

The "Old" New Resource for Education--Student Age

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Student age in community colleges has been steadily increasing for years. Does this graying of the students affect the quality of the learning in our institutions? If the students in continuing education courses are among the grayest students served by the community college, are they apt to be the weakest students? Questions like these have enlivened faculty room discussions for years. Conventional wisdom is reflected in the observation that evening students are "more fun to teach" than the younger students encountered in morning classes. This study attempts to provide a summary of the related literature and some direct empirical evidence to inform these discussions.

The purpose of this research is to explore the proposition that nontraditional college students (older students) exhibit higher academic achievement than traditional (younger) students, using GPA as the criteria for determining achievement. The specific questions examined in this paper include (a) Is there an academic difference between the two student groups? (b) Do nontraditional students have different academic orientations? and (c) What factors, if any, generate differences in academic achievement?

Definition of Terms

Nontraditional students are defined as those adult college students over 25 years of age. Traditional college students are those college students between the ages of 18 and 22. Grade point average (GPA), on a 4.00 point scale, is used as the measure of academic performance.

Prior Research

Several researchers have shown that nontraditional students achieve higher grades than traditional students (Honzik & MacFarlane, 1973; Kasworm, 1980; McConatha, 1986; Wright, Smith & Burger, 1978). Their conclusions are based on a variety of tests of intelligence and cognition. McConatha's (1986) research using

the College Outcome Measures Project (COMP) and the American College Testing (ACT) programs shows that nontraditional students scored significantly higher than traditional students on the COMP test scores. Comparison between the COMP scores and the incoming ACT scores shows a moderate relationship between the COMP scores and grade point averages with a correlation coefficient of .31 being significant at the .001 level.

Reinforcing this conclusion is the research of Wright, Smith, and Burger (1978) on nontraditional and traditional male veterans attending John Jay College of Criminal Justice. After completion of four consecutive semesters, nontraditional students averaged an overall GPA score of 2.79, while traditional students averaged an overall GPA of 2.54. This research seems to suggest that nontraditional students are more intelligent; therefore, it supports the research of Honzik & McFarland (1973) who found that intelligence, as measured by scores on IQ tests, increases with age.

Influencing Factors

Many researchers have suggested reasons for the difference in academic achievement between nontraditional and traditional students. Motivation, maturity, life experiences, persistence, pragmatic concerns, and personality are some of the major bases for the students' contrasting achievements.

Self-motivation of the nontraditional student is frequently stated as one of the most significant factors influencing academic achievement (Kuh & Cracraft, 1986; Wolfgang & Dowling, 1981). Using the Education Participation Scale (EPS), Wolfgang and Dowling's research showed nontraditional students scoring significantly higher (at the .01 level) than traditional students on the motivational factor of cognitive interest. The nontraditional students' higher scores on the motivational factors of "To learn for the sake of learning" and "To seek knowledge for its own sake" indicated that "the older adult students had an internal drive for knowledge that set them apart from younger students" (Wolfgang & Dowling, 1981, p. 642). The EPS has produced similar and consistent results when used by other researchers (Boshier, 1975; Burgess, 1971; Morstain & Smart, 1974; Sheffield, 1964). EPS scores have shown that traditional college students score higher on the test factor of "having a need to fulfill social relationships" and on the factor of "going to school to comply with wishes of someone other than themselves" (Wolfgang & Dowling, 1981). This indicates two distinct motivational designs students have for their enrollment in college. Nontraditional students tend to follow the design of an internal locus of control, whereas traditional students seem

to be motivated by an external locus of control.

A number of researchers (Kasworm, 1980; Knowles, 1970; Roelfs, 1975) have noted that nontraditional students make conscious commitments to their education. Their efforts are enhanced by high motivation, an eagerness to participate, a willingness to invest their time and energy, and a readiness to learn.

Other frequently cited factors influencing academic achievement are maturity and life experiences (Kasworm, 1980; Knowles, 1970; McConatha, 1986; Wright, Smith & Burger, 1978). Clark's (1980) research suggests the nontraditional students, in contrast to traditional students, have a stronger conviction to avoid delaying their studies, are more appreciative of the roles of teachers, and are more supportive of higher educational purposes and processes. Knowles (1970) concluded that nontraditional students have acquired a vast amount of knowledge through their life experiences and are able to put that knowledge to use in their learning endeavors.

Kasworm's 1980 research on students' interests, values, and attitudes in academic settings indicates that nontraditional students, in comparison to traditional students, show less anxiety, have more of a theoretical background, are more proficient in analytical problem solving, and show a higher degree of personal integration into the lifestyle changes on college campuses. Kasworm (1980) compares her findings to the normal criteria for predicting academic success:

Academic capabilities are more than the traditional collegiate criterion of grade point averages. Adult learners bring a diversity of perspectives and abilities to the classroom settings. A more generic issue regarding academic capabilities is the differences in intellectual and socio-emotional orientations of younger and older undergraduates.

(p. 37)

The former criteria of predicting academic achievement based on high school grades has given way to more flexible guidelines that consider individual potential and personal qualities.

Kasworm (1980) found that nontraditional students achieved much higher scores on "statements of self-confidence, well-being, minimal fears and fewer anxieties" (p. 40). Nontraditional students exhibit a developed identity, one that is structured and secured, whereas traditional students show that they are still in the process of having their identity and maturity develop (Kasworm, 1980; Roelfs, 1975). The traditional student is "in the life cycle phase which is focused on seeking out self identity, testing out life alternatives and examining personal values and

skills" (Erikson, 1968). Traditional students tend to be more rash and impetuous. They have the need for immediate gratification and focus on short-range goals. Nontraditional students, on the other hand, show maturity, self-confidence, and a need to achieve long-range goals (Chickering, 1971; Feldman, 1969; Kasworm, 1980; Roelfs, 1975).

