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ABSTRACT

Two recent studies proved the usefulness of predictors of academic performance and conceptual models that were developed primarily from research on traditional college students for the study of retention among nontraditional adult students in conventional postsecondary programs. Some modifications and extensions were suggested. The first study investigated the accuracy with which conventional demographic and achievement measures would differentiate between persisters and nonpersisters among adult students at Youngstown State University. A stepwise discriminant analysis identified four variables that explained 25 percent of the variance in the study population: financial aid, grade point average, matriculation status, and age. Using these four variables in the discriminant function to classify persisters and nonpersisters resulted in the correct classification of 81 percent of the study population--88 percent of the nonpersisters and 57 percent of the persisters. The second study explored the appropriateness of the conceptual model developed by Tinto from research on dropout among traditional college students for understanding dropout among a nontraditional student group (older, mostly minority women on welfare) enrolled in a postsecondary nondegree vocational training program. Findings indicated program completion was related not to personal background characteristics but to academic aptitude and the significance of students' integration to both academic and non-academic sectors. (YLB)

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RETENTION OF NONTRADITIONAL STUDENTS  
IN POSTSECONDARY EDUCATION \*

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## ABSTRACT

The paper illustrates that approaches to and conceptual frameworks for studying retention derived from research on traditional college students can be useful for understanding retention among non-traditional, adult students. It also suggests modifications and extensions that might be made in order to adapt the traditional approaches to some of the particular problems of non-traditional students, especially as they relate to the demands faced by independent adult students in coping with personal responsibilities and financial contingencies in addition to academic coursework.

Despite the commonalities between traditional and non-traditional students in postsecondary education there are also marked differences that require somewhat different responses and resources if institutions are to be successful at recruiting and retaining non-traditional students. First, admissions requirements should reflect contemporary assessments of adult students' academic potentials, not out-dated indicators such as high school performance. Second, every effort should be made to establish institutional mechanisms for facilitating the social and academic integration of non-traditional students. Third, the importance of providing financial aid should be emphasized. Finally, such responses as providing day care facilities on campus, resources for personal and career counseling, and allowing some flexibility with respect to institutional demands may certainly be reasonable.

## **RETENTION OF NONTRADITIONAL STUDENTS**

### **IN POSTSECONDARY EDUCATION**

The purpose of this presentation is to explore the extent to which predictors of academic performance and conceptual models developed primarily from research on traditional, 18- to 22-year-old college students are appropriate for the study of retention among non-traditional, adult students enrolled in conventional postsecondary programs. Specifically, I shall discuss two recent studies of retention among non-traditional, adult students - one group enrolled in regular undergraduate degree programs at a four-year collegiate institution (Haggerty, 1985); and the other group enrolled in a postsecondary vocational training program (Weidman and White, forthcoming). In both studies, the students are non-traditional not only because they are adults but also because they differ considerably from the students who are usually admitted into their respective programs. Furthermore, the educational institutions are located in urban environments and serve primarily commuting student populations.

#### **YOUNGSTOWN STATE STUDY: ADULTS IN REGULAR DEGREE PROGRAMS**

In the first of these studies, Madeleine Haggerty (1985), a doctoral student of mine at Pitt, was interested in exploring the extent to which conventional demographic and achievement measures would differentiate accurately between persisters and nonpersisters among adult students (aged 24 or older) enrolled in regular degree programs at Youngstown State University. The variables that she used, most of which are readily available from admissions data and college transcripts, included age, sex, race, marital status, high school rank, whether or not a major was declared, degree sought (associate or baccalaureate), employment status while enrolled, financial aid, part- or full-time matriculation, and college grade point average.

Youngstown State Study Population

Using data tapes containing official University records, Haggerty identified 724 students who began their studies between the fall of 1975 and the fall of 1978, and were at least 24 years old at the time of enrollment. The ages of these students ranged from 24 to 74, with a mean of 32. Females outnumbered males by almost two to one. Non-white students made up 26% of the study population. Sixty per cent of the students were married. Students were almost equally divided with respect to degree aspiration, with 46% seeking the baccalaureate. Most of these students were employed while going to college (76%) and attended on a part-time basis (75%). Only 14% received financial aid. The majority of this group of adult students had very checkered high school records: their high school class ranks averaged between the sixth and seventh tenth! Their average academic performance in college was, however, an acceptable C+/B- (2.5).

Those students who had either completed a degree or were still enrolled by the spring or summer of 1984 were classified as persisters (141 or 20%). Of the persisters, 93 (66%) had earned a degree and the remainder were enrolled in good standing. Interestingly, only 19 of the 583 non-persisters (3%) were dismissed for academic reasons.

