

Minority Recruitment and Retention Problems and Initiatives in Higher Education: Implication for Technology Teacher Education

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Recruiting and retaining minority students are growing concerns for leaders of colleges and universities across the United States. For a brief period, universities experienced steady progress at opening doors of higher education to minority students. For example, from 1960 to 1975, the number of black students in higher education rose from 150,000 students to approximately 1 million (Green, 1989). Unfortunately, enrollments of black students have remained at a plateau. With the exception of Asian students, participation rates of other minority groups in higher education have also remained stagnant. Further, the retention rates are low for minority students who have chosen to attend college. A recent report by the National Association of Independent Colleges and Universities found that 54% of Hispanic students and 63% of black students who had enrolled in four-year colleges had dropped out for good within six years (cited in Wilson, 1990). Although university leaders have confronted the problems of recruitment and retention on a national level, the issues have not been resolved. A growing chasm is reflected in the rates of participation of white and minority students in higher education (Carter & Wilson, 1989).

Technology teacher educators are also concerned about the recruitment and retention of minority students. As a profession, technology education needs minority teachers who can serve as role models to the increasing numbers of minority students in American schools. Further, minority leaders are greatly needed to strengthen the technology teaching field and its respective professional associations. Increasing the number of minority teachers in technology education should lead to positive results in recruiting minority students for technology education programs (Westbook, 1986). These are desirable goals, but what actions are needed by technology teacher educators to make sustained progress toward them? The purpose of this article is to review problems and

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initiatives associated with minority recruitment and retention in higher education and discuss implications for technology teacher education.

The Growing Importance of Minority Recruitment and Retention

Presidents of universities and deans of colleges of education have depicted minority recruitment and retention as vital issues for higher education. Demographic projections have indicated that an increasing percentage of students in elementary and secondary schools will be minority students. A recent report sponsored by the Western Interstate Commission for Higher Education and the College Board, *The Road to College: Educational Progress by Race and Ethnicity* (1991), stated that the proportion of graduates who are minority group members is expected to increase from 22% in 1986 to 28% in 1995 (cited in Evangelauf, 1991). The study showed that all of our southern perimeter states, from California to North Carolina, project proportions of graduates who are minority group members to be above 30%. Unfortunately, those minority groups are not currently well represented and are not expected to be comparably represented in the near future in the teaching ranks. For example, data presented by *Teacher Magazine* listed 93% of the beginning teachers of 1990 as white (cited in Work-America, 1990, May). This statistic is a marked contrast to the expectation that one third of the U.S. population will be people of color by the year 2000 (McCubbin, 1990).

Many technology teacher education departments desire to increase the number of minority students in their preservice programs--yet they are struggling for meaningful ways to accomplish this goal. The literature base on minority recruitment and retention lacks studies that might connect the topic directly to technology teacher education. However, technology teacher educators can begin to sense the magnitude of the issue by examining the expanding body of literature regarding minority participation in higher education.

A book published by the American Council on Education, *Minorities on Campus: A Handbook for Enhancing Diversity* (Green, 1989, p. 2-3), presented the following data related to minority participation on campuses.

Higher education's pool of students is increasingly made up of minority youth. Of our 25 largest cities and metropolitan areas, half of the public school students come from minority groups. In 1985, 20 percent of the school-age population was minority; in 2020, that figure will rise to 39 percent.

College attendance by black students has slowed; the gap in participation between whites and blacks is growing. Between 1967 and 1975, the percentage of black high school graduates 24 years old or younger that were enrolled in or had completed one or more years of college rose from 35 percent to 48 percent; over the same period, the corresponding rate for whites grew much more slowly from 51 to 53 percent. However,

between 1975 and 1985, while the college participation rate for white youths continued to climb to 55 percent, the rate for blacks dropped to 44 percent. Recently released figures indicate that, in 1986, the rate for blacks rose to 47 percent.

