***	**Percent**	***N***	**Percent**	***N***	**Percent**	***N***	**Percent**
Positive Job Characteristics	7	22.6	0	0.0	1	3.2	0	0.0
Univ. Recruiter to HS	5	16.1	6	19.4	1	3.2	0	0.0
Open House	5	16.1	4	12.9	0	0.0	0	0.0
Contests	3	9.7	3	9.7	1	3.2	0	0.0
Brochures	2	6.5	1	3.2	5	16.1	0	0.0
Media	2	6.5	1	3.2	0	0.0	0	0.0
Career Days	2	6.5	0	0.0	0	0.0	0	0.0
Video	1	3.2	2	6.5	1	3.2	0	0.0
Variety of Courses	1	3.2	0	0.0	0	0.0	0	0.0
Scholarships	1	3.2	0	0.0	0	0.0	0	0.0
Current TE Students	1	3.2	0	0.0	1	3.2	0	0.0
Face-to-Face Interactions	0	0.0	1	3.2	1	3.2	0	0.0
Promote Reputation	0	0.0	1	3.2	0	0.0	0	0.0
TSA or Skills USA Activities	0	0.0	1	3.2	0	0.0	0	0.0
Undeclared Univ. Students	0	0.0	0	0.0	1	3.2	0	0.0
HS Counselors with Info.	0	0.0	0	0.0	0	0.0	1	3.2
None	1	3.2	11	35.5	19	61.3	30	96.8
Total	31	100.0	31	100.0	31	100.0	31	100.0

The final questions on the instrument (Section 3) were designed to identify personal attributes of the respondents. Question 17 asked respondents to identify (from a list) attributes that most attracted them to major in technology education. Over 32% (n = 10) of the TECA students indicated that their personal interests and hobbies attracted them into the profession. The second most frequently rated attribute, enjoy hands-on activities, yielded 29% (n = 9) of the responses. The final question on the instrument asked the student respondents to pick the job-related characteristic that most influenced them to enter the field. Most respondents indicated that they entered technology education because of (a) versatile opportunities with their degree (29%, n = 9) or (b) having freedom and flexibility in the classroom (29%, n = 9).

Research Question Two

To answer the second research question, technology teacher education faculty members from the Midwest were asked questions regarding demographic information, disposition toward recruitment, recruitment technique used, and recruiting in general. The instrument used with the teacher educators was divided into three sections (as described earlier).

Table 3

Student Participants' People Who Influenced Choice of a Career in Technology Education

	Student Rank							
	First		Second		Third		Fourth	
People Who Influenced	***N***	**Percent**	***N***	**Percent**	***N***	**Percent**	***N***	**Percent**
HS Technology Teacher	13	41.9	2	6.5	0	0.0	1	3.2
HS Other Teacher	5	16.1	3	9.7	0	0.0	0	0.0
Myself	3	9.7	0	0.0	1	3.2	0	0.0
Parents	2	6.5	7	22.6	0	0.0	0	0.0
University Professor	2	6.5	2	6.5	1	3.2	0	0.0
Co-Worker	2	6.5	0	0.0	0	0.0	2	6.5
CC Counselor	1	3.2	0	0.0	0	0.0	0	0.0
Friend	1	3.2	0	0.0	2	6.5	0	0.0
Relative	1	3.2	1	3.2	0	0.0	0	0.0
Sibling	1	3.2	0	0.0	0	0.0	0	0.0
Friend of the Family	0	0.0	1	3.2	0	0.0	0	0.0
HS Athletic Coach	0	0.0	1	3.2	0	0.0	0	0.0
HS Counselor	0	0.0	1	3.2	0	0.0	0	0.0
None	0	0.0	13	41.9	27	87.1	28	90.3
Total	31	100.0	31	100.0	31	100.0	31	100.0

In the first section of the faculty survey, the data suggested that the majority of faculty participants (46%, $n = 13$) were between 41 and 50 years of age. Males made up the majority of the participants at 93% ($n = 26$). Only 7% ($n = 2$) of the respondents were female. The responses of the TECA students to a similar question suggest that it may be reasonable to anticipate that this imbalance could continue for years to come. Over 85% ($n = 24$) of the teacher educators indicated that their institution sponsored a TECA chapter.