Youngstown State Study Findings

All of the variables were entered into a stepwise discriminant analysis in order to determine which combination differentiated those students who persisted from those who dropped out of their degree programs. Four variables explained 25% of the variance in persistence among this particular adult student population: financial aid (persisters more likely to have received an award); grade point average (persisters higher); matriculation status (persisters more likely to be full-time); and age (persisters somewhat younger).

Using these four variables in the discriminant function to classify

persisters and non-persisters resulted in the correct classification of 81% of the study population. However, while 88% of the non-persisters were classified correctly, only 57% of the persisters were identified correctly. Hence, the dropouts among these adults enrolled in regular degree programs were much easier to classify than the persisters, at least with respect to this particular set of readily obtainable variables. Of course, because of their generally low high school performance (primarily bottom half class ranks), this student population would be considered to be "high risk" academically. However, that only 3% of the non-persisters flunked out suggests that high school grades are poor predictors of academic performance in college for adult students.

The significance of financial aid and full-time attendance for retention among these adults suggests the importance for institutions of providing financial resources for non-traditional students. This is especially crucial for these students because the Youngstown area has one of the highest unemployment rates in the country. In fact, Youngstown State University has a Non-traditional Undergraduate Student Grant-In-Aid Program for adult students. This program covers over 55% of tuition and is available to both part- and full-time students who are not eligible for any other grant or scholarship assistance and whose annual family income does not exceed \$25,000 (Haggerty, 1985, p. 52).

It should be noted that several of the variables identified by Cross (1981) as posing barriers to participation in adult education (e.g., race, sex, employment status while enrolled, and high school class rank) were not significant predictors of persistence in this study. Clearly, developing a more complete understanding of retention among adult students requires an examination of other variables in addition to those addressed in this particular study. Choosing additional variables is facilitated by relying on and building from existing conceptual frameworks, especially the widely known one developed by

Tinto (1975). It is to such a study that I now turn.

#### DEVRY STUDY: "HIGH-TECH" TRAINING FOR WOMEN ON WELFARE

The second study (Weidman and White, forthcoming) explored the appropriateness of the conceptual model developed by Tinto (1975) from research on dropout among traditional, residential, 18 to 22 year-old college students for understanding dropout among a particular non-traditional, commuter student group (older, mostly minority women on welfare) enrolled in a post-secondary, non-degree vocational training program. This research was part of a larger evaluation of a high quality, demonstration training program for women in the Work Incentive (WIN) Program that was funded by the U. S. Department of Labor (White, et al., 1983).

The training institutions selected for this demonstration were the DeVry Institute of Technology in Chicago and the Ohio Institute of Technology in Columbus (now also named DeVry Institute of Technology). Both institutions are part of the Bell & Howell Corporation's Education Group, serve primarily non-resident students, and offer two-year, non-degree programs for electronic technicians in addition to other electronics programs leading to associate as well as baccalaureate degrees. Faculty and the regular student body at both institutions are predominantly male and white. Most of the regular students are between the ages of 18 and 21. In recent years, between 40 and 50 percent of those students admitted to the electronic technician program graduated.

Since the goal of the program was to make the WIN clients fully competitive in the labor market, there was little modification of the basic technician program on their behalf. However, some additional services were provided, including tutoring and supplementary instruction, tours of work sites, and the hiring of a special counselor at each school to work exclusively with WIN students. These counselors were available throughout the life of the program to assist WIN students in overcoming academic and non-academic problems

which might interfere with successful school completion and job placement.

### DeVry Study Population

The WIN women who entered the program in 1978 differed from the regular students not only because they were female, older, more likely to be minority, and single heads of households with young children, but also because their academic preparation was weaker.

The majority of all participants were minority group members (in Chicago, 81% were black, 10 % were other ethnic minorities; in Columbus, 47% were black, 2% other minorities). Ages ranged from 18 to 54, with a mean of 29. The mean number of school years completed was just under 12, the average Stanford reading test grade equivalent was 10, the mean score on the Bell & Howell Schools arithmetic test was just over 50%, and average scores on three GATB tests (U. S. Department of Labor, Manpower Administration, 1970) exceeded the norm of 100 by about six points. Virtually all of the WIN women who began the training had held a job at some point in their lives but at the time of program enrollment, 90% had been unemployed for more than six months.