The rate of college attendance for Hispanic youths has declined in the last decade. While the number of Hispanic students enrolled in college has increased significantly since 1975, the rate of attendance declined slightly between 1975 and 1985, from 51 percent to 47 percent.

College attendance by American Indian students lags far behind black and Hispanic attendance. A recent report by the Cherokee Nation found that only 55 percent of U.S. Indians graduate from high school, and of these, only 17 percent go on to college.

Minority students are concentrated in community colleges. In the fall of 1986, over 55 percent of the Hispanics and just over 43 percent of the blacks attending college were enrolled in two-year institutions. Few of these students ever go on to attend or graduate from four-year institutions.

Black and Hispanic students are far less likely than white students to complete a degree. Among 1980 high school seniors who enrolled in college, 21 percent of the white students, compared with 10 percent of the black students and 7 percent of the Hispanic students, earned a bachelor's degree to higher degree by spring 1986.

Blacks attending historically black colleges and universities (HBCUs) are more likely to complete a degree than those attending predominantly white institutions. In 1984-85, HBCUs awarded 34 percent of baccalaureate degrees earned by blacks while enrolling 18 percent of black students.

As one ponders the preceding information, questions surface in the search for remedies to these concerns: Why is the participation gap increasing between minority and white students on our campuses? Why are attrition rates higher for minority students? What efforts have achieved success at increasing minority recruitment and retention? Leaders of our universities are struggling to find solutions to these pressing questions.

A study conducted by the American Council on Education titled "Campus Trends 1989" found that a vast majority of colleges are attempting to increase minority recruitment and retention on their campuses. Despite the efforts of these institutions, nearly two-thirds of their leaders rated their abilities to recruit black and Hispanic students as only fair or poor. Senior administrators at approximately 370 institutions participated in this annual survey (cited in Magner, 1989, July 26). Some of the administrators who took part in the survey were not confident about whether their institutions provided supportive environments

for black and Hispanic students. Forty percent responded that the environment for black and Hispanic students was fair or poor at their institutions.

Attendees at the 1989 annual meeting of the Education Commission of the States collectively agreed that a need exists to attract more minority students to universities. State policy makers were divided, nonetheless, over what approach should be used to attract those minority students. They disagreed over whether states should use "a carrot or a stick" approach to urge colleges and universities to increase the emphasis on minority recruitment and retention. In light of the need to improve minority students' academic achievement, considerable debate ensued over whether radical changes were needed in today's educational system (Cage, 1989, July 26).

If corrective actions are not taken, problems with minority recruitment and retention might get worse as opposed to better. According to Wayne E. Becraft, the interim Executive Director of the American Association of Collegiate Registrars and Admissions Officers, contradictory goals are in place that hinder minority recruitment and retention. Large public universities are tightening admission requirements and attempting to recruit minority students at the same time. Colleges are trying to recruit minority students without a clear cut plan for doing it. Without programs that offer support, such universities are building failure (cited in Evangelauf, 1989, February 8).

Minority Recruitment and Retention Programs in Action

Several colleges and universities have implemented minority recruitment and retention programs. The following examples depict an array of strategies that might help an institution initiate a minority recruitment and retention program.

William and Mary. Programs initiated at William and Mary focus on raising the academic skills of black high school juniors. A summer program consists of a five-week term and is an attempt to increase the pool of eligible high school seniors and attract them to William and Mary. If these students enroll at William and Mary, they are assigned academic advisors who help the students with the transition to college (Jaschik, 1989, June 28).

Rutgers University. Rutgers is another institution that has suffered a serious decline in the number of minority students. In an attempt to battle this problem, the institution has created special mailings for minority students, conducted telephone contacts, issued personal invitations to campus receptions, established a scholarship program for high ability Black and Puerto Rican students, and initiated a seminar for minority high school students and their counselors. Much of Rutgers' effort at retention has focused on tutorial assistance and additional counseling for minority students (Kanarek, 1987).