Faculty members were asked to indicate how effective they believed they were at recruiting. The majority (54%, $n = 15$) of faculty participants indicated that they were somewhat effective at recruiting undergraduate students into technology education. Four (14%) of the respondents identified that they were not effective at recruiting. Almost 68% ($n = 19$) of the faculty respondents indicated that they were either not effective or only somewhat effective at recruiting students into the field. Meanwhile, 25% ($n = 7$) identified themselves as being effective recruiters, and two (7%) faculty members described themselves as very effective at recruiting. Conversely, when asked to determine

how critical they thought it was to increase the number of students entering technology teacher education programs, the majority of respondents (71%, n = 20) suggested that it was very critical. The number of faculty respondents who indicated that recruitment was critical (71%, n = 20) was almost equal to the number of faculty who indicated that they were less than effective in recruiting students (68%, n = 19).

To examine another aspect of student recruitment, faculty participants were asked to estimate how much time they spend per semester actively recruiting students. Two participants suggested that they spend no time recruiting. Most faculty participants (74%, n = 21) indicated that they spend less than 40 hours per semester on recruitment. The faculty participants were also asked to identify the approximate amount of money their institution spends on recruiting students into the technology education program per semester. Of those who did give estimates (10 did not), eight (30%) implied that their institution did not spend any money on recruitment. For the remaining respondents, money allocated toward recruitment ranged from $200 to $3,000.

In Section 2 of the faculty survey, faculty members were asked to evaluate various recruitment techniques. The first question in this section asked respondents to rate an inclusive list of recruitment techniques on how effective they believed each item was at attracting students into the field. Each technique was rated on a Likert-type scale (1=Not Effective, 2=Slightly Effective, 3=Effective, 4=Quite Effective, 5=Extremely Effective). The mean and standard deviation were calculated to assist in identifying the effectiveness of each recruitment technique.

Over half (52%, n = 15) of the faculty participants rated face-to-face interaction as being extremely effective (see Table 4). Calculations revealed that it also had the highest mean at 4.30 and a low standard deviation of 0.82. Conversely, the majority of student respondents indicated that they were not exposed to face-to-face interaction with university faculty (see Table 1). Maintaining a rapport with high school technology education teachers was identified as the second most effective recruitment technique, with a mean of 3.93 and a standard deviation of 1.14. In the influential factors section of the student questionnaire, over 41% (n = 13) of the student respondents recognized high school technology teachers (see Table 3) as the most influential person in their career choice. The faculty participants also acknowledged this assertion, with a response of 40.7% (see Table 4), suggesting that maintaining a rapport with high school technology education teachers was extremely effective.

Faculty respondents selected hosting a departmental open house as the least effective technique, with the lowest mean at 2.19 and a standard deviation of 0.88. Ironically, the student respondents rated open houses as one of the top three recruitment techniques (see Table 2) they would use to attract students into technology education if they were in a position to recruit for a university. The faculty members also indicated that providing displays at teacher conferences was an ineffective recruitment method, even though 63% (n = 18) of the faculty respondents indicated that they regularly used this technique. Both the TECA

students (Table 2) and the faculty members (Table 4) indicated that supplying high school counselors with information was an ineffective recruitment

Table 4
Faculty Participants' Recruitment Techniques Ranked on a Likert Scale for Perceived Effectiveness at Attracting Students into Technology Education