### DeVry Study Design

In identifying the variables of interest for the analysis, we relied primarily on the conceptual model of dropout from higher education developed by Tinto (1975). To summarize the Tinto model briefly, family background, individual attributes, and pre-college schooling are presumed to influence the development of commitments to educational as well as other personal goals along with commitments to the postsecondary educational institutions through which such goals might be realized. The goal commitments at entrance to postsecondary education affect, in turn, the student's performance in both the academic (grades and intellectual development) and social (peer-group and faculty interactions) systems of the educational institution. Students' decisions about whether or not to drop out from the postsecondary educational institution reflect the extent of



their academic and social integration within it which, in turn, influence subsequent institutional and goal commitments as well as individuals' assessments of the personal importance of those commitments.

We specified the variables of importance for each of the conceptions in the Tinto model and drew from additional sources (Aitken, 1982; Pantages and Creedon, 1978; Weidman, 1984; Weidman and Friedmann, 1984) to modify the model for our particular study population. With respect to "family background," the commonly used indicators of parental socio-economic status were not appropriate because the women in our study were not their parents' dependents but were rather, themselves, heads of households. Sex was a constant since all clients were female. Age and race were, however, included.

"Individual attributes" used in the analysis were academic ability as measured by scores on the tests required for admission to the Bell & Howell Schools. Since the students were enrolled in a vocational training program, it was assumed that previous employment experience might conceivably be related to completion. Virtually all of the WIN clients who entered the demonstration training program were single heads of households, so we included data about the number and ages of children they had living at home.

"Pre-college schooling" variables included years of prior schooling completed, type of high school program (academic, general, or vocational), and high school courses of particular relevance for electronics training, namely, science and mathematics.

With respect to "commitments," one important concern was the client's "goal commitment," or desire to pursue what was known to be a long (2 years) and academically challenging training program as opposed to the direct employment option available through the WIN Program. We approached "institutional commitment" in a somewhat unconventional way because this particular WIN demonstration project was limited to a single postsecondary institution at each

site; clients had essentially no comparable alternatives available. Hence, the initial placement of the student ("Prep" vs. direct enrollment in the electronic technician program) was construed to be an indicator of initial "institutional commitment" since it reflected the institution's assessment of the student's potential for completing the training.

Indicators of "social integration" into campus life included support networks on campus, participation in extra-curricular organizations, and interaction with non-WIN student peers. Indicators of "academic integration" included willingness to come to campus for studying or additional laboratory work at times other than usual class days, and interaction with faculty.

Two sets of variables not in the Tinto model were added for our analysis. The first, the students' subjective assessments of their school experiences (in this study, perceived fulfillment of expectations), is suggested by the work of Weidman (1984) on undergraduate career socialization. This may be said to reflect the concept of "intra-personal integration."

The second, problems encountered outside of school, is suggested by Weidman and Friedmann (1984) who argue that because typical educational institutions are not encapsulated environments, it is reasonable to assume that performance in school may be affected by the student's ability to cope with problems at home as well as in other community settings in which they are involved. Such concerns are particularly important for the WIN clients in this study because these women must be responsible to agencies in the welfare system as well as to their own children and possibly other relatives in addition to meeting the demands of the postsecondary educational institution they are attending. This set of variables may be said to reflect the student's "extra-institutional integration."

The interviews from which the data were obtained for this study were conducted in the winter of 1979 (6-8 months following initial program

enrollment) and two years later in the spring of 1981. Comparisons were based on data obtained from the fifty-two program graduates and the ninety-seven women who dropped out of the training program for whom we have data. Since there were essentially no significant differences in completion rates by site, clients from both sites were combined for the data analysis.

### DeVry Study Findings

Twenty-nine percent of the original group of WIN-sponsored women had completed the training program. While this is a much lower completion rate than that achieved in most WIN programs, it is roughly the same as the completion rate for those regular Bell & Howell students who began in the remedial or "Prep" term as well as for degree-oriented and performance-graded postsecondary education programs of no more than two academic years' duration beyond high school. This rather high attrition rate at the Bell & Howell schools can be attributed to the academic rigor of the program and the school's strict standards for terminating students whose attendance and achievement are unsatisfactory.

Most of the women who dropped out of this program did so quite early. Forty-three percent of the dropouts left without completing a single term of the technician program, and an additional twenty-one percent completed only the first term. The following is a summary of the basic analytical findings with a discussion of some of their policy implications.

### Admission

Program completion for the WIN women was not related to personal background characteristics (age, race, previous employment experience, or welfare history), but it was related to their academic aptitude (GATB:G test score) and to their having taken a geometry course in high school. The most important correlate of success was, however, qualification for admission (at least 80% correct on the Bell & Howell Schools arithmetic test) directly into

the first trimester of the electronic technician program as opposed to the remedial or "Prep" term.