Purdue University The School of Engineering and Technology, Purdue University at Indianapolis has developed a curriculum that uses computers to develop pre-college skills of students in grades 6-11 who participate in its Minority Engineering Advancement Program (MEAP). The program began in 1974 as a result of low enrollment levels of minority students in the schools

of engineering and technology. The program is funded through a combination of private and university funding. Since the program's inception, 84% of all the program's participants have attended college and 58% of these majored in engineering or technology ("Recruiting Minority Students," 1989, September).

Texas Tech University. Statistics from the Texas State Board of Education indicated that Hispanic students comprised 30.4% of Texas student population in 1984, yet the number of employed Hispanic teachers has remained constant at about 12% from 1982-86. Furthermore, of those students who choose teaching as a career, data indicated that 90% were Anglo, 4.6% black, 2.8% Hispanic, and 1.4% Asian or Pacific Islander (Zapata, 1988).

Texas Tech University formed a partnership with a public school district in an effort to recruit and retain minority students. This effort is intended to make Texas Tech faculty members available to individual teachers and classrooms of the Lubbock Independent School District (LISD). Each faculty member will be used as a general classroom resource, exchange teacher and role model. This partnership is expected to help high school students make the transition to college and to help recruit and retain minority students at Texas Tech University (Ishler & Leslie, 1987, February 12-15).

Virginia Polytechnic Institute and State University. The Virginia Polytechnic Institute and State University uses a five-week summer program to facilitate the enrollment and retention of black college students. The program focuses on increasing skills in academic subjects; developing skills in interpersonal interactions with peers, faculty and administrators; developing self-confidence and self-awareness; gaining knowledge of the complex university structure, its rules, regulations and policies; and learning successful study methods and time management (McLaughlin et al., 1984, October 24-26).

Northern Illinois University. Northern Illinois University is renovating a program that is giving special help to minority students. The CHANCE Program helps minority students who are academically deficient upon admission by offering counseling, tutoring and basic skills classes in English, reading, speech and mathematics. The university is doubling the number of counselors in its CHANCE program and extending services to cover students' entire stay on campus.

The preceding examples of recruitment and retention strategies represent a small sample of ideas that have been tried by a handful of colleges. Programs at other universities may be as good or perhaps better, but the preceding programs were cited by the authors to exemplify the breadth of activities occurring on college campuses. Additional recruitment and retention strategies and examples may be gleaned from the documents *Recruiting Minority Teachers*, by the American Association of Colleges for Teacher Education (1991), and separate articles by Dorman and Holmes in the *Policy Briefs* (1990, Number 8) publication of the North Central Regional Education Laboratory.

**Articulation with Community Colleges to
Enhance Minority Recruitment and Retention**

Although numerous approaches to minority recruitment deserve recognition (e.g., intervention with public schools, summer campus internships for visitation programs, articulation with historically black colleges), the authors believe that articulation among universities and community colleges merits special attention. Community colleges are quite often the point of access to postsecondary education and professional career exploration for many ethnic minorities. Estimates are that 54% of all Hispanic and 45% of all black enrollments in the postsecondary sector are in two-year colleges (Woods & Williams, 1987). These students make up 30% of community college enrollment yet they are the least likely groups to continue their education at four-year institutions (Watkins, 1990).

Researchers are beginning to identify variables that enhance transfers for minority students from community colleges to universities. Well over \$10 million dollars were awarded between 1979 and 1987 by Ford and other foundations for projects and activities related to minority student transfer. For students to make progress toward the Baccalaureate degree, these projects and activities indicated that three sets of activities should occur: 1) easing a transition from high school to community college, including testing and placing students in the proper courses; 2) supporting the students through a variety of special interventions while they are enrolled in a community college; and 3) enhancing transfer to senior institutions through such strategies as coordinated financial aid packages, curriculum articulation, and regularly scheduled staff interaction (Cohen, Lombardi, & Brawer, 1988).