Recruitment Technique	Not Effective (value = 1)		Slightly Effective (value = 2)		Effective (value = 3)		Quite Effective (value = 4)		Extremely Effective (value = 5)		Total		
	N	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	*M*	*SD*
Face-to-Face Interactions	0	0.0	0	0.0	6	22.2	7	25.9	14	51.9	27	4.30	0.82
Maintaining Rapport with HS TE Teachers	0	0.0	5	18.5	3	11.1	8	29.6	11	40.7	27	3.93	1.14
Current TE Students to Recruit	0	0.0	4	14.8	8	29.6	7	25.9	8	29.6	27	3.70	1.07
Alumni to Recruit	0	0.0	4	14.8	6	22.2	12	44.4	5	18.5	27	3.67	0.96
Modern Lab Facilities	0	0.0	5	18.5	4	14.8	13	48.1	5	18.5	27	3.67	1.00
Scholarships	1	3.7	5	18.5	9	33.3	5	18.5	7	25.9	27	3.44	1.19
Promote Reputation of Program/ University	0	0.0	3	11.1	12	44.4	10	37.0	2	7.4	27	3.41	0.80
Alternative Certification Programs	2	7.4	6	22.2	5	18.5	11	40.7	3	11.1	27	3.26	1.16
Share Positive Job Related Characteristics	0	0.0	7	25.9	9	33.3	9	33.3	2	7.4	27	3.22	0.93
Contests for HS	0	0.0	9	33.3	8	29.6	7	25.9	3	11.1	27	3.15	1.03
Personal Letters to Students	0	0.0	10	38.5	6	23.1	7	26.9	3	11.5	26	3.12	1.07
Articulating Univ. to Comm. and Tech. Coll.	0	0.0	11	42.3	3	11.5	10	38.5	2	7.7	26	3.12	1.07
E-mails to Students	0	0.0	11	42.3	5	19.2	8	30.8	2	7.7	26	3.04	1.04
Talk at TSA or Skills USA-Type Activities	0	0.0	9	33.3	11	40.7	5	18.5	2	7.4	27	3.00	0.92

Table 4 (continued)

Recruitment Technique	Not Effective (value = 1)		Slightly Effective (value = 2)		Effective (value = 3)		Quite Effective (value = 4)		Extremely Effective (value = 5)		Total		
	N	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	*M*	*SD*
Contact Undeclared Univ. Students	3	11.5	8	30.8	8	30.8	2	7.7	5	19.2	26	2.92	1.29
Info on Departmental Website	0	0.0	12	44.4	9	33.3	3	11.1	3	11.1	27	2.89	1.01
Talk in Univ. GE Courses	1	3.8	8	30.8	13	50.0	3	11.5	1	3.8	26	2.81	0.85
HS Counselors with Info	1	3.7	13	48.1	7	25.9	5	18.5	1	3.7	27	2.70	0.95
Printed Brochures	2	7.4	11	40.7	8	29.6	5	18.5	1	3.7	27	2.70	0.99
Talk During Student Teacher Supervisions	1	3.7	12	44.4	10	37.0	2	7.4	2	7.4	27	2.70	0.95
Advertise through Media	4	15.4	9	34.6	8	30.8	3	11.5	2	7.7	26	2.62	1.13
Wide Variety of Courses in Department	3	11.1	12	44.4	7	25.9	3	11.1	2	7.4	27	2.59	1.08
Recruitment Video	4	15.4	8	30.8	9	34.6	5	19.2		0.0	26	2.58	0.99
Univ. Recruiter to Comm. and Junior Coll.	4	14.8	11	40.7	6	22.2	5	18.5	1	3.7	27	2.56	1.09
University Recruiter to High Schools	4	14.8	13	48.1	5	18.5	1	3.7	4	14.8	27	2.56	1.25
Recruitment Posters	2	7.7	14	53.8	6	23.1	2	7.7	2	7.7	26	2.54	1.03
Recruiters to HS Career Days	4	14.8	13	48.1	5	18.5	4	14.8	1	3.7	27	2.44	1.05
Bulletin Board Display	4	14.8	13	48.1	7	25.9	3	11.1	0	0.0	27	2.33	0.88
Displays at Teacher Conferences	4	14.8	11	40.7	11	40.7	1	3.7	0	0.0	27	2.33	0.78
Departmental Open Houses	6	22.2	12	44.4	7	25.9	2	7.4	0	0.0	27	2.19	0.88

technique. The TECA respondents also indicated that high school counselors were not influential in their career choice of technology education. This may reveal that both faculty and student respondents believe that high school counselors may not fully understand technology education and may not be directing students into the field.