Because almost half of the graduates actually started in the "Prep" term, it would be inappropriate to restrict the training program to those students who qualified for regular admission. This finding does, however, suggest the importance for institutions of developing remedial programs that are as effective as possible in providing students with the skills necessary for success in the transition to the regular academic program for which they are preparing. In addition, it supports Tinto's (1982, p. 699) contention that successful retention programs "...are almost always tied integrally into the admission process."

#### Institutional Life

The significance of students' integration into both the academic and non-academic sectors of postsecondary educational institutions was highlighted in this research. Graduates were more likely than dropouts a) to report contact with the non-WIN students at the training institution; b) to join a club or student government; c) to see non-WIN students outside of school; and d) to identify non-WIN students as important sources of support. These results contrast sharply with Pascarella, et al. (1983) who argue that, in a commuter college as compared with a residential college, integrative variables are less important than student background variables for explaining dropout.

The findings for these WIN women about the importance of support by and interaction with non-WIN school peers as opposed to interaction with faculty is congruent with the work of Bean (forthcoming), but in contrast to Pascarella (1980) and Weidman (1979) who emphasize the pre-eminence of faculty in student socialization. While graduates did tend to perceive faculty as being more helpful than expected, willingness of WIN women to do extra classwork at the training institution seemed to be the more important indicator of academic

integration. Perhaps there was too great a socio-economic and academic gap between the white male faculty accustomed to teaching white male students and the predominantly minority, female WIN students for effective interaction to occur.

\* The relationship of extra-institutional integration to program completion illustrates that postsecondary educational institutions should not be presumed to function as encapsulated environments. Graduates, in contrast to dropouts were able to cope better with the demands of life outside of the training program because they a) had more supportive friends and relatives; b) reported fewer problems with their own children; c) were healthier; and d) managed better in overcoming problems encountered with the welfare system, especially late checks. These findings provided strong support for our assertion that extra-institutional factors need to be considered in the study of attrition, especially where independent adult student populations are concerned. For institutions, this suggests the desirability of providing sufficient flexibility so that students are not penalized inordinately for occasional personal contingencies that might temporarily prevent them from fulfilling institutional expectations.

#### DISCUSSION

The foregoing illustrates that approaches to and conceptual frameworks for studying retention that are derived from research on traditional college students can provide appropriate points of departure for understanding retention among non-traditional, adult students. It also suggests modifications and extensions that might be made in order to adapt the traditional approaches to some of the particular problems of non-traditional students in postsecondary education, especially as they relate to the demands faced by independent adult students in coping with personal responsibilities and financial contingencies in addition to academic coursework.

Despite the commonalities between traditional and non-traditional students in postsecondary education there are also marked differences that require somewhat different responses and resources if institutions are to be successful at recruiting and retaining non-traditional students. First, admission of non-traditional, adult students into regular academic programs need not depend as heavily on high school grades and class rank as does admission of traditional students. That is not to say, however, that more recent evidence of applicants' academic performance should be discounted. What is essential is that admissions requirements reflect contemporary assessments of adult students' academic potentials, not outdated indicators.

Second, every effort should be made to establish institutional mechanisms for facilitating the social and academic integration of non-traditional students. This may include provision of special counselors who are available on campus at times and in places that are easily accessible to non-traditional students. It may also include organizing at least certain aspects of the campus extra-curriculum in ways that are more attractive to non-traditional students. Furthermore, on those campuses with increasing numbers of non-traditional students, faculty should be encouraged strongly to orient themselves more fully to the particular problems of these students.

Third, the importance of providing financial aid should be emphasized. Because of their responsibility for family expenses, it can be a financial hardship for adult students to pursue college-level degrees and certificates. Consequently, institutions should not overlook the needs of such students for at least tuition support. Not only should institutions attempt to provide some aid for non-traditional students, they should also make certain that financial aid officers are trained to assist in the identification and acquisition of aid that is available through sources outside of the institution.

Finally, there are many personal contingencies that interfere with the

academic demands on non-traditional, adult students. For the most part, ascertaining that independent adult students have the social support of family and friends is beyond the scope of institutional responsibility. Nonetheless, such responses as providing day care facilities on campus (preferably for both long- and short-term childcare), providing resources for personal and career counseling, and allowing some flexibility with respect to institutional demands (including attendance requirements, deadlines for completion of coursework, and schedules for tuition payment) may certainly be reasonable.



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