The research discussed here suggests that nontraditional students have acquired some adaptive skills, in both behavior and judgment, that reduce the chance of poorer grades. These skills, being positively correlated to motivational and cognitive abilities, tend to be linked positively with age (Wright, Smith, & Burger, 1978).

Mehallis (1986) reports that nontraditional students are more self-directed and more practical than traditional students. They are in the academic setting with specific goals in mind and do not want to waste time, a valuable and scarce resource. Many have full-time jobs and other real life concerns that traditional students have yet to face. This perspective of the nontraditional students is shared by a number of other researchers (Cardinale, 1983; Draves, 1984; Jurand, 1986; Kuh & Cracraft, 1986) whose data confirm Mehallis's findings.

Using the Brown/Holtzman Survey of Study Habits and Attitudes (SSHA) (Brown & Holtzman, 1966), Clark's (1980) research on remedial students supports the belief that nontraditional students go back to the educational setting in a more positive frame of mind because of their adult experiences. While they see their skill deficiencies as a challenge, traditional remedial students view remedial education as a sign of prior failure and think of their skill deficiency as further evidence of inadequacy (Clark, 1980).

Current Research

The data reported here were extracted from a larger study (Whisnant, 1990) on stress and coping strategies among community college students. Six community college locations throughout the state of Virginia participated in the study. Data were collected from these locations during the fall semester of 1989.

Methodology

Participation criteria for sample selection were based on geographic distribution, size of school, density of population (urban vs. rural), and cooperation of the institution's mathematics department in collecting data and administering instruments of the study. The six campus locations represent 13 mathematics professors who collected data, including age and test score variables, from 25 math classes. Five hundred and sixty-

eight students participated in the stress study. Because of missing and incomplete data, only 383 of these 568 students were included in the data concerning age and academic achievement. Attrition then reduced these 383 students responding on the first measurement of academic achievement to 342 students responding at the end of the term.

Students were selected for participation in the study based on their enrollment in classes selected for the study. In addition to stress and coping instruments completed by the students, basic demographic data and grades from their first major exam and from their final exam were collected. The demographic data of age in relation to exam scores are the major concern of this paper.

Results

Scores from 383 students were collected from the first major exam administered in the semester. Of these, 102 were 25 years of age or older while 281 were under 25 years of age. T-test procedures revealed a significant difference at the $p < .01$ level between the two age groups. The mean score for the nontraditional students 25 and over was 82.7 compared to a mean of 76.6 for the traditional students under 25 years of age.

Final grade scores were collected for 93 of the nontraditional and 249 of the traditional students. Mean scores for the two groups were 82.0 and 76.7 respectively with t-test showing significance at the $p < .01$ level. Net differences between the two scores of the two groups did not reveal statistical significance. Results also showed no difference between developmental and transfer classes for the two age groups. Older, nontraditional students scored higher in both transfer and developmental classes than did their younger counterparts.

Table 1

T-Test Procedures on Grades by Age

Age Grouping	N	Mean	Std. Dev.	p
First Class Exam				
25 years and over	102	82.76	16.67	0.003

under 25 years	281	76.64	20.12	
Final Course Grade				
25 years and over	93	82.01	15.81	0.006
under 25 years	249	76.78	14.94	
Net difference between first exam and final grade				
25 years and over	93	-2.67	12.84	0.911
under 25 years	249	-2.85	14.88	

Conclusions

The results of this present study confirm much of what the literature has established; namely, that older, nontraditional students perform at higher academic levels than do younger, traditional students. Changing patterns of college enrollment, [nontraditional students will comprise 49% of college enrollment by the year 1993 (Lace, 1986)] make this conclusion increasingly significant for institutions of higher education. As the baby boom generation continues returning to school, educators have the opportunity to structure courses in ways that best incorporate older students' characteristic of higher academic achievement.

An additional conclusion of this study is that older, nontraditional students appear to bring with them the qualities that lead to their higher academic achievement. The lack of statistical significance ($p < .91$) for the net difference between their first test grade and their final grade indicates that nontraditional students return to school with the skills or other attributes that account for their higher academic achievement. Prior research suggests that these skills and attributes include motivation, maturity, life experiences, persistence, pragmatic concerns, and an educationally focused personality. This research has increasingly significant implications for instruction as well as for admissions offices.

Recommendations

One of the primary implications for instruction is the expanded use of cooperative learning. This method of instruction, using peer tutoring and group activities, enhances interactive social skills as well as comprehension of subject matter. An analysis of 122 studies involving cooperative learning by Johnson, Maruyama, Johnson, Nelson, and Skon (1981) found

cooperative learning to be more academically beneficial than traditional learning techniques. Further research by Soldier (1989) reports that cooperative learning helps students to accept differences among themselves, helps them to develop more positive attitudes toward school, and promotes the idea that students have greater control over their lives in school.

Vertical grouping is an example of an expanded method of cooperative learning involving older students who act as models of maturity, confidence, and rational thinking in small group instructional activities. Older, nontraditional students serve a leadership function in addition to possible tutoring roles. Traditional college-age students benefit from vertical grouping by being exposed to more mature levels of cognitive interaction and to the older students' increased experience with effective coping strategies. In return, older students will likely appreciate the recognition and the opportunity to display their advanced maturity and their more experienced social and personal skills. In fact, they learn by teaching.

Summary

The literature and current research concerning student age provides educational institutions with information about achievement differences among traditional and nontraditional groups. This information provides higher education an underused educational tool to assist with the development of its traditional students. As education increases the dimensions of its mission, the nontraditional student is an overlooked, often untapped, resource.

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