In the final question of Section 2, faculty participants were asked to mark all recruitment techniques they have used in the last year from the same inclusive list used for previous questions. Every recruitment technique was identified as being used by at least five of the respondents. None of the respondents identified using every recruitment technique. All but one of the respondents indicated that they used face-to-face interactions, and this technique was rated as the most effective recruitment technique. Maintaining rapport with high school technology education teachers was identified as being the second most widely used, with 88% (n = 25) of the responses. Student respondents seemed to agree with the perceived influence of high school technology education teachers (see Table 2).

Summary of Findings

Midwest technology teacher education faculty members indicated that they were aware of the concern regarding technology teacher shortages. Over 71% (n = 20) of the faculty members suggested that it was very critical to increase the number of students entering technology teacher education programs. However, most faculty respondents (68%, n = 19) see themselves as less than effective at recruiting students into the field. Face-to-face interaction was the most widely used technique (96%, n = 27) by faculty participants and perceived to be the most effective. Although the vast majority of faculty members indicated that they use a face-to-face recruitment technique and perceived it to be effective, this technique is obviously not reaching the correct audience since the majority of TECA respondents (68%, n = 21) indicated that no recruitment techniques were used to recruit them to the university that they were currently attending. However, by examining the *Industrial Teacher Education Directory* (Bell, 2001), one important relationship came to the surface. Of those universities graduating the greatest numbers of technology education teachers in the Midwest, face-to-face interaction was indicated as the predominant recruitment technique used.

Maintaining a rapport with local high school technology education teachers also seemed to garner strong support as a technique that can be used to reduce the critical shortage of new students entering the field. Both faculty and student respondents indicated that high school technology teachers are an important link in the recruitment process. In fact, almost 42% (n = 13) of the TECA students identified their high school technology teachers as the most influential factor in their career choice. This may indicate that keeping a good relationship with current high school technology teachers is one very effective way to recruit students.

Conclusions

With less than 10% of the student respondents indicating that they were recruited to the institution they attend, it appears that universities are not effectively using the techniques perceived to be effective by students. In addition, techniques that students believe to be effective are not being used or are not valued as effective tools by faculty member respondents. It is clear that what faculty perceives to be effective differs greatly from what TECA students perceive to be effective. It is surprising that over 95% of the faculty respondents indicated that they used face-to-face interaction to recruit, but just over 6% of the student respondents acknowledged that it was used effectively to recruit them. Perhaps these faculty members are talking to the wrong students or the students are changing fields of study after entering the university.

It is clear that high school technology teachers are vastly underutilized as recruiters for technology education, and steps must be taken to include them in future recruitment programs. Using currently enrolled technology teacher education students to recruit can be effective as well. Faculty participants ranked using current majors as the third most effective recruitment technique. Student respondents concurred, indicating that over 74% had tried to recruit other students into the profession of technology education. Clearly, using students to recruit new members to the profession is an underutilized resource for the profession.

It is also clear that depending on high school guidance counselors as a recruitment source is not an effective solution. Both faculty and student respondents suggested that counselors were not a factor in recruitment decisions. Perhaps, high school counselors are not guiding students into technology education because they do not fully understand the profession.

If members of the profession continue to be so ineffective at recruiting students, the future of the profession is in danger. In order to curb the shortage of teachers, all members of the profession must begin to communicate the benefits of technology education and spread the news to those outside the profession. It is those human interactions and communication channels that will make the difference in future recruitment efforts. Our profession has a great deal to offer, but clearly this message is not being delivered to the correct population.

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