The Ford Foundation funded 24 community colleges to conduct activities that might increase the number of minority students who receive Associate degrees and then transfer to universities. Five institutions received continued funding for a second year, and each institution took a different approach in increasing the student flow to universities. The Cuyahoga Community College established a center for articulation and transfer that focused on linkages with high schools and four-year institutions. Liguardia Community College stressed the improvement of the flow of information to students. Miami-Dade Community College worked on areas such as mandatory testing and placement, extensive remedial instruction and enforced standards of academic progress. The Community College of Philadelphia stressed curriculum reform through staff development, and South Mountain Community College created a variety of student recruitment and support services ("An assessment of urban community colleges," 1988).

Rivera (1986) found that the four most common program components for community colleges to increase minority recruitment to four-year institutions were curriculum development, articulation, student transfer information and student services. Recruitment of community college minority students is a complex issue and needs a variety of programs which are unique and fit within the framework of an institution. For additional reading on this topic, the reader is referred to a publication jointly produced by the Academy for Educational Development and the College Entrance Examination Board, *Bridges to oppor-*

tunity: Are community colleges meeting the transfer needs of minority students? (1989).

Some Common Ground for Minority Recruitment and Retention

No one set of recommendations will apply to all universities that wish to increase the recruitment and retention levels of minority students. Such factors as the size of programs, populations that they serve, the regional economy, institutional goals and administrative and faculty commitments can alter the degree of success that might be obtained in recruiting and retaining minority students. However, those institutions that seem to reach a level of success more often than not start at the local level and then reach outward. Further, institutions that have experienced success in improving minority recruitment and retention have one common element: they have developed a comprehensive approach for planning and coordination (Green, 1989).

Institutions cannot examine the problem of recruitment and retention of minority students from the perspective of what's wrong with the student. Instead, an approach should be taken that asks the question, "What's wrong with our institution?" Such questioning might lead to the systematic self-analysis needed to initiate an overall institutional game plan as opposed to a piece-meal, fragmented manner for dealing with minority recruitment and retention (Bender & Blanco, 1987).

University officials will be conducting a disservice if they merely gather up minority students from the inner city and drop them off as incoming freshmen at a far away, rural institution of higher education. Many minority students from urban areas have received inadequate educations from academically and fiscally bankrupt school systems. A university located in a rural community may be a vastly different social, economical, and educational experience for minority students. The total experience and value structure of the university and its community might significantly affect minority students' decision to stay or drop out.

Universities should not focus on the quantity of minority students that are recruited, but the quality of the transitional efforts that will permit minority students of vastly different backgrounds to achieve success socially, economically, and educationally. A beginning point is for university faculty and administrators to collectively review policies and common practices that might create barriers to success for minority students. Minority students have a minimal chance of graduating without the benefit of a substantial institutional commitment to retention (Mancuso-Edwards, 1983, November 29).

Organizational influences that can improve minority recruitment and retention include developing programs that help students with academic preparation problems, emphasizing precollege programs in relation to elementary and secondary schools, addressing multicultural environments, resolving organizational dilemmas of separatist versus support programs for minority students,

creating proactive approaches to financial aid and examining opportunities for on-campus housing (Crosson, 1987).

Implications for Technology Teacher Education

As opposed to minority student programs that merely focus on high enrollments, perhaps the following suggestions might be more appropriate for technology teacher education departments:

1. Establish networks of information and referral with local schools and community colleges. Technology teacher education departments need a well planned approach for recruiting and retaining minority students. Within that plan, establishing a network will permit a timely flow of information among industrial and technology education students and faculty at secondary schools, community colleges and technology teacher educators at universities. A well orchestrated network will have much better results than the once a year contacts that are typically arranged by student recruiters. A network will permit students and faculty to become familiar with technology teacher education programs and to recognize their strengths and weaknesses.
2. Technology teacher education programs do not need to start from scratch when building recruitment and retention efforts. We must learn from the practices that have been tested by others. Moe (1989), for example, found in the literature consistent identification of the basic requirements needed to foster minority recruitment and retention. Such enhancements can occur through institutional improvements including: a) academic assessment programs, b) tutorial and mentorship services, c) visible minority leadership and participation on campus, d) curriculum development, e) increased financial assistance, and f) supporting an environment that will stimulate learning in a multicultural setting. Some recruitment and retention programs (as described in this manuscript) have been operating for many years. Such models may be adapted to coincide with local community and institutional needs. Those characteristics of the community and institution must be carefully delineated to depict what variables might be viewed as enhancements or hindrances for recruiting and retaining minority students.
3. Technology teacher education departments should work in tandem with other campus offices and departments to increase the pool of minority students as opposed to competing with one another for the existing supply of minority students. For example, departments can collaborate to serve adult minority students through community based organizations, military programs, community colleges, public and private trade schools, apprenticeships, and organized labor. Constituents of these groups need to be aware of employment opportunities in technology education teaching.
4. Technology teacher educators should work actively with community based organizations. By establishing relationships with community based organ-

izations, they can gain understanding of cultural characteristics of that particular population.

Can Technology Education Make a Contribution?

The central theme of this article pertains to technology teacher education and the recruitment and retention of minority students. But what about technology education as a secondary school discipline? Can its content be established as a connecting force for minority participation in higher education? Is there any aspect of its subject structure that sets it apart from other curriculum areas in articulation with higher education? The technology education knowledge base lacks research and experience based conclusions to adequately answer the preceding questions. However, we can gain insight into possible connections by examining the linkages that have been created among other disciplines and the recruitment and retention of minority students.

The College Board has sponsored a project, called Equity 2000, to improve the college participation rate of students in six predominantly minority school districts. The program will require students of those districts to take algebra and geometry. The project is based on research indicating that low-income and minority students who master algebra and geometry attend and graduate from college at approximately the same rate as higher income white students (Collison, 1991, June 12). These findings should be of considerable interest to technology educators. Perhaps technology educators should seek avenues for using their curricula and laboratories to augment the success rate of minority students in algebra and geometry. Contemporary secondary curricula such as principles of technology, automated manufacturing, and computer aided drafting can serve as news linkages among technology education and other academic teachers for the purposes of creating integrative curriculum projects. Action research projects are needed in the field to pursue such endeavors.

Medical education is another field of study worthy of examination by technology educators. A report titled *Recruitment and retention of minority medical students in S.R.E.B. states*, by the Southern Regional Educational Board, was based on a survey of 45 medical schools. The two institutions that had the highest proportion of black students (East Carolina and East Tennessee) both had summer programs designed to help disadvantaged students improve their skills. At East Carolina University, the eight week summer program was considered to be *the single best predictor* for the student's success in medical school (Cage, 1991). Perhaps similar skill building summer programs could be cooperatively structured across secondary technology education programs and technology teacher education programs.

We need to look across disciplines to find examples of successful minority recruitment and retention programs. The declining number of minority teachers is a serious threat to the social ideals of public schools in a racially and culturally diverse democracy. Technology teacher education programs should confront this problem with idealism, innovation, initiative, and (hope-

fully) added resources ("Work in Progress," 1989). Minority teachers can play a critical role as empathetic mentors for minority students and as non-stereotypical examples for majority students (Gill, 1989).

A singular solitary approach for minority recruitment will not adequately serve the diverse needs of blacks, Hispanics and/or Asians. Recruitment and retention of students representing these groups will require technology teacher educators to become a good neighbor to these populations. As good neighbors, we must try to establish long lasting friendships through networks, community based organizations, local schools and community colleges. Such relationships are needed so that we can become more involved in grooming minority students for college at an earlier age (Magner, 1990, July 26). As those friendships mature, we will have benefited from an increased knowledge base for serving the needs of minority students and greater success at recruiting and retaining minority students in technology teacher education programs.

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